Agenda Including Addeds
Civic Works Committee

The 4th Meeting of the Civic Works Committee

February 22, 2023

12:00 PM

Council Chambers - Please check the City website for additional meeting detail information. Meetings can be viewed via live-streaming on YouTube and the City Website.

The City of London is situated on the traditional lands of the Anishinaabek (AUh-nish-in-ah-bek), Haudenosaunee (Ho-den-no-show-nee), Lūnaapéewak (Len-ah-pay-wuk) and Attawandaron (Add-a-won-da-run).

We honour and respect the history, languages and culture of the diverse Indigenous people who call this territory home. The City of London is currently home to many First Nations, Metis and Inuit people today.

As representatives of the people of the City of London, we are grateful to have the opportunity to work and live in this territory.

Members

Councillors C. Rahman (Chair), H. McAlister, P. Cuddy, S. Trosow, P. Van Meerbergen, Mayor J. Morgan

The City of London is committed to making every effort to provide alternate formats and communication supports for meetings upon request. To make a request specific to this meeting, please contact CWC@london.ca or 519-661-2489 ext. 2425.

Pages

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2. **Consent**

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3. Scheduled Items

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6. Adjournment

Environmental Stewardship and Action Community Advisory Committee

Report

3rd Meeting of the Environmental Stewardship and Action Community Advisory Committee
February 1, 2023

Attendance

PRESENT: B. Samuels (Chair), D. Allick, P. Almost, I. ElGhamrawy, M. Griffith, A. Hames, C. Hunsberger, C. Mettler, N. Serour, L. Vuong and A. Wittingham and H. Lysynski (Committee Clerk)

ABSENT: R. McGarry

ALSO PRESENT: A. Curtis, M. Fabro, K. Oudekerk, B. Page, A. Rammeloo, J. Stanford and B. Westlake-Power

The meeting was called to order at 3:01 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 Adelaide Wastewater Treatment Plant and Greenway Wastewater Treatment Plant

That it BE NOTED that the Environmental Stewardship and Action Community Advisory Committee received the presentation appended to the Agenda, with respect to the Adelaide Wastewater Treatment Plant and the Greenway Wastewater Treatment Plant.

3. Consent

3.1 2nd Report of the Environmental Stewardship and Action Community Advisory Committee

That, the following actions be taken with respect to the 2nd Report of the Environmental Stewardship and Action Community Advisory Committee, from its meeting held on January 11, 2023:

a) the attendance record BE AMENDED to correct C. Hunsberger's attendance from present to absent; and,

b) the 2nd Report of the Environmental Stewardship and Action Community Advisory Committee, from its meeting held on January 11, 2023, BE RECEIVED.

4. Sub-Committees and Working Groups

None.

5. Items for Discussion

5.1 Blue Box Transition Update

That it BE NOTED that the Environmental Stewardship and Action Community Advisory Committee heard a verbal presentation and received the staff report dated January 10, 2023, entitled "Updates: Blue Box Transition and Next Steps" from J. Stanford, Director, Climate Change, Environment and Waste Management and held a general discussion with respect to this matter.

5.2 Notice of Application - Draft Plan of Subdivision, Official Plan and Zoning By-law Amendments - 735 Southdale Road West

That, the following actions be taken with respect to the Notice of Planning Application for the Draft Plan of Subdivision, Official Plan and Zoning By-law Amendments, dated January 26, 2023, relating to the property located at 735 Southdale Road West:

a) a Working Group consisting of B. Samuels, A. Hames and A. Wittingham BE ESTABLISHED to review and report back on the Notice of Planning Application relating to the property located at 735 Southdale Road West; and,

b) the staff presentation relating to this matter BE RECEIVED for information.

6. Adjournment

The meeting adjourned at 4:55 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: **RFT-2022-311 Dedicated Locate Services Contract Award – Irregular Result**
Date: **February 22, 2023**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to Request for Tender RFT-2022-311 for Dedicated Locate Services:

(a) The bid submitted by GTel Engineering of $1,350,000 (excluding HST), to provide dedicated locate services for one (1) year as the initial term, and four (4) optional terms of one (1) year each, **BE ACCEPTED** in accordance with the Procurement of Goods and Services Policy, it being noted that the bid submitted by GTel Engineering was the only bid that met the technical criteria and the City's specifications and requirements;

(b) Civic Administration **BE AUTHORIZED** to undertake all administrative acts that are necessary in connection with this purchase;

(c) Approval herein **BE CONDITIONAL** upon the Corporation entering into a formal contract relating to the subject matter of this approval; and

(d) The Mayor and City Clerk **BE AUTHORIZED** to execute any contract, statement, or other documents, if required, to give effect to these recommendations.

Executive Summary

The dedicated locate service supports City construction and public works projects by ensuring utility locates are provided optimally as needed. The superior dedicated locate service eliminates construction delays due to late locates and supports more flexible work plans which assists in controlling construction costs. Implementing the dedicated locator program administered by Ontario One Call requires appointing a qualified Dedicated Locate Service provider, which is the purpose of this report that recommends contract approval resulting from RFT-2022-311 for the provision of dedicated locator services for municipal construction and public works projects for 2023.

Linkage to the Corporate Strategic Plan

The following report supports the Strategic Plan through the strategic focus area of "Building a Sustainable City" by efficiently supporting municipal construction through the provision of a superior dedicate locate service.

Analysis

1.0 Background Information

1.1 Ontario Underground Infrastructure Notification System (One Call Act)

The *Ontario Underground Infrastructure Notification System Act, 2012, as amended* governs the notification process and the provision of utility locates for underground services in Ontario. All owners of underground infrastructure are required to provide

locates for their services for anyone who “breaks ground”. Under the normal locate process Ontario One Call notifies owners of buried utilities of the planned excavation enabling them to provide locates to protect to their underground infrastructure from being damaged and to prevent injury to workers.

In April of 2022 the Act was amended to include a provision that permit project owners to hire their own dedicated locator to provide locates for their own construction projects on behalf of all utility owners. The dedicated locate program is administered by Ontario One Call and fully satisfies all legislative and regulatory requirements for the provision of locates of buried infrastructure.

The City intends to use this dedicated locate program on its 2023 construction and municipal works projects. Implementation requires appointing a dedicated locate service provider which is the subject of this report.

1.2 Context

Late locates have caused significant problems for the construction industry in recent years by interfering with project scheduling and limiting the ability of contractors to flex work plans as is often required due to equipment availability, weather delays, project change requests, and other challenges. The City’s contractors and operations crews can also be impacted by late locates, leading to direct and indirect costs associated with construction delays.

Locates for large projects can take weeks to complete due to their size and complexity. Even meeting the newly mandated locate response timelines through the traditional Ontario One Call service will not adequately satisfy the higher level of service needed by contractors on large construction projects due the dynamic nature and high cost of construction. Project owners such as the City of London, are seeking ways of ensuring that construction and other public works projects are not unduly impacted by late locates. The Province has mandated the use of dedicated locators for all broadband projects in Ontario and now its use is expanding into other areas as the benefits of the service are being more widely recognized.

The main advantage of the dedicated locate program is that when locates are required by a contractor, instead of requesting locates through Ontario One Call and waiting for each utility owner to be notified, respond, and locate their utilities, a single dedicated locator can complete the locates on behalf of all utility owners without delay. The dedicated locate service is essentially an “on-call” locate service paid for by the project owner rather than the utility owners. A dedicated locator service provides flexible, just-in-time delivery of locates to support the City’s critical construction projects.

2.0 Discussion and Considerations

2.1 2022 Pilot Dedicated Locator Program

In 2022, in co-operation with the City’s contracted locate service provider, G-Tel Engineering, the City undertook a limited pilot dedicated locator program to test the viability of providing a dedicated locate service for the City’s major construction projects. The City’s test program was created prior to the model administered by Ontario One Call being available but was similar in operational nature and effect.

The trial program was deemed successful in that locates were completed on time for virtually every one of the City’s construction projects that received the dedicated locate service. In post construction debriefings, all of the City’s contractors that benefited from

the program were unanimous in their support for the program and have requested the City continue the program for all construction projects in the future.

2.2 2023 Dedicated Locator Program

For 2023, the City intends to utilize the Provincial dedicated locator program administered by Ontario One Call which has significant advantages over the pilot 2022 program the City used as the Provincial program simplifies the process and avoids certain contractual challenges that cropped up during the 2022 pilot program.

In order to implement the new program, the first step is to register a Dedicated Locator Regional Request Notice with Ontario One Call which requires the City hire a dedicated locate service provider, which is the purpose of RFT-2022-311.

3.0 Financial Impact/Considerations

3.1 Procurement Process

Following the public posting of Dedicated Locate Services RFT-2022-311, three bid submissions were received and reviewed for compliance to the mandatory technical requirements by the Environment and Infrastructure Department and Procurement Services. Two of the three submissions were disqualified because the bidders could not be approved by Ontario One Call for the provision of dedicated locate services which was a requirement of the tender. The remaining submission from G-Tel Engineering satisfied all technical requirements and their bid submission was accepted. Since only one submission could be considered this is an irregular bid.

As per Section 8.10 of the Procurement of Goods & Services Policy, the client Service Area, in conjunction with Procurement and Supply, shall submit a report to Committee and City Council and receive their approval for the award of a competitive bid greater than $100,000 if the specifications of a competitive bid cannot be met by two or more suppliers.

This is a fee for service contract based on hourly and daily rates with a projected maximum cost of $1,350,000 (excluding HST). The RFT bid submission represents the maximum (or upset limit) value assuming the service will be used for most of the construction and municipal works projects. However, the service will only be applied to projects that will benefit from the dedicated locate service the most so total cost is expected to be less.

3.2 Dedicated Locate Funding

The cost of this service will be invoiced directly to each project using the dedicated locates option to be accommodated within existing approved capital and operating budgets.

Conclusion

The dedicated locate service improves the delivery of mandatory locate services on City construction and public works projects by eliminating construction delays caused by late locates and by supporting more efficient and flexible work plans which help to control construction costs. Implementing the Ontario One Call supported dedicated locator program requires appointing a qualified dedicated locate service provider. It is therefore recommended that G-Tel Engineering be awarded the contract to provide dedicated locator services for 2023 as per the terms of RFT-2022-311.

Prepared by:	**Gary Irwin, O.L.S., O.L.I.P. Division Manager, Geomatics and City Surveyor**
Submitted by:	**Jennie Dann, P.Eng., Director, Construction and Infrastructure Services**
Recommended by:	**Kelly Scherr, P.Eng., MBA, FEC, Deputy City Manager, Environment and Infrastructure**

Cc: Steve Mollon, Senior Manager, Procurement & Supply
John Millson, Sr. Financial Business Administrator

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: **Electric Kick-Scooter and Cargo Power-assisted Bicycle Pilot Project By-law and By-law Amendments**
Date: **February 22, 2023**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions related to the Electric Kick-Scooter and Cargo Power-assisted Bicycle pilot projects **BE TAKEN**:

a) The attached proposed by-law (Appendix A) **BE INTRODUCED** at the Municipal Council meeting to be held on March 7, 2023, to establish a pilot project for Electric Kick-Scooters and for Cargo Power-assisted Bicycles;
b) The attached proposed by-law (Appendix B) **BE INTRODUCED** at the Municipal Council meeting to be held on March 7, 2023, to amend the Traffic and Parking By-law (PS-114);
c) The attached proposed by-law (Appendix C) **BE INTRODUCED** at the Municipal Council meeting to be held on March 7, 2023, to amend the Streets By-law (S-1);
d) The attached proposed by-law (Appendix D) **BE INTRODUCED** at the Municipal Council meeting to be held on March 7, 2023, to amend the Parks and Recreation Area By-law (PR-2); and
e) The attached proposed by-law (Appendix E) **BE INTRODUCED** at the Municipal Council meeting to be held on March 7, 2023, to amend the Administrative Monetary Penalty System (AMPS) By-law (A-54).

Executive Summary

The purpose of this report is to provide Committee and Council with the proposed by-law and by-law amendments to allow electric kick-scooters and cargo power-assisted bicycles to operate in London for the period of the provincial pilot projects.

A new by-law is proposed to establish a pilot project for both vehicles, the Electric Kick-Scooter and Cargo Power-assisted Bicycles Pilot Project By-law. In addition, amendments are proposed to four existing by-laws to ensure they include the use of these vehicles in London. These by-laws are:

- Traffic and Parking By-law;
- Streets By-law;
- Parks and Recreation Area By-law; and
- Administrative Monetary Penalty System (AMPS) By-law.

All proposed by-law amendments and the new by-law are included in Appendices A-E.

The parameters within the proposed by-laws have been received for information and comment from the Integrated Transportation Community Advisory Committee (ITCAC) and the Accessibility Community Advisory Committee (ACAC).

Background information and a synopsis of the City's participation in the two provincial pilot projects is also provided and included in Appendix F.

The highlights of the changes are as follows. The Electric Kick-Scooter pilot project parameters include:

- A minimum operator age of 16 years
- Vehicle speed limit is 24 km/h
- Vehicle must be equipped with a bell, a brake and lights
- Single rider only – no passengers
- No basket or cargo
- Operator must wear a helmet if aged 16 or 17 years
- Operator must follow all posted speed limits
- Use is limited to streets that have a posted speed limit of 50 km/h or less and park multi-use pathways, including the Thames Valley Parkway
- Operators are to use reserved lanes (bike lanes) on streets where provided
- Where reserved lanes are not provided, operators must ride as close to the right side as possible
- No riding on sidewalks, on roads with posted speed limits higher than 50 km/hour, on hiking trails, in Environmentally Significant Areas (ESA), or natural park areas - unless authorized

The Cargo Power-assisted Bicycle pilot project parameters include:

- A minimum operator age of 16 years
- Vehicle maximum power-assisted speed limit is 32 km/hour
- Vehicle has a traditional bicycle or tricycle design
- Vehicle is electric-powered with a maximum power output of 1,000 watts
- All riders and passengers must wear a helmet
- Operator must follow all posted speed limits
- Use is limited to streets that have a posted speed limit of 50 km/h or less and park multi-use pathways, including the Thames Valley Parkway
- Operators are to use reserved lanes (bike lanes) on streets where provided
- Where reserved lanes are not provided, operators must ride as close to the right side as possible
- No riding on sidewalks, on roads with posted speed limits higher than 50km/hour, on hiking trails, in Environmentally Significant Areas (ESA), or natural park areas - unless authorized
- A motor assisted bicycle, or any kind of power-assisted bicycle that weighs more than 120 kg or is capable of providing propulsion assistance when the bicycle attains a speed of 32 km/hour or more, is not allowed on pathways.

Linkage to the Corporate Strategic Plan

Municipal Council's 2019-2023 Strategic Plan for the City of London continues to recognize the importance of active transportation, cycling, and the need for a more sustainable, inclusive and resilient city. Electric kick-scooter and cargo power-assisted bicycle use address four of the five Areas of Focus, at one level or another:

- Strengthening Our Community
- Building a Sustainable City
- Growing Our Economy
- Creating a Safe London for Women and Girls

On April 23, 2019, the following was approved by Municipal Council with respect to climate change:

> Therefore, a climate emergency be declared by the City of London for the purposes of naming, framing, and deepening our commitment to protecting our economy, our eco systems, and our community from climate change.

On April 12, 2022 Municipal Council approved the Climate Emergency Action Plan which includes Area of Focus 4, Transforming Transportation and Mobility.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

Relevant reports that can be found at www.london.ca under Council meetings include:

- Proposed Approach to Review E-Scooters in London (January 7, 2020 meeting of Civic Works Committee (CWC), Agenda Item # 2.8)
- Cycling and Transportation Demand Management Upcoming Projects (March 30, 2021 meeting of CWC, Agenda Item # 2.12)
- 6th Report of the Accessibility Advisory Committee (July 27, 2021 meeting of Community and Protective Services Committee, Agenda Item # 4.2)
- 7th Report of the Transportation Advisory Committee (August 31, 2021 meeting of CWC, Agenda Items # 4.1 and 4.2)
- Participation in Provincial E-scooter Pilot (June 21, 2022 meeting of Civic Works Committee, Agenda Item 4.2)
- Participation in Provincial Cargo E-bike Pilot (June 21, 2022 meeting of Civic Works Committee, Agenda Item 4.1)

1.2 Background

The Executive Summaries from these two reports are found in Appendix F along with brief details in this section:

- Participation in Provincial E-scooter Pilot
- Participation in Provincial Cargo E-bike Pilot

Electric Kick-Scooters

An electric kick-scooter is a stand-up scooter powered by an electric motor (Figure 1). They are generally designed for use by adults and older children with a large deck in the centre upon which the rider stands.

Figure 1: - Example of an Electric Kick-Scooter

(Photo credit: Solar Scooters)

In January 2020, the Province of Ontario launched a five-year electric kick-scooter pilot project. It ends November 27, 2024. The pilot is intended to evaluate the use of both personal and shared electric kick-scooters, to examine their ability to safely integrate with other vehicle types and determine whether existing provincial rules of the road are adequate.

As part of the pilot, Ontario municipalities first need to pass by-laws to define where electric kick-scooters can operate when on municipal property. London City Council authorized personal use for the pilot but did not intend it to apply to shared (rental) commercial operations. Shared commercial electric kick-scooter operations are not authorized to operate in London under the draft by-law.

More information on the provincial electric kick-scooter pilot is available at http://www.mto.gov.on.ca/english/vehicles/electric/electric-scooters.shtml

Cargo Power-assisted Bicycles

A cargo power-assisted bicycle is a type of electric-powered bike with a platform or box to carry larger items like packages and boxes for deliveries (Figures 2 and 3). Individuals use them for transporting larger items for personal use (e.g., groceries) or children as passengers, often instead of using an automobile.

Figure 2 - Example of Personal Use Cargo Power-assisted Bicycle

(Photo credit: Bunch Bikes)

Figure 3 - Example of Personal Use Cargo Power-assisted Bicycle

(Photo credit Virtue Cycles)

The Province of Ontario has defined a cargo power-assisted bicycle as being over 55 kilograms. Similar style power-assisted bicycles that also have a box but weigh less than 55 kilograms are considered to be standard power-assisted bicycles. These power-assisted bicycles are already legal to ride in London.

In March 2021, the Province of Ontario launched a five-year cargo power-assisted bicycle pilot project. It ends March 1, 2026. The pilot is intended to evaluate the use of cargo power-assisted bicycles for both personal and commercial purposes.

As part of the pilot, Ontario municipalities first need to pass by-laws to define where they can operate. The Pilot Project for Cargo Power-assisted Bicycles applies to both personal and commercial use cargo power-assisted bicycles. More information on the provincial pilot is available at https://www.ontario.ca/page/cargo-e-bike-pilot-program

The timeframes left in the provincial pilots allow the City and interested parties to assess uptake by Londoners. City staff will also be able to monitor and learn from other municipalities' pilots.

The commercial cargo power-assisted bicycle pilot project parameters will be presented to Committee and Council at a later date.

1.3 Council Direction

Council's current direction as it relates to matters in this report are listed below. With respect to electric kick-scooters, on July 5, 2022, Council resolved that:

b. *City Administration BE AUTHORIZED to advise the Province of Ontario that the City of London will be participating in the personal e-scooter portion of the Provincial pilot, subject to the approval of c., below, and will not be participating in the e-scooter share program, it being noted that the Provincial pilot ends December 2024;*

c. *Civic Administration BE AUTHORIZED to update relevant municipal by-laws to incorporate e-scooters for personal use and bring back a report of proposed by-law amendments to the Civic Works Committee at a future meeting; and*

d. *Civic Administration BE DIRECTED to monitor other municipalities involved with the Provincial e-scooter share program for the purpose of obtaining details pertinent to such plans as the Climate Emergency Action Plan, Mobility Master Plan, and The London Plan.*

With respect to cargo power-assisted bicycles, on July 5, 2022, Council resolved that:

b. *Civic Administration BE AUTHORIZED to advise the Province of Ontario that the City of London will be participating in both the commercial and personal components of the Cargo E-bike Pilot Program;*

c. *Civic Administration BE AUTHORIZED to update relevant municipal by-laws to incorporate cargo e-bikes for personal use, and bring back a by-law to the Civic Works Committee (CWC) at a future meeting;*

2.0 Discussion and Considerations

2.1 Input Received

In late 2022/early 2023, presentations were made to the Integrated Transportation Community Advisory Committee (ITCAC) and to the Accessibility Community Advisory Committee (ACAC) with respect to Council direction. The presentations included information on:

- Vehicle descriptions and provincial pilot details;
- Review of Council's decisions on participating in provincial pilots;
- Provincial pilot data needs;
- Draft by-law parameters for feedback; and
- Municipal awareness and education support for launch of by-laws.

Overall, the two advisory committees agreed with the draft by-law parameters presented. No additional feedback was received from either Advisory Committee as of February 10, 2023.

2.2 Highlights of Proposed Changes

The new Pilot Project By-law and associated amendments to existing by-laws found in the appendices establish the rules for the pilot project. These by-laws integrate the provincial regulations.

The Electric Kick-Scooter pilot project parameters include:

- A minimum operator age of 16 years
- Vehicle speed limit is 24 km/h
- Vehicle must be equipped with a bell, a brake and lights

- Single rider only – no passengers
- No basket or cargo
- Operator must wear a helmet if aged 16 or 17 years
- Operator must follow all posted speed limits
- Use is limited to streets that have a posted speed limit of 50 km/h or less and park multi-use pathways, including the Thames Valley Parkway
- Operators are to use reserved lanes (bike lanes) on streets where provided
- Where reserved lanes are not provided, operators must ride as close to the right side as possible
- No riding on sidewalks, on roads with posted speed limits higher than 50 km/hour, on hiking trails, in Environmentally Significant Areas (ESA), or natural park areas - unless authorized

The Cargo Power-assisted Bicycle pilot project parameters include:

- A minimum operator age of 16 years
- Vehicle maximum power-assisted speed limit is 32 km/hour
- Vehicle has a traditional bicycle or tricycle design
- Vehicle is electric-powered with a maximum power output of 1,000 watts
- All riders and passengers must wear a helmet
- Operator must follow all posted speed limits
- Use is limited to streets that have a posted speed limit of 50 km/h or less and park multi-use pathways, including the Thames Valley Parkway
- Operators are to use reserved lanes (bike lanes) on streets where provided
- Where reserved lanes are not provided, operators must ride as close to the right side as possible
- No riding on sidewalks, on roads with posted speed limits higher than 50km/hour, on hiking trails, in Environmentally Significant Areas (ESA), or natural park areas - unless authorized
- A motor assisted bicycle, or any kind of power-assisted bicycle that weighs more than 120 kg or is capable of providing propulsion assistance when the bicycle attains a speed of 32 km/hour or more, is not allowed on pathways.

2.3 Proposed By-law to Establish a Pilot Project for Electric Kick-Scooters and for Cargo Power-assisted Bicycles (Appendix A)

This proposed new by-law establishes the use of these vehicles in London; defines the vehicles; where they are permitted to operate (on highways and reserved bicycle lanes); where they are prohibited from operating (on sidewalks, roads with posted speed limits higher than 50km/hour, hiking trails, and Environmentally Significant Areas); and when the by-law will be revoked in line with the end of the provincial pilots.

2.4 Proposed Amendments to the Traffic and Parking By-law (PS-114) (Appendix B)

Proposed amendments to this by-law include adding the vehicle definitions; permitting their operation in “reserved lanes”; prohibiting their operation from a defined list of highways; and the dates that the provincial pilots are revoked.

2.5 Proposed Amendments to the Streets By-law (S-1) (Appendix C)

Proposed amendments to this by-law include adding the vehicle definitions; where the vehicles are permitted to operate (on highways and reserved bicycle lanes); where they are prohibited from operating (on sidewalks or streets with posted speed limits higher than 50km/hour); and the dates that the provincial pilots are revoked.

2.6 Proposed Amendments to the Parks and Recreation Area By-law (PR-2) (Appendix D)

Proposed amendments to this by-law include adding the vehicle definitions; where they are permitted to operate (on multi-use pathways, including Thames Valley Parkway, and in parks); where they are prohibited from operating (hiking trails, in Environmentally

Significant Areas or natural park areas - unless authorized); prohibited use of motor assisted or power-assisted bicycles; and the dates that the provincial pilots are revoked.

2.7 Proposed Amendments to the Administrative Monetary Penalty System (AMPS) By-law (A-54) (Appendix E)

Proposed amendments to this by-law include adding the vehicles; detailing administrative penalties related to contraventions of the designated provisions; and the date that the by-law items related to electric kick-scooters is repealed.

2.8 Education and Summer Support Program

To help support the implementation of the by-laws, City staff is developing an education and awareness campaign that will launch after Council approves the by-laws. It will include ongoing messaging to remind Londoners of the rules of the road, where the vehicles can and cannot operate, as well as the health and economic advantages of using these vehicles (i.e., replacing motor vehicle trips).

Civic administration is also designing a four-month student position, supported by City staff, that will focus on the health and safety aspects of the new vehicles and will also include existing vehicles such as bikes, power-assisted bicycles, and other micromobility options. The staff person will provide awareness information, collect data to be sent to the Province and to help inform the Mobility Master Plan, and respond to emails and phone calls. Their efforts will be focused along the Thames Valley Parkway and other busy active transportation locations. This is an education and outreach position, versus enforcement.

2.9 Data Needs

The Province requires participating municipalities to provide data during the pilot. A set list of data types has not been provided by the Province, but based on other municipalities' efforts to date, this could include trip data, injury data and parking compliance. City staff is ensuring that the London Police Service and London Health Sciences Centre are using consistent coding for any reported incidents. Ensuring that standardized terms and abbreviations are used will simplify data collection and analysis.

The Province will use these data to determine whether a permanent framework is warranted for electric kick-scooters and/or cargo power-assisted bicycles. This includes making a long-term decision on whether electric kick-scooters and/or cargo power-assisted bicycles are permanently allowed on Ontario roads. Any provincial decisions will affect what is allowed in all Ontario municipalities, including in London.

3.0 Financial Impact/Considerations

3.1 2023 Budget

The provincial Electric Kick-Scooter Pilot Project ends November 27, 2024. The Cargo Power-assisted Bicycle Pilot Project ends March 1, 2026, about 18 months after the Electric Kick-Scooter Pilot Project.

The four-month student position as noted by City staff will be funded by three City Divisions within Environment & Infrastructure (Transportation & Mobility; Parks & Forestry and Climate Change, Environment & Waste Management). An estimated cost for 2023 has been established at $20,000. The work in 2023 will help document the needs and requirements for future work, if needed. This work will also identify how much of the work can be absorbed with existing resources and workload.

3.2 Risk Assessment

The use of City roads and pathways for electric kick-scooters and cargo power-assisted bicycles may lead to an increased liability exposure relating to associated accidents and injury. This is not a reason to forgo the pilot. The City of London continues to recognize

the importance of active transportation, cycling, and the need for a more sustainable, inclusive, and resilient city. In considering the benefits of the pilot, the City's current assessment suggests the benefits outweigh the risk.

The parameters set forth in the proposed by-law amendments aim to assist in limiting the City's liability and are based on a comprehensive assessment of best practices throughout the province, and neighbouring municipalities.

Conclusion

A new Electric Kick-Scooters and Cargo Power-assisted Bicycles By-law and amendments to the Traffic and Parking By-law (PS-114), Streets By-law (S-1), Parks and Recreation Area By-law (PR-2) and Administrative Monetary Penalty System (AMPS) By-law are recommended to establish the pilot project.

Both electric kick-scooters and cargo power-assisted bicycles represent another transportation option for Londoners. The environmental, financial and societal benefits are in line with City strategic plans and priorities.

Concerns of safety, accessibility and equity are valid as evidenced in other municipalities, although they are often more prevalent with rental systems versus personally owned equipment. Electric kick-scooters and cargo power-assisted bicycles would be prohibited from operating on sidewalks. Parking correctly can be encouraged through the provision of visible, accessible racks or delineated parking areas.

Cargo power-assisted bicycles are difficult to differentiate from smaller power-assisted bicycles. It is anticipated that learnings about this will come from the four-month student position and will be shared as part of broader feedback to the Province.

Prepared by:	**Allison Miller, M.C.P., MCIP, RPP, Senior Coordinator, Transportation Demand Management**
	Shane Maguire, P.Eng., Division Manager, Traffic Engineering
Prepared and Submitted by:	**Jay Stanford, M.A., M.P.A. Director, Climate Change, Environment, and Waste Management**
Concurred by:	**Doug MacRae, P.Eng. M.P.A. Director, Transportation & Mobility**
	Scott Stafford, Director, Parks & Forestry
Recommended by:	**Kelly Scherr, P.Eng., MBA, FEC, Deputy City Manager, Environment & Infrastructure**

Appendix A	A by-law to establish a pilot project for Electric Kick-Scooters and for Cargo Power-assisted Bicycles
Appendix B	A by-law to amend the Regulate Traffic and Parking of Motor Vehicles By-law (PS-114)
Appendix C	A by-law to amend the Streets By-law (S-1)
Appendix D	A by-law to amend the Parks and Recreation Area By-law (PR-2)
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APPENDIX A
A by-law to establish a pilot project for Electric Kick-Scooters and for Cargo Power-assisted Bicycles

Bill No.
2023

By-law No.

A By-law to establish a Pilot Project for Electric Kick-Scooters and for Cargo Power-Assisted Bicycles, for use on highways and bicycle lanes, (not sidewalks) in the City of London

WHEREAS the *Highway Traffic Act*, R.S.O. 1990, c. H.8 ("*Highway Traffic Act*") provides in Part XVI s. 228 that the Lieutenant Governor in Council may by regulation authorize or establish a project for research into or testing or evaluation of any matter governed by the *Highway Traffic Act* or relevant to highway traffic;

AND WHEREAS the *Highway Traffic Act* establishes in section 228(8) that every person who contravenes a regulation made under that section is guilty of an offence and on conviction is liable to a fine of not less than $250 and not more than $2,500;

AND WHEREAS Ontario Regulation 389/19 entitled "Pilot Project – Electric Kick-Scooters" established a pilot project to evaluate the use and operation of electric kick-scooters, and is to be revoked on November 27, 2024, attached to this by-law as Schedule 1;

AND WHERAS Ontario Regulation 141/21 entitled "Pilot Project – Cargo Power-Assisted Bicycles" established a pilot project to evaluate the use and operation of cargo power-assisted bicycles, and is to be revoked on March 1, 2026, attached to this by-law as Schedule 2;

AND WHEREAS these Pilot Projects prohibit the use of Electric Kick-Scooters and Cargo Power-Assisted Bicycles on a highway, sidewalk, trail, path or walkway or in a public park or exhibition ground under municipal jurisdiction unless such operation is permitted by the Regulation, and where such operation is permitted by a municipal by-law;

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

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

AND WHEREAS subsection 10(1) of the *Municipal Act, 2001* provides that a municipality may provide any service or thing that the municipality considers necessary or desirable for the public;

AND WHEREAS subsection 10(2) of the Municipal Act, 2001 provides that a municipality may pass by-laws respecting: in paragraph 4, Public assets of the municipality acquired for the purpose of exercising its authority under this or any other Act; in paragraph 5, Economic, social and environmental well-being of the municipality, including respecting climate change; in paragraph 6, Health, safety and well-being of persons; in paragraph 7, Services and things that the municipality is authorized to provide under subsection (1); in paragraph 8, Protection of persons and property; and in paragraph 10, Structures, including fences and signs;

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

Part 1
DEFINITIONS

Definitions

1.1 For the purposes of this By-law:

"Electric Kick-Scooter" means a vehicle that has,

(a) two wheels placed along the same longitudinal axis, one placed at the front of the kick-scooter and one at the rear;
(b) a platform for standing between the two wheels;
(c) a steering handlebar that acts directly on the steerable wheel; and
(d) an electric motor not exceeding 500 watts that provides a maximum speed of 24 kilometres per hour.

"Cargo Power-assisted Bicycle" means a pedal-driven bicycle of conventional exposed fork-and-frame bicycle design and appearance that,

(a) has two or three wheels;
(b) is fitted at all times with pedals that are always operable to propel the bicycle;
(c) has a platform, basket or container for carrying cargo, parcels or goods,
(d) has steering handlebars;
(d.1) has a weight of more than 55 kilograms;
(e) has a width not exceeding 1.3 metres;
(f) has a length not exceeding 4 metres;
(g) has a height not exceeding 2.2 metres;
(h) has wheels that have a width of not less than 35 millimetres and a diameter of not less than 350 millimetres;
(i) does not have any structure that fully encloses the occupant area; and
(j) has an electric motor with a continuous rated output power not exceeding 1000 watts that is incapable of providing propulsion assistance when the bicycle attains a speed of 32 kilometres per hour or more.

"Commercial Electric Kick-Scooter" means an Electric Kick-Scooter that is owned by a corporation or individual that allows other individuals or corporations to use the Electric Kick-Scooter on a temporary membership basis or fee per use basis or any other commercial arrangement, including free trials, between the parties for the use of the Electric Kick-Scooter.

Part 2
PROHIBITIONS

Prohibited – sidewalks, Hiking trial, ESA, natural park area

2.1 No person shall operate an Electric Kick-Scooter or a Cargo Power-assisted Bicycle:

(a) on a sidewalk as defined under the Streets By-law;
(b) on a Hiking trail as defined under the Parks and Recreation Area By-law;
(c) in an Environmentally Significant Area (ESA) or a natural park area as defined under the Parks and Recreation Area By-law, unless authorized under the Parks and Recreation Area By-law.

Prohibited – Commercial Electric Kick-Scooter

2.2 No person shall provide or cause to be provided Commercial Electric Kick-Scooters anywhere in the City, unless specifically authorized by The Corporation of the City of London by way of permit, licence or contract with The Corporation of the City of London.

Part 3
PERMITTED

Permitted - Electric Kick-Scooter– highway, bicycle lane – not sidewalk

3.1(1) Subject to sections 2.1, 2.2 and subsection 3.1(2), a person is permitted to operate an Electric Kick-Scooter on the following property under the jurisdiction of The Corporation of the City of London:

(a) on a highway (excluding the sidewalk and excluding those portions of the highways where the use is prohibited under s. 35 and Schedule 22 of the Traffic and Parking By-law and excluding those highways that have a posted rate of speed of more than 50 kilometres per hour). Where Reserved Lanes for bicycles are provided on a highway, the Electric Kick-Scooter is permitted and required to use such Reserved Lanes, and where there are no Reserved Lanes for bicycles on a highway, the Electric Kick-Scooter shall be operated as close to the right edge of the shoulder or edge of roadway as possible; and

(b) on a trail, path, walkway or in a park (excluding Hiking trails and Environmentally Significant Areas (ESA) and natural parks all as defined under the Parks and Recreation Area By-law, unless authorized under the Parks and Recreation Area By-law).

3.1(2) The permission under subsection 3.1(1) to operate an Electric Kick-Scooter or a Cargo Power-assisted Bicycle is subject to the person complying with the applicable Ontario Regulation 389/19 and 141/21, as amended from time to time.

Permitted – Cargo Power-assisted Bicycle– highway, bicycle lane – not sidewalk

3.2(1) Subject to sections 2.1, 2.2 and subsection 3.2(2), a person is permitted to operate a Cargo Power-assisted Bicycle on the following property under the jurisdiction of The Corporation of the City of London:

(a) on a highway (excluding the sidewalk and excluding those portions of the highways where the use is prohibited under s. 35 and Schedule 22 of the Traffic and Parking By-law and excluding those highways that have a posted rate of speed of more than 50 kilometres per hour). Where Reserved Lanes for bicycles are provided on a highway, the Cargo Power-assisted Bicycle is permitted and required to use such Reserved Lanes, and where there are no Reserved Lanes for bicycles on a highway, the Cargo Power-assisted Bicycle shall be operated as close to the right edge of the shoulder or edge of roadway as possible; and

(b) on a trail, path, walkway or in a park (excluding Hiking trails and Environmentally Significant Areas (ESA) and natural parks all as defined under the Parks and Recreation Area By-law, unless authorized under the Parks and Recreation Area By-law).

3.2(2) The permission under subsection 3.2(1) to operate a Cargo Power-assisted Bicycle is subject to the person complying with Ontario Regulation 141/21, as amended from time to time.

3.2(3) The permission under subsection 3.2(1) to operate a Cargo Power-assisted Bicycle for commercial or business purposes is subject to any additional licensing requirements under the City's Business Licensing By-law.

Part 4
COMPLIANCE AND ADMINISTRATIVE PENALTY

4.1 Every person who fails to comply with any provision of this by-law is liable to pay an administrative monetary penalty as per the Administrative Monetary Penalty System By-law;

4.2 Penalty notices indicating non-compliance with the by-law shall be issued in accordance with the Administrative Monetary Penalty System By-law.

PART 5
REVOCATION

5.1. The definition of "Electric Kick Scooter" in section 1.1, the phrase "Electric Kick Scooter" in section 2.1, and section 3.1, are all repealed on November 27, 2024, being the date that the Province's Pilot Project – Electric Kick Scooters Regulation is revoked.

5.2 This By-law is repealed on March 1, 2026, being the date that the Province's Pilot Project – Cargo Power-assisted Bicycles is revoked.

Part 6
MISCELLANEOUS

Administration
6.1 The Deputy City Manager, Environment and Infrastructure is responsible for the administration of the By-law.

Short Title
6.2 The short title of this by-law is the Electric Kick-Scooter and Cargo Power-assisted Bicycle By-law.

Effective date
6.3 This By-law shall come into force and effect on the day it is passed.

PASSED in Open Council on March 7, 2023.

Josh Morgan
Mayor

Michael Schulthess
City Clerk

First Reading – March 7, 2023
Second Reading – March 7, 2023
Third Reading – March 7, 2023

Schedule 1 (O.Reg. 389/19)
Highway Traffic Act

ONTARIO REGULATION 389/19

PILOT PROJECT - ELECTRIC KICK-SCOOTERS

Consolidation Period: From January 1, 2020 to the e-Laws currency date.

Note: This Regulation is revoked on November 27, 2024, the fifth anniversary of the day it was filed. (See: O. Reg. 389/19, s. 14)

Last amendments: 389/19.

Legislative History: 389/19.

This is the English version of a bilingual regulation.

Definitions

1. (1) In this Regulation,

"electric kick-scooter" means a vehicle that has,

(a) two wheels placed along the same longitudinal axis, one placed at the front of the kick-scooter and one at the rear,

(b) a platform for standing between the two wheels,

(c) a steering handlebar that acts directly on the steerable wheel, and

(d) an electric motor not exceeding 500 watts that provides a maximum speed of 24 kilometres per hour; ("trottinette électrique")

"public park" means a provincial park or land designated by a municipality for use as a park. ("parc public")

(2) An electric kick-scooter is deemed not to be a motor vehicle under the Act.

(3) Despite subsection (2), any municipal by-law that governs or prohibits the operation of a motorized vehicle applies to an electric kick-scooter unless the by-law provides otherwise.

Pilot project re electric kick-scooters

2. A pilot project to evaluate the use and operation of electric kick-scooters is established.

Prohibition

3. No person shall operate an electric kick-scooter on a highway, sidewalk, trail, path or walkway or in a public park or exhibition ground unless,

(a) such operation is permitted by and in accordance with this Regulation; and

(b) where the highway, sidewalk, trail, path, walkway, public park or exhibition ground is under the jurisdiction of a municipality, such operation is permitted by and in accordance with a municipal by-law.

Where electric kick-scooters permitted

4. (1) Subject to subsection (2), a person may operate an electric kick-scooter on a roadway or on the shoulder of a highway.

(2) An electric kick-scooter shall not be operated on,

(a) those parts of the controlled-access highways described in Schedule 1 to Regulation 627 of the Revised Regulations of Ontario, 1990 (Use of Controlled-Access Highways by Pedestrians) made under the Act;

(b) those parts of the controlled-access highways described in Schedule 1 to Regulation 630 of the Revised Regulations of Ontario, 1990 (Vehicles on Controlled-Access Highways) made under the Act; or

(c) any highway to which access by pedestrians or bicycles is prohibited under any Act, regulation or municipal by-law.

Roadway use

5. (1) Where bicycle lanes are provided on a highway, an electric kick-scooter shall only be operated in the bicycle lanes.

(2) Despite subsection (1), where the highway is located in a tunnel or underpass, an electric kick-scooter may be operated on a sidewalk in the tunnel or underpass rather than the bicycle lane except where such operation is prohibited by municipal by-law.

(3) Where bicycle lanes are not provided on a highway or where the operation of electric kick-scooters in bicycle lanes is prohibited by municipal by-law, an electric kick-scooter shall only be operated,

(a) if there is a shoulder on the highway, on the shoulder as close to the right edge of the shoulder as possible; or

(b) if there is no shoulder on the highway, on the right side of the roadway as close to the edge of the roadway as possible.

Application of the Act

6. (1) Parts II, IV, VI and X.3, sections 179 and 199 and subsection 214 (2) of the Act do not apply to the operation of an electric kick-scooter or to a person who operates an electric kick-scooter.

(2) Sections 140 and 144 of the Act apply to an electric kick-scooter as if the electric kick-scooter were a bicycle.

(3) When an electric kick-scooter is being operated on a sidewalk, trail, path or walkway or in a public park or exhibition ground, the provisions of the Act, other than the Parts and sections listed in subsection (1), apply to the operation of the electric kick-scooter and to the operator of the electric kick-scooter as if the electric kick-scooter were a bicycle and the operator a cyclist.

(4) When an electric kick-scooter is being operated on a roadway or on the shoulder of a highway, the provisions of the Act, other than the Parts and sections listed in subsection (1) or the provisions listed in subsection (2), apply to the operation of the electric kick-scooter and to its operator as if the electric kick-scooter were a bicycle and the operator a cyclist.

Safe operation

7. (1) The operator of an electric kick-scooter shall keep a safe distance from pedestrians and other users of the roadway, shoulder, sidewalk, trail, path, walkway, public park or exhibition ground at all times and shall give way to a pedestrian or bicycle by slowing or stopping, as necessary, where there is insufficient space for the pedestrian or bicycle and the electric kick-scooter to pass.

(2) An electric kick-scooter shall not be operated on a sidewalk, trail, path or walkway or in a public park or exhibition ground at a speed that is markedly greater than the speed of the pedestrians who are proximate to the electric kick-scooter.

(3) Every electric kick-scooter shall be equipped with a bell or horn which shall be kept in good working order and sounded whenever it is reasonably necessary to notify cyclists, pedestrians or others of its approach.

(4) When operated at any time from one-half hour before sunset to one-half hour after sunrise and at any other time when, due to insufficient light or unfavourable atmospheric conditions, persons and vehicles are not clearly discernible at a distance of 150 metres or less, every electric kick-scooter shall carry a lighted lamp displaying a white or amber light at the front and a lighted lamp displaying a red light at the rear.

(5) The lamps referred to in subsection (4) may be attached to the electric kick-scooter or may be carried or worn by the operator on his or her person.

(6) An electric kick-scooter shall not be operated in such a manner that it may harm, injure or damage, either directly or indirectly, any person or property.

General rules re operation

8. (1) No person under the age of 16 years shall operate an electric kick-scooter.

(2) No person operating an electric kick-scooter shall carry any other person thereon.

(3) No person operating an electric kick-scooter shall tow another person, vehicle or device.

(4) No person operating an electric kick-scooter shall attach himself or herself to another electric kick-scooter, vehicle or device for the purpose of being drawn or towed.

(5) No person operating an electric kick-scooter shall operate it in any position other than while standing at all times.

(6) No cargo may be carried on an electric kick-scooter.

(7) No person operating an electric kick-scooter shall leave it in a location that is intended for the passage of vehicles or pedestrians.

Equipment

9. (1) An electric kick-scooter shall have one or more electric batteries that are the sole source of power to the motor.

(2) An electric kick-scooter shall not have,

(a) a seat, surface or structure that could be used as a seat;

(b) pedals attached to it;

(c) a basket attached to it;

(d) wheels with a diameter of more than 430 millimetres; or

(e) any structure to enclose the electric kick-scooter.

(3) The weight of an electric kick-scooter, including the weight of the battery but otherwise unladen, shall not exceed 45 kilograms.

(4) The battery and motor of an electric kick-scooter shall be securely fastened to the electric kick-scooter to prevent them from moving while the electric kick-scooter is in motion.

(5) All electric terminals on an electric kick-scooter shall be completely insulated and covered.

(6) An electric kick-scooter shall not be modified after its manufacture in any way that may result in increasing its power or its maximum speed beyond the limits set out in the definition of “electric kick-scooter”.

(7) The motor of an electric kick-scooter shall cease to propel the electric kick-scooter forward if the accelerator is released or the brakes are applied.

(8) The braking system of an electric kick-scooter must be capable of bringing the electric kick-scooter, while being operated at a speed of 24 kilometres per hour on a clean, paved and level surface, to a full stop within nine metres from the point at which the brakes were applied.

(9) An electric kick-scooter and all of its components shall be maintained in good working order at all times.

Helmets

10. A person who is under 18 years old shall wear a helmet that complies with the requirements of subsection 104 (1) or (2.1) of the Act when operating an electric kick-scooter.

Operator to stop for police officer

11. Every operator of an electric kick-scooter shall stop when required to do so by a police officer and shall, on the demand of the police officer,

(a) surrender his or her driver’s licence, if he or she has one and has it in his or her possession, for reasonable inspection by the officer; or

(b) provide the officer with his or her correct name, address and date of birth.

Duty to report accident

12. (1) Where an electric kick-scooter is involved in an accident with a pedestrian, animal or vehicle that results in personal injury or property damage, the operator of the electric kick-scooter shall forthwith report the accident to a police officer and furnish him

or her with the information concerning the accident as may be required by the officer under subsection (2).

(2) A police officer receiving a report of an accident, as required by this section, shall secure from the person making the report, or by other inquiries where necessary, the particulars of the accident, the persons involved, the extent of the personal injuries or property damage, if any, and the other information that may be necessary to complete a written report concerning the accident and shall forward the report to the Registrar within 10 days of the accident.

(3) The report of a police officer under subsection (2) shall be in the form that is approved by the Minister.

Reports to Minister

13. Any municipality in which electric kick-scooters are being used shall, if requested by the Minister, report to the Minister on the use of electric kick-scooters in the municipality, or on any aspect of such use as may be specified by the Minister.

Revocation

14. This Regulation is revoked on the fifth anniversary of the day it is filed.

15. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION).

Schedule 2 (O.Reg. 141/21)
Highway Traffic Act

ONTARIO REGULATION 141/21

PILOT PROJECT - CARGO POWER-ASSISTED BICYCLES

Consolidation Period: From April 29, 2021 to the e-Laws currency date.

Note: This Regulation is revoked on March 1, 2026. (See: O. Reg. 141/21, s. 14)

Last amendment: 321/21.

Legislative History: 141/21, 321/21.

This is the English version of a bilingual regulation.

Definitions

1. (1) In this Regulation,

"cargo power-assisted bicycle" means a pedal-driven bicycle of conventional exposed fork-and-frame bicycle design and appearance that,

(a) has two or three wheels,

(b) is fitted at all times with pedals that are always operable to propel the bicycle,

(c) has a platform, basket or container for carrying cargo, parcels or goods,

(d) has steering handlebars,

(d.1) has a weight of more than 55 kilograms,

(e) has a width not exceeding 1.3 metres,

(f) has a length not exceeding 4 metres,

(g) has a height not exceeding 2.2 metres,

(h) has wheels that have a width of not less than 35 millimetres and a diameter of not less than 350 millimetres,

(i) does not have any structure that fully encloses the occupant area, and

(j) has an electric motor with a continuous rated output power not exceeding 1000 watts that is incapable of providing propulsion assistance when the bicycle attains a speed of 32 kilometres per hour or more; ("vélo cargo assisté")

"public park" means a provincial park or land designated by a municipality for use as a park. ("parc public") O. Reg. 141/21, s. 1 (1); O. Reg. 321/21, s. 1.

(2) A cargo power-assisted bicycle is deemed not to be a motor vehicle under the Act. O. Reg. 141/21, s. 1 (2).

(3) Despite subsection (2), any municipal by-law that governs or prohibits the operation of a motorized vehicle applies to a cargo power-assisted bicycle unless the by-law provides otherwise. O. Reg. 141/21, s. 1 (3).

Pilot project re cargo power-assisted bicycles

2. A pilot project to evaluate the use and operation of cargo power-assisted bicycles is established.

Prohibition

3. No person shall operate a cargo power-assisted bicycle on a highway, sidewalk, trail, path or walkway or in a public park or exhibition ground unless,

(a) such operation is permitted by and in accordance with this Regulation; and

(b) where the highway, sidewalk, trail, path, walkway, public park or exhibition ground is under the jurisdiction of a municipality, such operation is permitted by and in accordance with a municipal by-law.

Where cargo power-assisted bicycles permitted

4. (1) Subject to subsection (2), a person may operate a cargo power-assisted bicycle on a roadway or on the shoulder of a highway.

(2) A cargo power-assisted bicycle shall not be operated on,

(a) those parts of the controlled-access highways described in Schedule 1 to Regulation 627 of the Revised Regulations of Ontario, 1990 (Use of Controlled-Access Highways by Pedestrians) made under the Act;

(b) those parts of the controlled-access highways described in Schedule 1 to Regulation 630 of the Revised Regulations of Ontario, 1990 (Vehicles on Controlled-Access Highways) made under the Act; or

(c) any highway to which access by pedestrians or bicycles is prohibited under any Act, regulation or municipal by-law.

Roadway use

5. (1) Where bicycle lanes are provided on a highway, a cargo power-assisted bicycle shall only be operated in the bicycle lanes.

(2) Despite subsection (1), where the highway is located in a tunnel or underpass, a cargo power-assisted bicycle may be operated on a sidewalk in the tunnel or underpass rather than the bicycle lane except where such operation is prohibited by municipal by-law.

(3) Where bicycle lanes are not provided on a highway or where the operation of cargo power-assisted bicycles in bicycle lanes is prohibited by municipal by-law, a cargo power-assisted bicycle shall only be operated,

(a) if there is a shoulder on the highway, on the shoulder as close to the right edge of the shoulder as possible; or

(b) if there is no shoulder on the highway, on the right side of the roadway as close to the edge of the roadway as possible.

Application of the Act

6. The Act and the regulations apply to the operation of a cargo power-assisted bicycle and to a person who operates a cargo power-assisted bicycle.

Safe operation

7. (1) The operator of a cargo power-assisted bicycle shall keep a safe distance from pedestrians and other users of the roadway, shoulder, sidewalk, trail, path, walkway, public park or exhibition ground at all times and shall give way to a pedestrian or bicycle by slowing or stopping, as necessary, where there is insufficient space for the pedestrian or bicycle and the cargo power-assisted bicycle to pass.

(2) A cargo power-assisted bicycle shall not be operated on a sidewalk, trail, path or walkway or in a public park or exhibition ground at a speed that is markedly greater than the speed of the pedestrians who are proximate to the cargo power-assisted bicycle.

(3) The operator of a cargo power-assisted bicycle shall sound the bell or horn on the cargo power-assisted bicycle whenever it is reasonably necessary to notify cyclists, pedestrians or others of its approach.

(4) The operator of a cargo power-assisted bicycle shall, when operating the cargo power-assisted bicycle at any time from one-half hour before sunset to one-half hour after sunrise and at any other time when, due to insufficient light or unfavourable atmospheric conditions, persons and vehicles are not clearly discernible at a distance of 150 metres or less, ensure the bicycle has a lighted lamp at the front displaying a white or amber light, and at the rear either a lighted lamp displaying a red light or a reflector.

(5) A cargo power-assisted bicycle shall not be operated in such a manner that it may harm, injure or damage, either directly or indirectly, any person or property.

General rules re operation

8. (1) No person under the age of 16 years shall operate a cargo power-assisted bicycle.

(2) No person operating a cargo power-assisted bicycle shall carry any other person thereon unless the bicycle was manufactured to carry passengers.

(3) No person operating a cargo power-assisted bicycle shall tow another person, vehicle or device.

(4) No person operating a cargo power-assisted bicycle shall attach the bicycle to another cargo power-assisted bicycle, vehicle or device for the purpose of being drawn or towed.

(5) No person operating a cargo power-assisted bicycle shall leave it in a location that is intended for the passage of vehicles or pedestrians.

(6) No person operating a cargo power-assisted bicycle shall carry any dangerous or hazardous goods.

(7) No person shall operate or permit to be operated a cargo power-assisted bicycle that carries a load unless the load is loaded, bound, secured, contained or covered so that no portion of the load may become dislodged or fall, leak, spill or blow from the cargo power-assisted bicycle.

Equipment

9. (1) A cargo power-assisted bicycle shall have one or more electric batteries that are the sole source of power to the motor.

(2) A cargo power-assisted bicycle shall be equipped with a bell or horn which shall be kept in good working order.

(3) The battery and motor of a cargo power-assisted bicycle shall be securely fastened to the cargo power-assisted bicycle to prevent them from moving while the cargo power-assisted bicycle is in motion.

(4) A cargo power-assisted bicycle shall have a lamp displaying a white or amber light at the front and a lamp displaying a red light or a reflector at the rear that are each clearly discernible at a distance of 150 metres or less.

(5) A cargo power-assisted bicycle shall have white reflective material placed on its front forks, and red reflective material covering a surface of not less than 250 millimetres in length and 25 millimetres in width placed at the rear.

(6) A cargo power-assisted bicycle shall not be modified after its manufacture in any way that results in increasing the total continuous rated output power of its electric motor beyond 1000 watts, or that results in increasing its maximum assisted speed beyond 32 kilometres per hour.

(7) A cargo power-assisted bicycle shall not be modified after its manufacture in any way that results in the cargo power-assisted bicycle being propelled by any form of non-muscular propulsion other than its electric motor.

(8) The motor of a cargo power-assisted bicycle shall cease to propel the cargo power-assisted bicycle forward if the accelerator is released or the brakes are applied.

(9) The brakes of a cargo power-assisted bicycle must be capable of bringing the bicycle, while being operated at a speed of 30 kilometres per hour on a clean, paved and level surface, to a full stop within nine metres from the point at which the brakes were applied.

(10) A cargo power-assisted bicycle and all of its components shall be maintained in good working order at all times.

Helmets

10. Every person operating or riding on a cargo power-assisted bicycle shall wear a helmet that complies with the requirements of subsection 104 (1) or (2.1) of the Act.

Operator to stop for police officer

11. Every operator of a cargo power-assisted bicycle shall stop when required to do so by a police officer and shall, on the demand of the police officer,

(a) surrender his or her driver’s licence, if he or she has one and has it in his or her possession, for reasonable inspection by the officer; or

(b) provide the officer with his or her correct name, address and date of birth.

Duty to report accident

12. (1) Where a cargo power-assisted bicycle is involved in an accident with a pedestrian, animal or vehicle that results in personal injury or property damage, the operator of the cargo power-assisted bicycle shall forthwith report the accident to a police officer and furnish him or her with the information concerning the accident as may be required by the officer under subsection (2).

(2) A police officer receiving a report of an accident, as required by this section, shall secure from the person making the report, or by other inquiries where necessary, the particulars of the accident, the persons involved, the extent of the personal injuries or property damage, if any, and the other information that may be necessary to complete a written report concerning the accident and shall forward the report to the Registrar within 10 days of the accident.

(3) The report of a police officer under subsection (2) shall be in the form that is approved by the Minister.

Reports to Minister

13. Any municipality in which cargo power-assisted bicycles are being used shall, if requested by the Minister, report to the Minister on the use of cargo power-assisted bicycles in the municipality, or on any aspect of such use as may be specified by the Minister.

14. OMITTED (PROVIDES FOR AMENDMENTS TO THIS REGULATION).

15. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION).

APPENDIX B
A by-law to amend the Regulate Traffic and Parking of Motor Vehicles By-law (PS-114)

Bill No.
2023

By-law No.

A By-law to amend By-law PS-114 entitled, “A by-law to regulate traffic and the parking of motor vehicles in the City of London”.

WHEREAS the *Highway Traffic Act*, R.S.O. 1990, c. H.8 (“*Highway Traffic Act*”) provides in Part XVI s. 228 that the Lieutenant Governor in Council may by regulation authorize or establish a project for research into or testing or evaluation of any matter governed by the *Highway Traffic Act* or relevant to highway traffic;

AND WHEREAS the *Highway Traffic Act* establishes in section 228(8) that every person who contravenes a regulation made under that section is guilty of an offence and on conviction is liable to a fine of not less than $250 and not more than $2,500;

AND WHEREAS Ontario Regulation 389/19 entitled “Pilot Project – Electric Kick-Scooters” established a pilot project to evaluate the use and operation of electric kick-scooters, and is to be revoked on November 27, 2024;

AND WHERAS Ontario Regulation 141/21 entitled “Pilot Project – Cargo Power-Assisted Bicycles” established a pilot project to evaluate the use and operation of cargo power-assisted bicycles, and is to be revoked on March 1, 2026;

AND WHEREAS these Pilot Projects prohibit the use of Electric Kick-Scooters and Cargo Power-Assisted Bicycles on a highway, sidewalk, trail, path or walkway or in a public park or exhibition ground under municipal jurisdiction unless such operation is permitted by the Regulation, and where such operation is permitted by a municipal by-law;

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

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

AND WHEREAS subsection 10(1) of the *Municipal Act, 2001* provides that a municipality may provide any service or thing that the municipality considers necessary or desirable for the public;

AND WHEREAS subsection 10(2) of the Municipal Act, 2001 provides that a municipality may pass by-laws respecting: in paragraph 4, Public assets of the municipality acquired for the purpose of exercising its authority under this or any other Act; in paragraph 5, Economic, social and environmental well-being of the municipality, including respecting climate change; in paragraph 6, Health, safety and well-being of persons; in paragraph 7, Services and things that the municipality is authorized to provide under subsection (1); in paragraph 8, Protection of persons and property; and in paragraph 10, Structures, including fences and signs;

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

1. Section 1 of by-law PS-114 is amended by adding the following new definition of “Cargo Power-assisted Bicycle” after the definition of “bicycle”:

“Cargo Power-assisted Bicycle” means a pedal-driven bicycle of conventional exposed fork-and-frame bicycle design and appearance that,
(a) has two or three wheels;
(b) is fitted at all times with pedals that are always operable to propel the bicycle;
(c) has a platform, basket or container for carrying cargo, parcels or goods,
(d) has steering handlebars;
(d.1) has a weight of more than 55 kilograms;
(e) has a width not exceeding 1.3 metres;
(f) has a length not exceeding 4 metres;
(g) has a height not exceeding 2.2 metres;
(h) has wheels that have a width of not less than 35 millimetres and a diameter of not less than 350 millimetres;
(i) does not have any structure that fully encloses the occupant area; and
(j) has an electric motor with a continuous rated output power not exceeding 1000 watts that is incapable of providing propulsion assistance when the bicycle attains a speed of 32 kilometres per hour or more.

2. Section 1 of by-law PS-114 is amended by adding the following new definition of “Electric Kick-Scooter” after the definition of “driveway access”:

“Electric Kick-Scooter” means a vehicle that has,
(a) two wheels placed along the same longitudinal axis, one placed at the front of the kick scooter and one at the rear;
(b) a platform for standing between the two wheels;
(c) a steering handlebar that acts directly on the steerable wheel; and
(d) an electric motor not exceeding 500 watts that provides a maximum speed of 24 kilometres per hour.

3. The definition of “motor vehicle” in Section 1 of by-law PS-114 is deleted and replaced with the following new definition:

"motor vehicle" includes an automobile, motorcycle, motor assisted bicycle unless otherwise indicated in this by-law, and any other vehicle propelled or driven otherwise than by muscular power, but does not include a Cargo Power-Assisted Bicycle or an Electric Kick-Scooter, a streetcar, or other motor vehicles running only upon rails, or a motorized snow vehicle, traction engine, farm tractor, self-propelled implement of husbandry or road building machine within the meaning of the *Highway Traffic Act*;

4. Subsection 23(2) of by-law PS-114 is amended by deleting the period at the end of subsection (k) and replacing it with the phrase “; and”, and adding a new subsection (l) after subsection (k) as follows:

(l) the operation of a vehicle as part of a Pilot Project established by the Province of Ontario if the operation of that vehicle is permitted in a Reserved Lane by City of London By-law passed in connection with the Pilot Project;

5. Section 35 of by-law PS-114 is amended by adding the phrase “an Electric Kick-Scooter, a Cargo Power-assisted Bicycle” after the phrase “a motor assisted wheelchair”.

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

PASSED in Open Council on March 7, 2023.

Josh Morgan
Mayor

Michael Schulthess
City Clerk

First Reading – March 7, 2023
Second Reading – March 7, 2023
Third Reading – March 7, 2023

APPENDIX C
A by-law to amend the Streets By-law (S-1)

Bill No.
2023

By-law No.

A By-law to amend By-law No. S-1, entitled “A by-law to provide for the REGULATION OF STREETS”

WHEREAS the *Highway Traffic Act*, R.S.O. 1990, c. H.8 (“*Highway Traffic Act*”) provides in Part XVI s. 228 that the Lieutenant Governor in Council may by regulation authorize or establish a project for research into or testing or evaluation of any matter governed by the *Highway Traffic Act* or relevant to highway traffic;

AND WHEREAS the *Highway Traffic Act* establishes in section 228(8) that every person who contravenes a regulation made under that section is guilty of an offence and on conviction is liable to a fine of not less than $250 and not more than $2,500;

AND WHEREAS Ontario Regulation 389/19 entitled “Pilot Project – Electric Kick-Scooters” established a pilot project to evaluate the use and operation of electric kick-scooters, and is to be revoked on November 27, 2024;

AND WHERAS Ontario Regulation 141/21 entitled “Pilot Project – Cargo Power-Assisted Bicycles” established a pilot project to evaluate the use and operation of cargo power-assisted bicycles, and is to be revoked on March 1, 2026;

AND WHEREAS these Pilot Projects prohibit the use of Electric Kick-Scooters and Cargo Power-Assisted Bicycles on a highway, sidewalk, trail, path or walkway or in a public park or exhibition ground under municipal jurisdiction unless such operation is permitted by the Regulation, and where such operation is permitted by a municipal by-law;

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

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

AND WHEREAS subsection 10(1) of the *Municipal Act, 2001* provides that a municipality may provide any service or thing that the municipality considers necessary or desirable for the public;

AND WHEREAS subsection 10(2) of the Municipal Act, 2001 provides that a municipality may pass by-laws respecting: in paragraph 4, Public assets of the municipality acquired for the purpose of exercising its authority under this or any other Act; in paragraph 5, Economic, social and environmental well-being of the municipality, including respecting climate change; in paragraph 6, Health, safety and well-being of persons; in paragraph 7, Services and things that the municipality is authorized to provide under subsection (1); in paragraph 8, Protection of persons and property; and in paragraph 10, Structures, including fences and signs;

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

1. Section 1.1 of by-law S-1 is amended by adding the following new definition of “Cargo Power-assisted Bicycle” after the definition of “Bicycle path”:

Cargo Power-assisted Bicycle - defined

"Cargo Power-assisted Bicycle" means a pedal-driven bicycle of conventional exposed fork-and-frame bicycle design and appearance that,

(a) has two or three wheels;
(b) is fitted at all times with pedals that are always operable to propel the bicycle;
(c) has a platform, basket or container for carrying cargo, parcels or goods,
(d) has steering handlebars;
(d.1) has a weight of more than 55 kilograms;
(e) has a width not exceeding 1.3 metres;
(f) has a length not exceeding 4 metres;
(g) has a height not exceeding 2.2 metres;
(h) has wheels that have a width of not less than 35 millimetres and a diameter of not less than 350 millimetres;
(i) does not have any structure that fully encloses the occupant area; and
(j) has an electric motor with a continuous rated output power not exceeding 1000 watts that is incapable of providing propulsion assistance when the bicycle attains a speed of 32 kilometres per hour or more.

2. Section 1.1 of by-law S-1 is amended by adding the following new definition of "Electric Kick-Scooter" after the definition of "City Engineer":

Electric Kick-Scooter - defined

"Electric Kick-Scooter" means a vehicle that has,

(a) two wheels placed along the same longitudinal axis, one placed at the front of the kick scooter and one at the rear;
(b) a platform for standing between the two wheels;
(c) a steering handlebar that acts directly on the steerable wheel; and
(d) an electric motor not exceeding 500 watts that provides a maximum speed of 24 kilometres per hour.

3. Section 2.11 of by-law S-1 is amended by adding the following sentence after the final sentence:

"This section shall not apply to a person who operates an Electric Kick-Scooter or a Cargo Power-Assisted Bicycle along a bicycle path if such operation is specifically permitted by another by-law of the City of London."

4. Section 2.12 of by-law S-1 is deleted and replaced with the following new section 2.12:

"2.12 Motor vehicle - bicycle - on sidewalk - exceptions

(a) No person shall, without lawful authority, either by themselves or by permitting others, operate a motor vehicle (including an automobile, a motorcycle, motor assisted bicycle), a motorized snow vehicle, a traction engine, an Electric Kick-Scooter, a bicycle, or a power-assisted bicycle (including a Cargo Power-assisted Bicycle), along a sidewalk.

(b) Subsection (a) shall not apply to a person who,

(i) operates an Electric Personal Assistive Mobility Device due to a disability, along a sidewalk;
(ii) operates the vehicle across that portion of a sidewalk which intersects with a lawful private entrance;
(iii) operates a bicycle, or Electric Kick-Scooter or Cargo Power-assisted Bicycle if such operation is specifically permitted by another by-law of the City of London, on that portion of a sidewalk which connects a bicycle path with a roadway;
(iv) being under the age of 14, operates a bicycle along a sidewalk.

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

PASSED in Open Council on March 7, 2023.

Josh Morgan
Mayor

Michael Schulthess
City Clerk

First Reading – March 7, 2023
Second Reading – March 7, 2023
Third Reading – March 7, 2023

APPENDIX D
A by-law to amend the Parks and Recreation Area By-law (PR-2)

Bill No.
2023

By-law No.

A By-law to amend By-law No. PR-2, entitled "A by-law relating to the use, protection and regulation of PUBLIC PARKS AND RECREATION AREAS IN THE CITY OF LONDON"

WHEREAS the *Highway Traffic Act*, R.S.O. 1990, c. H.8 ("*Highway Traffic Act*") provides in Part XVI s. 228 that the Lieutenant Governor in Council may by regulation authorize or establish a project for research into or testing or evaluation of any matter governed by the *Highway Traffic Act* or relevant to highway traffic;

AND WHEREAS the *Highway Traffic Act* establishes in section 228(8) that every person who contravenes a regulation made under that section is guilty of an offence and on conviction is liable to a fine of not less than $250 and not more than $2,500;

AND WHEREAS Ontario Regulation 389/19 entitled "Pilot Project – Electric Kick-Scooters" established a pilot project to evaluate the use and operation of electric kick-scooters, and is to be revoked on November 27, 2024;

AND WHERAS Ontario Regulation 141/21 entitled "Pilot Project – Cargo Power-Assisted Bicycles" established a pilot project to evaluate the use and operation of cargo power-assisted bicycles, and is to be revoked on March 1, 2026;

AND WHEREAS these Pilot Projects prohibit the use of Electric Kick-Scooters and Cargo Power-Assisted Bicycles on a highway, sidewalk, trail, path or walkway or in a public park or exhibition ground under municipal jurisdiction unless such operation is permitted by the Regulation, and where such operation is permitted by a municipal by-law;

AND WHEREAS Municipal Council resolved at its Council meeting of July 5, 2022 that Civic Administration bring forward proposed by-law amendments to incorporate cargo e-bikes for personal use and commercial use, and e-scooter use;

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

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

AND WHEREAS subsection 10(1) of the *Municipal Act, 2001* provides that a municipality may provide any service or thing that the municipality considers necessary or desirable for the public;

AND WHEREAS subsection 10(2) of the Municipal Act, 2001 provides that a municipality may pass by-laws respecting: in paragraph 4, Public assets of the municipality acquired for the purpose of exercising its authority under this or any other Act; in paragraph 5, Economic, social and environmental well-being of the municipality, including respecting climate change; in paragraph 6, Health, safety and well-being of persons; in paragraph 7, Services and things that the municipality is authorized to provide under subsection (1); in paragraph 8, Protection of persons and property; and in paragraph 10, Structures, including fences and signs;

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

1. Section 1.1 of by-law PR-2 is amended by adding the following new definition of "Cargo Power-assisted Bicycle" after the definition of "Bulk Feeding":

Cargo Power-assisted Bicycle - defined

"Cargo Power-assisted Bicycle" means a pedal-driven bicycle of conventional exposed fork-and-frame bicycle design and appearance that,

(a) has two or three wheels;
(b) is fitted at all times with pedals that are always operable to propel the bicycle;
(c) has a platform, basket or container for carrying cargo, parcels or goods,
(d) has steering handlebars;
(d.1) has a weight of more than 55 kilograms;
(e) has a width not exceeding 1.3 metres;
(f) has a length not exceeding 4 metres;
(g) has a height not exceeding 2.2 metres;
(h) has wheels that have a width of not less than 35 millimetres and a diameter of not less than 350 millimetres;
(i) does not have any structure that fully encloses the occupant area; and
(j) has an electric motor with a continuous rated output power not exceeding 1000 watts that is incapable of providing propulsion assistance when the bicycle attains a speed of 32 kilometres per hour or more.

2. Section 1.1 of by-law PR-2 is amended by adding the following new definition of "Electric Kick-Scooter" after the definition of "designated":

Electric Kick-Scooter - defined

"Electric Kick-Scooter" means a vehicle that has,

(a) two wheels placed along the same longitudinal axis, one placed at the front of the kick scooter and one at the rear;
(b) a platform for standing between the two wheels;
(c) a steering handlebar that acts directly on the steerable wheel; and
(d) an electric motor not exceeding 500 watts that provides a maximum speed of 24 kilometres per hour.

3. Section 1.1 of by-law PR-2 is amended by deleting the definition of "Hiking trail" and replacing it with the following new definition:

Hiking trail – defined

"Hiking trail' means that part of a park that has been marked, posted or blazed for the purpose of hiking, cross country skiing or running by the public, and which is not pavement or concrete, and excludes certain uses as set out in this by-law. Hiking trails may or may not be accessible to motorized wheel chairs depending on topographic restrictions."

4. Section 1.1 of by-law PR-2 is amended by deleting the definition of "Multi-use Pathway" and replacing it with the following new definition:

Multi-use pathway – defined

"Multi-use pathway' means that part of a park that has been improved with a hard surface and intended for a variety of uses, including pedestrian use, and excludes certain uses as set out in this by-law."

5. The definition of "Power-assisted bicycle" in section 1.1 of by-law PR-2 is repealed and replaced with the following new definition of "Power-assisted bicycle":

Power-assisted bicycle" – defined

"Power-assisted bicycle" has the meaning attributed to it in the Highway Traffic Act and is commonly referred to as an electric bicycle, or e-bike.

6. Subsection 3.1(4) of by-law PR-2 is deleted and replaced with the following new subsection 3.1(4):

"on a multi-use pathway: drive, ride or operate any motor vehicle (including an automobile, motorcycle or motor assisted bicycle), any kind of power-assisted bicycle that weighs more than 120 kg or is capable of providing propulsion assistance when the bicycle attains a speed of 32 kilometres per hour or more, or horse-drawn conveyance;".

7. Subsections 3.1(5) of by-law PR-2 is deleted and replaced with the following new subsection 3.1(5):

"on a hiking trail: drive, ride or operate any motor vehicle (including an automobile, motorcycle or motor assisted bicycle), a bicycle (including a tricycle, unicycle or any kind of power-assisted bicycle), Electric Kick-Scooter, skateboard, or carry on in-line skating;"

8. Subsection 3.1(41) of by-law PR-2 is deleted and replaced with the following new subsection 3.1(41):

"drive, ride or operate a motor assisted bicycle, or any kind of power-assisted bicycle that weighs more than 120 kg or is capable of providing propulsion assistance when the bicycle attains a speed of 32 kilometres per hour or more;"

9. Subsection 3.1(43) of by-law PR-2 is deleted and replaced with the following new subsection 3.1(43):

"drive, ride or operate any kind of power-assisted bicycle or Electric Kick-Scooter unless the person is wearing a helmet that complies with the requirements of the *Highway Traffic Act*.

10. Subsection 5.4(7) of by-law PR-2 is deleted and replaced with the following new subsection 5.4(7):

"No person shall, within the boundaries of an ESA or a natural park area, operate a vehicle (including a motor vehicle, automobile, motorcycle, motor assisted bicycle, tricycle, unicycle, bicycle, any kind of power-assisted bicycle, Electric Kick-Scooter, motorized snow vehicle, or traction engine, unless signs are posted specifically allowing such activity;"

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

PASSED in Open Council on March 7, 2023.

Josh Morgan
Mayor

Michael Schulthess
City Clerk

First Reading – March 7, 2023
Second Reading – March 7, 2023
Third Reading – March 7, 2023

APPENDIX E
A by-law to amend the Administrative Monetary Penalty System (AMPS) By-law (A-54)

Bill No.
2023

By-law No.

A by-law to amend By-law No. A-54, as amended, being “A by-law to implement an Administrative Monetary Penalty System in London” to designate the Electric Kick-Scooter and Cargo Power-assisted Bicycle By-law.

WHEREAS section 434.1 of the Municipal Act authorizes the City to require a person, subject to conditions as the municipality considers appropriate, to pay an administrative penalty if the municipality is satisfied that the person has failed to comply with a by-law of the municipality;

AND WHEREAS the Municipal Council considers it desirable to enforce and seek compliance with the designated by-laws, or portions of those by-laws, through the Administrative Monetary Penalty System;

AND WHEREAS the Municipal Council on June 25, 2019 passed By-law No. A-54, being “A by-law to implement an Administrative Monetary Penalty System in London”;

AND WHEREAS the Municipal Council deems it appropriate to amend Bylaw No. A-54 with respect to contraventions of the Electric Kick-Scooter and Cargo Power-assisted Bicycle By-law;

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

1. The definition of “Administrative Penalty” in Section 1 of By-law A-45 is amended by deleting the phrase “ and ‘A-26’” and replacing it with the phrase “, ‘A-26’ and ‘A-27’”.

2. Section 2.1 of By-law A-45 is amended by adding the phrase “’A-27’” after the phrase “’A-26’”.

3. Section 3.1 and subsection 3.1(a) of By-law A-45 are amended by deleting the phrase “ and ‘A-26’” and replacing it with the phrase “, ‘A-26’ and ‘A-27’”.

4. Schedule “A-1” of By-law No. A-54 is amended to include the Electric Kick-Scooter and Cargo Power-assisted Bicycle By-law.

5. The attached new Schedule “A-27” is added to By-law No. A-54 after Schedule “A-26”. Items 1 to 3 in Column 1 of Schedule “A-27” related to Electric Kick-Scooters are repealed on November 27, 2024. Schedule “A-27” is repealed in its entirety on March 1, 2026.

6. This By-law shall come into force and effect on the day it is passed, subject to the passing by Council of the Electric Kick-Scooter and Cargo Power-assisted Bicycle By-law.

PASSED in Open Council on .

Josh Morgan
Deputy Mayor

Michael Schulthess
City Clerk

First Reading – March 7, 2023
Second Reading – March 7, 2023
Third Reading – March 7, 2023

Schedule "A-27"
Administrative Monetary Penalty System By-law
Penalty Schedule for the Electric Kick-Scooter and Cargo Power-assisted Bicycle By-law

1. For the purposes of Section 2 of this By-law, Column 3 in the following table lists the provisions in the Designated By-law identified in the Schedule, as amended.

2. Column 2 in the following table set out the short form wording to be used in a Penalty Notice for the contravention of the designated provisions listed in Column 3.

3. Column 4 in the following table set out the Administrative Penalty amount that is payable for contraventions of the designated provisions listed in Column 3.

Column 1 Item #	**Column 2 Short Form Wording**	**Column 3 Designated Provision**	**Column 4 Administrative Penalty Amount**
1	operate Electric Kick-Scooter on sidewalk	2.1(a)	$50.00
2	operate Electric Kick-Scooter on Hiking trail	2.1(b)	$50.00
3	operate Electric Kick-Scooter in Environmentally Significant area or natural park area	2.1(c)	$50.00
4	operate Cargo Power-assisted Bicycle on sidewalk	2.1(a)	$50.00
5	operate Cargo Power-assisted Bicycle on Hiking Trail	2.1(b)	$50.00
6	operate Cargo Power-assisted Bicycle in Environmentally Significant area or natural park area	2.1(c)	$50.00
7	provide Commercial Electric Kick-Scooters	2.2	$50.00

Fines may be doubled for any and all subsequent repeat offences.

APPENDIX F
Executive Summaries from Previous Civic Works Committee Reports

Reprinted below is the Executive Summary from Participation in Provincial E-scooter Pilot (June 21, 2022 meeting of Civic Works Committee, Agenda Item 4.2)

Executive Summary

The purpose of this report is to provide Committee and Council with background information and a synopsis of input on participation in the Province's electric kick-style e-scooter pilot. The Provincial e-scooter pilot includes both e-scooters for personal purchase and use, and e-scooter share services (i.e., similar to bike share services).

An e-scooter is a stand-up scooter powered by an electric motor. They are generally designed for use by adults with a large deck in the centre upon which the rider stands. They are a micromobility option (e.g., along with bike share and e-bike share) that is becoming more popular in many North American cities.

Several other Ontario municipalities are examining or participating in the Ontario e-scooter pilot, specifically:

A. Personal E-scooters Programs

- Ottawa, Hamilton, Windsor, York Region, Brampton and Mississauga allow personal e-scooters. The Region of Waterloo will allow them as of July 1, 2022.
- Toronto is currently not allowing either personal use or e-scooter share services.

B. E-scooter Share Programs

- Ottawa and Windsor have e-scooter share services in place. Windsor's system includes e-bikes.
- Hamilton, Brampton and Region of Waterloo (in partnership with cities of Cambridge, Kitchener and Waterloo), are working towards e-scooter share services.
- Mississauga is reviewing e-scooter share.

Contact was made with many of these municipalities in 2021 and 2022. In addition, details provided by e-scooter vendors and other on-line sources was reviewed by City staff.

In London, the public, City advisory committees, City service areas, and partner organizations' feedback was collected in the summer of 2021. In summary, a range of feedback was received. For the public, overall, those who have tried or own an e-scooter are supportive of allowing them in London. Generally, those who have no experience with e-scooters are not supportive.

This report includes recommendations for both options of the provincial pilot, personal e-scooters and e-scooter share systems:

- With respect to personal e-scooters; Civic Administration recommend that for the remainder of the provincial pilot (ends December 2024), allow e-scooters for personal use in the same locations where bicycles are allowed for adults (i.e., not on sidewalks) and update related by-laws. This option recognises that personal e-scooters are already in use in London, they provide an efficient transportation option for many Londoners, and they should be recognised in municipal by-laws. This option is referred to in the report as A-1. Allow Personal E-scooters and Update By-laws.

- With respect to e-scooter share programs; Civic Administration recommend not participating in the e-scooter share portion of the provincial pilot. Rather, it is recommended London proceed with monitoring and reviewing other municipalities' pilots to learn about their services' set-up and challenges, and how they dealt with by-law updates. This information will be used to inform the development of the Mobility Master Plan and the implementation of the Climate Emergency Action Plan and The London Plan. This option is referred to as B-3. Do Not Join the Provincial Pilot; Monitor and Review Other Municipalities' Pilots

Financial Impact/Considerations
This review, analysis and recommended direction has identified three main items with respect to financial considerations noting that the financial impact may occur in a different project as noted in number 3 below:

1. A-1. Allow Personal E-scooters and Update By-laws
   Existing City staff resources will be used to review and address relevant municipal by-laws. There is no additional financial impact for City staff. During the Pilot, discussions will occur with London Police Services and Municipal Compliance staff from an enforcement perspective.

2. B-3. Do Not Join the Provincial Pilot; Monitor and Review Other Municipalities' Pilots
   Existing City staff resources will be used to monitor and review e-scooter share pilot programs and full-scale programs. There is no additional financial impact for City staff.

3. City staff still recommend proceeding with a bike share system, with a Request for Proposals (RFP) to be issued later in 2022. This matter will be the subject of a future Civic Works Committee report. The absence of e-scooters within the bike share system RFP may impact the financial aspects of a bike share system.

…….

Reprinted below is the Executive Summary from Participation in Provincial Cargo E-bike Pilot (June 21, 2022 meeting of Civic Works Committee, Agenda Item 4.1)

Executive Summary

Cargo e-bikes are a type of electric-powered bike with a platform or box to carry larger items like packages and boxes for deliveries. Individuals use them for transporting larger items for personal use (e.g., groceries) or children as passengers, often as an alternative to using an automobile. Businesses use them to deliver products and/or services. Cargo e-bikes, particularly personal use cargo e-bikes, are already present in London and it would be prudent to pilot a by-law framework for their safe and efficient use.

The Province of Ontario has defined a cargo e-bike as being over 55 kilograms. Similar style e-bikes that are less than 55 kilograms are considered to be the same as standard e-bikes.

Ottawa and Toronto are currently participating in the provincial pilot, including the development of new permitting and licencing processes for commercial cargo e-bikes that include requirements for company logos and identifying numbers, offering annual short-term parking permits for each bike in use, and allowing commercial cargo e-bikes to be in loading zones and no-parking zones for up to 15 minutes.

In the Summer 2021, public input on the use of cargo e-bikes was gathered primarily through the Get Involved platform. For personal use cargo e-bikes, most respondents who had no experience with one expressed a willingness to try them. This group of respondents had some concerns about unsafe bike lanes and the chance of increasing congestion. Respondents with experience noted that this mode of transportation is environmentally friendly, helpful, and safe. This group of respondents also noted that more connected and safe dedicated bike lanes are required.

For commercial use cargo e-bikes, 32 per cent of respondents were willing to use it in the future for business purposes, and the other 68 per cent do not plan to own one in the future at this time.

The potential introduction of both personal and commercial use cargo e-bikes was also discussed with several City service areas and partner organizations. The overall themes to the feedback received included:

- Restrict all cargo e-bikes from riding or parking on sidewalks;
- Restrict commercial cargo e-bike use in parks, along pathways, and the Thames Valley Parkway (TVP);
- Enforcement will need to be addressed;
- Need dedicated parking locations for commercial cargo e-bikes;
- Develop education, including rules of the road, in advance of pilot participation; and
- Otherwise, treat cargo e-bikes the same as bicycles.

Based on feedback received, City staff recommend the following:

- Join the pilot for personal cargo e-bikes, with associated by-law updates. This would include a review of current municipal by-laws. A review of municipal by-laws would also allow for the recognition of other, new, larger mobility devices, such as those envisioned for riders in the Province of Ontario's Urban Mobility Vehicle Pilot. This option is referred to in the report as A-1. Allow Personal Cargo E-bikes and Update By-law. This recommendation will allow Londoners to purchase any cargo e-bike, ride it legally (where allowed), and eliminate the need to recognise the difference between e-bikes under 55 kilograms and cargo e-bikes over 55 kilograms for enforcement purposes. The recommendation also recognises that a cargo e-bike can be a viable alternative to owning a second car. Personal cargo e-bikes would not be allowed to operate or park on sidewalks.

- Develop a pilot program for commercial use of cargo e-bikes, including licensing rules, fees and parking requirements. This is one action local businesses can take that supports the Climate Emergency Action Plan. Commercial cargo e-bikes would not be allowed to operate or park on sidewalks. This option is referred to in the report as B-1. Full Cargo E-bike Pilot Participation.

Financial Impact/Considerations
The costs associated with both the personal and commercial pilot projects are expected to be minor in nature as the number of cargo e-bikes is expected to be modest over the term of the pilot projects. Minor costs associated with educational and promotional materials, as well as the licensing of commercial pilot project participants, is expected to be between $5,000 and $10,000 and can be absorbed in existing budgets during the pilot projects.

Hi,

I would like to register my colleague (Ms. Alex Petre - cc'ed on this email) to speak virtually at the Civic Works Committee on Feb. 22nd on Item 2.3: Electric Kick-Scooter and Cargo Power-assisted Bicycle Pilot Project By-law and By-law Amendments. (I am unable to speak due to another commitment).

Alex Petre's title is Chief Operating Officer at Bird Canada.

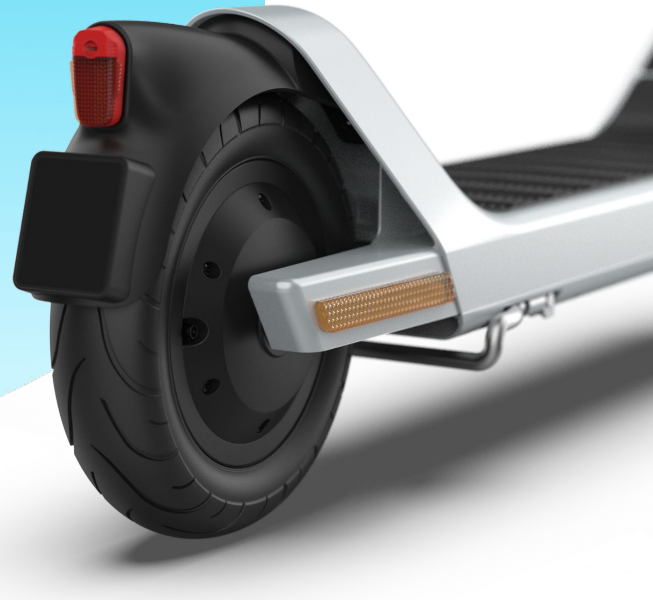
I will follow up with a presentation deck on Fri. Feb. 17th.

Please confirm receipt of this email and any necessary instructions (i.e. length of time permitted to speak before Committee, etc.).

Sincerely,

Chris Schafer
Vice President, Government Affairs
Bird Canada
(647) 389-8052
www.birdcanada.co

Hello, London



Shared E-scooter

Battery	36 V, 21.0 Ah 10S6P
Charge Time	5.8 hrs
Range	35 miles
Braking	Regen; Drum (front), disc (r)
Wheels	10” pneumatic
Top Speed	15 mph
Dimensions	47.7 in. x 19.3 in. x 46.8 in.
Lights	Front / Rear LEDs

Throttle-Brake Interlock
Automatic safety actions to protect against accidentally holding the throttle.

Dual Wiper Throttle
Automotive-grade functional safety and guaranteeing absolute speed-control accuracy

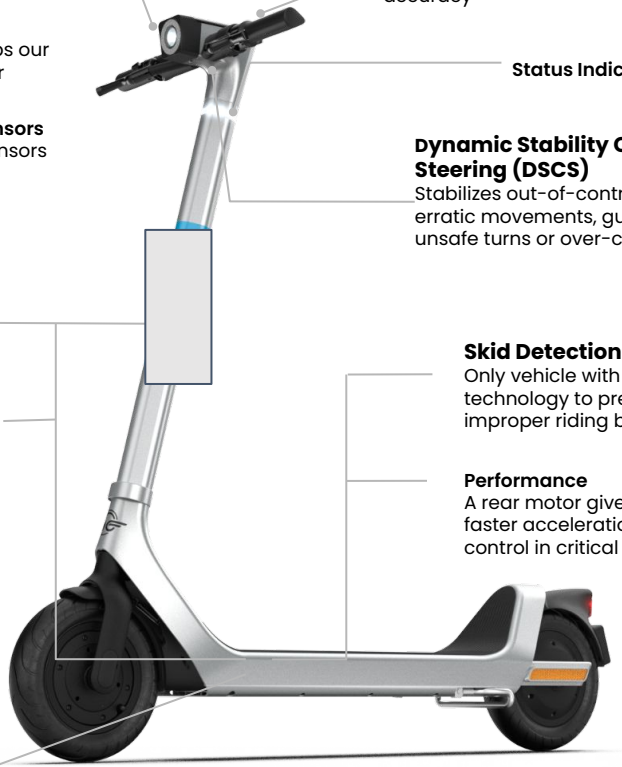
Enhanced Lighting

Anti-Theft Encryption
Enhanced encryption keeps our riders safe and helps deter theft

Status Indicator

Autonomous Damage Sensors
Self-reporting damage sensors and automotive-inspired diagnostic technology

Dynamic Stability Control Steering (DSCS)
Stabilizes out-of-control, sudden or erratic movements, guards against unsafe turns or over-corrections.



Seamless Screws
Protection against injury and theft with no exposed screws

Skid Detection
Only vehicle with skid detection technology to prevent improper riding behavior.

Puncture-Proof Tires
10” tires feature puncture-proof tech, higher traction, and decreased vibration.

Performance
A rear motor gives faster acceleration and more control in critical situations.

Industry’s Longest-Lasting Battery
Automotive-grade battery management system. Largest, safest, only operator with IP68 integrated battery

Tip Detection Technology

Anti-Tip Kick Stand
With a dual anti-tipping kickstand, this Bird stands on its own two feet.

Performance
AEB brings the vehicle to a stop in the event of a brake failure.

A shared commercial e-scooter program provides the City with more control and several advantages over personally owned e-scooters

Accessibility/Senior Concern	**Shared E-scooter Rental Program** (What these scooter program have)	**Personal Use E-scooters** (What they don't have)
E-scooters are too fast	• Shared e-scooters have speed governors - can cap maximum speed (i.e. 20 km/h max.) • Shared e-scooters have geo-fencing capabilities: slow down / no ride zones / no park zones • "Beginner Mode" has shared e-scooters ride with gentle acceleration & lower speed	• Speeds can greatly exceed provincial maximum permitted speed • No geo-fencing capabilities to prevent riding or parking in key areas of city
E-scooters are too quiet	• Shared e-scooters can emit a noise at a regular interval and while idling while in service to warn others of its presence.	• No noise emission for vulnerable road users
E-scooters are hard to see	• Shared e-scooters come with high contrast colouring + reflectors • Come with lights front and back	• Often do not come equipped with reflectors • Personal e-scooters not manufactured to same rigorous standards as shared e-scooters
E-scooters may be ridden on sidewalks	• Shared e-scooters come with anti-sidewalk riding technology	• No anti-sidewalk riding technology
E-scooters may be misparked	• Shared e-scooter programs have developed various parking strategies to keep public realm safe and tidy: no park zones, in-app "preferred" parking zones, "lock-to" e-scooters, camera positioning parking, etc.	• Are either brought in doors or like "lock-to" shared e-scooters, are locked to bike racks
E-scooters are hard to report	• QR Code reporting and/or in-app reporting available • Braille and/or Raised Lettering on shared e-scooters • Customer support available via email & 1-800 & TTY relay	• No QR Code / in-app reporting • No Braille/Raised Lettering • No customer support • No TTY relay service
E-scooters can't be enforced	• Daily "Safe Street" patrols by shared e-scooter company staff • 15 minute response times by shared e-scooter company • "License plates" on shared e-scooters - shared e-scooter riders are not anonymous / fines & bans enforced by company	• No "Safe Street" patrols • No mandated response times • No "license plates" on e-scooters • Hard to enforce against an anonymous rider

Geo-zone technology

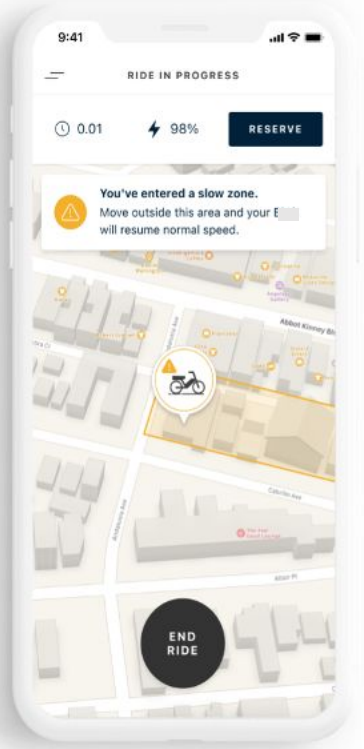
All vehicles are tracked with GPS.

When riders enter a designated geo-zone, vehicles follow set rules.

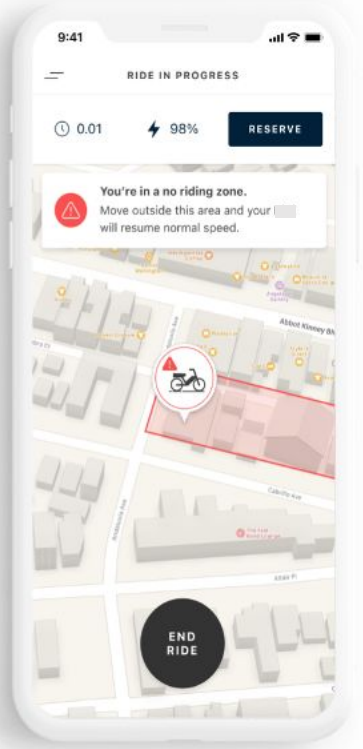
Vehicles will slow down or stop, and riders are notified by a vehicle sound and an in-app notification.

*Most Canadian cities have set shared e-scooters to a maximum of 20 km/h and slow down zones for highly pedestrianized areas of the City are generally set at 15 km/h.

Slow Zone

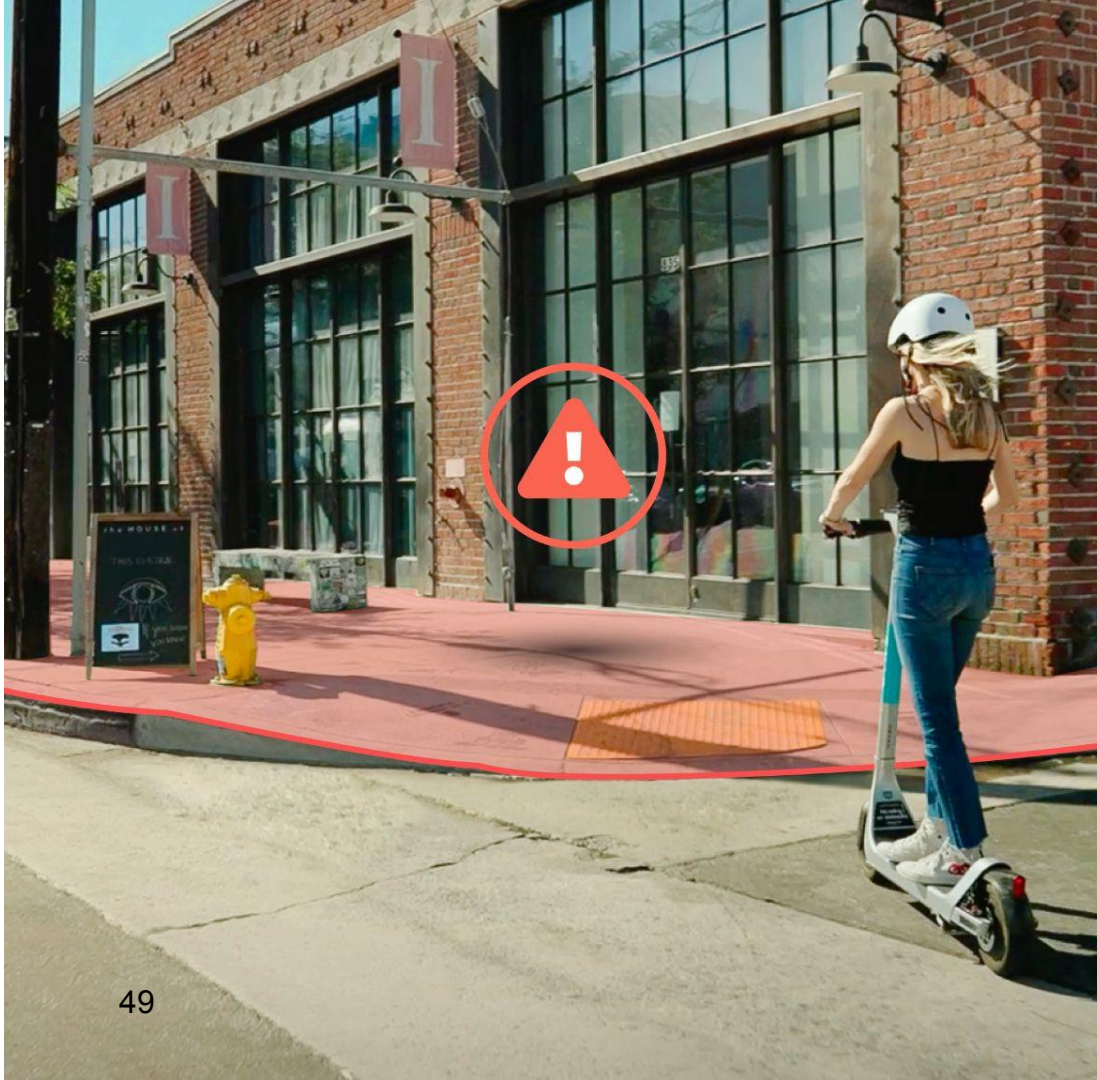


No Ride Zone and/or No Park Zone

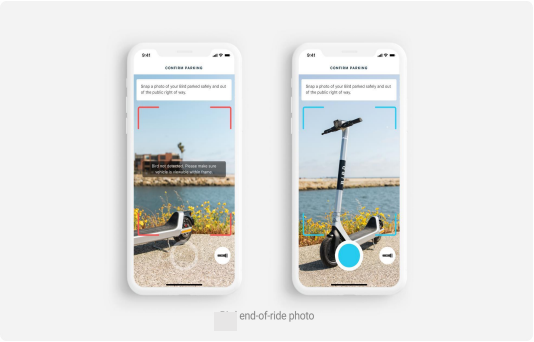


Smart Sidewalk Protection

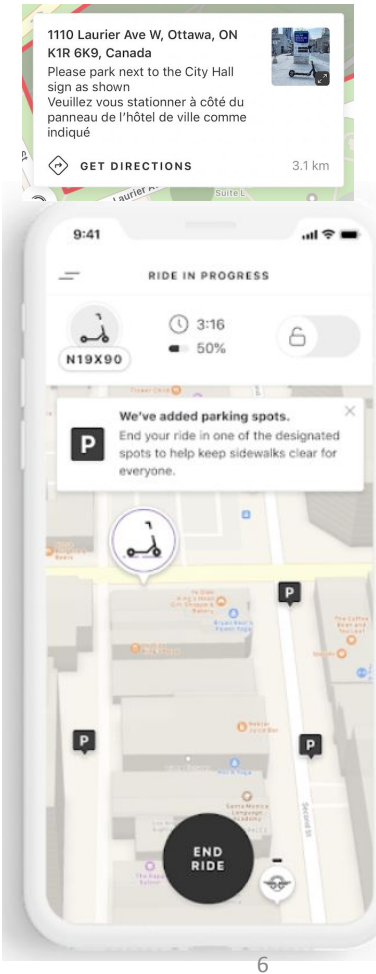
Applied to sidewalks with history of bicycle sidewalk riding, particularly on main streets downtown. Image shows e-scooter rider entering sidewalk from street and sidewalk detection technology preventing riding of the e-scooter on the sidewalk.



Parking of e-scooters



- In-app rider education - tutorials, video
- Street Patrols by shared e-scooter company staff
- “Virtual Parking” spots (these are located digitally in-app with instructions for how to locate and park properly)
- Some cities provide supplemental Designated Parking spots that are located throughout the City (i.e. painted box, mat, etc.).
- End of Ride photos
- Geo-fencing for no-park, slow down and no ride zones
- Warnings, fines, suspensions by Shared E-scooter company for inappropriate riding/parking



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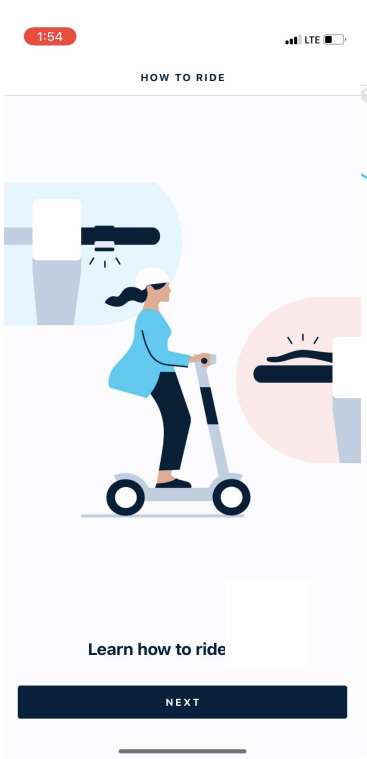
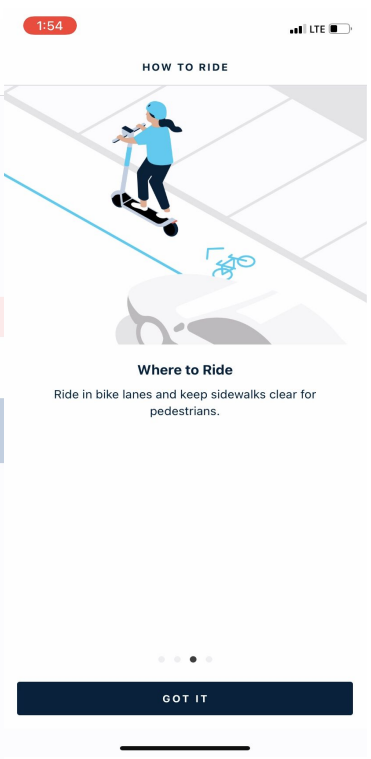
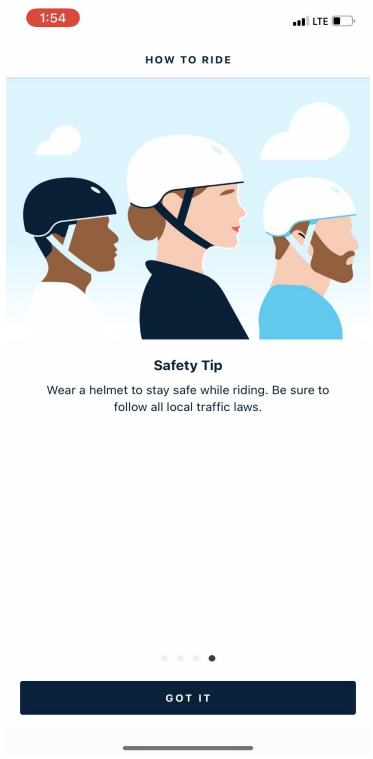
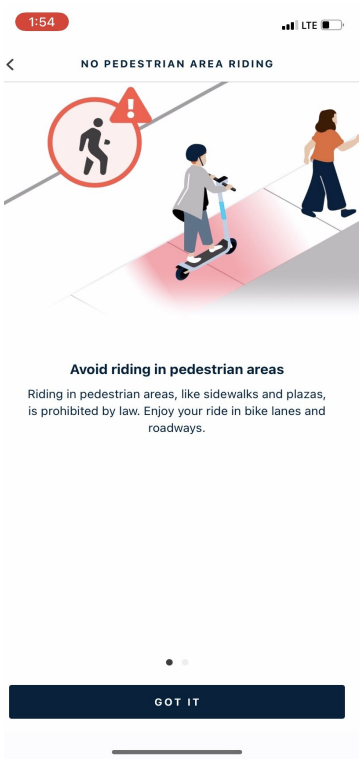
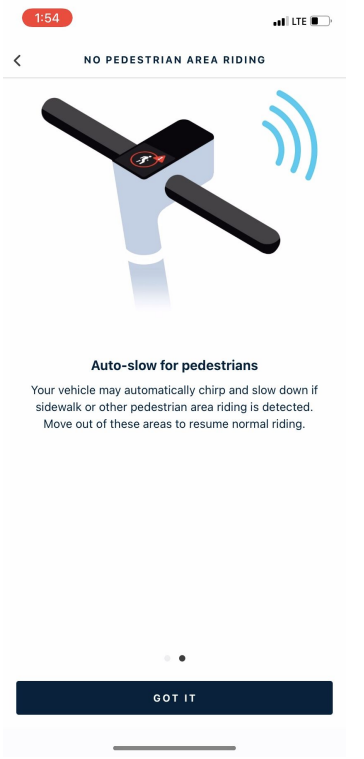
In-app Rider Education











51

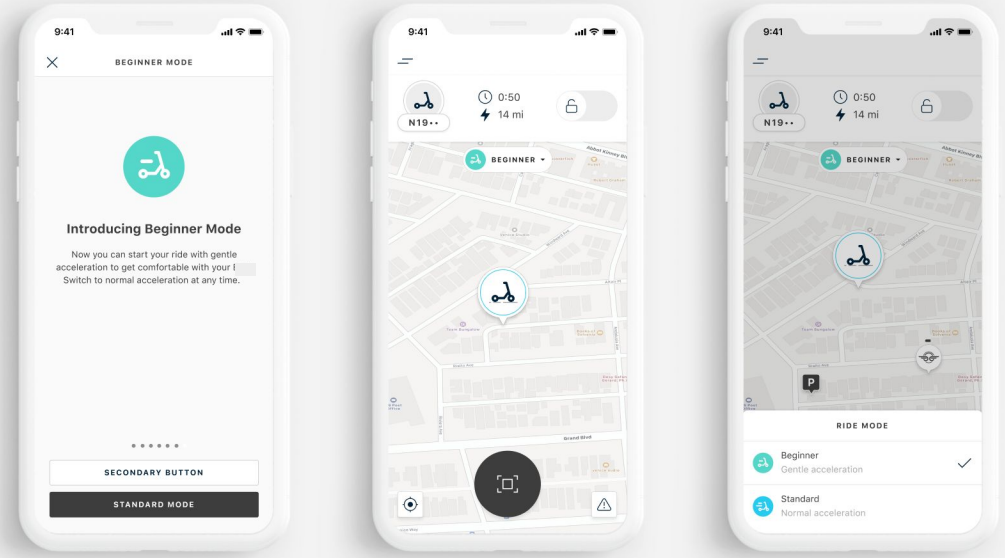
In-app images of rider tutorial for safe riding and parking of e-scooters.

Safe Street Patrols

52

Shared E-scooter company Safe Streets Team patrols the operational service area of cities responding to issues in real-time.

Beginner Mode



Beginner Mode

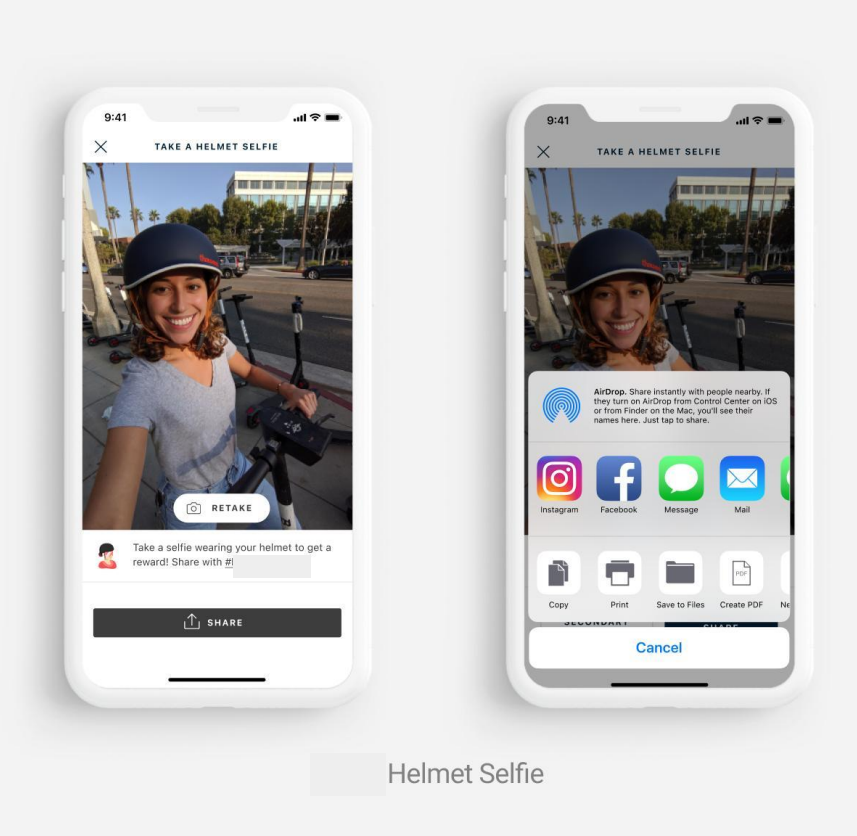
Beginner Mode automatically **softens** a shared e-scooter's acceleration, allowing riders to **slowly work their way up** to full speed.

This can be mandated for first # of rides and at a lower maximum speed.

Helmet Selfies

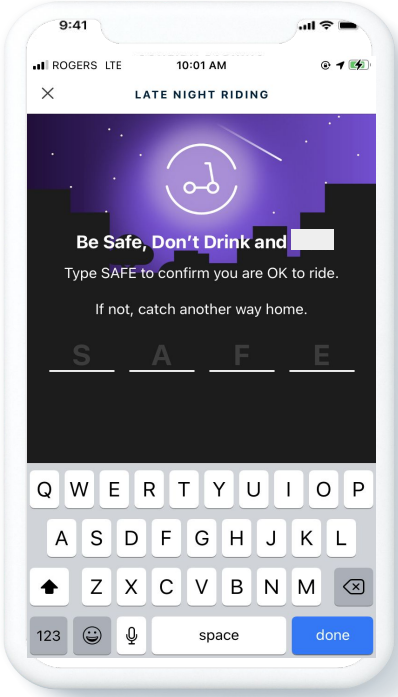
Riders are asked to **take a selfie**. Riders who demonstrate helmet usage will receive **incentives** such as future ride credits.

Riders can also share their selfie via social media to help promote broader adoption and use of helmets.



Helmet Selfie

Safe Start

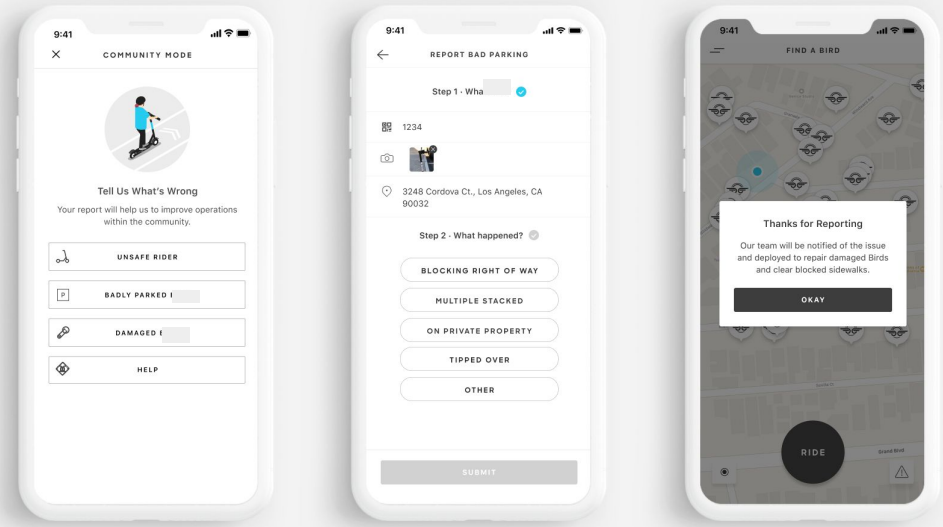


An in-app checkpoint, Safe Start is **designed to discourage** people from riding under the influence.

During late night hours, riders attempting to unlock an e-scooter are asked to verify that they can safely ride by correctly entering a keyword into the app.

Those who are unable to type the keyword correctly are encouraged to choose an **alternative method of transportation**, such as a taxi or ride-hailing service.

In-app reporting



Community Mode help center available to both riders and non-riders

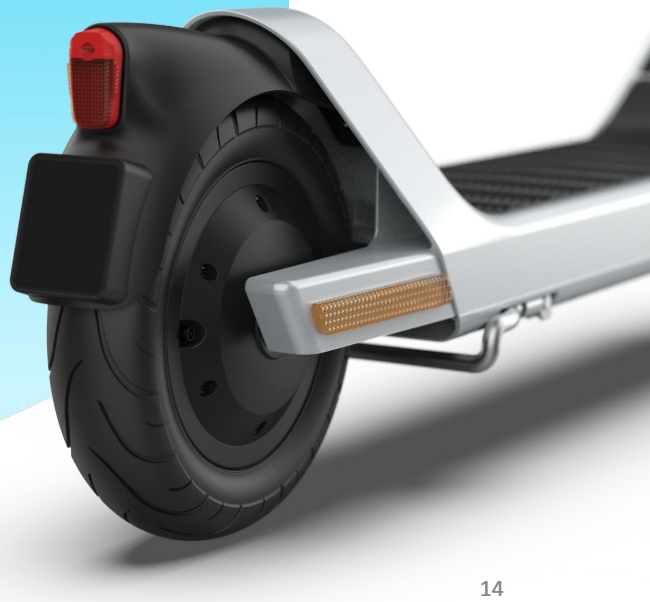
In-app reporting is a feature that allows anyone - whether or not they ride a shared e-scooter - to **report instances where a shared e-scooter is parked improperly, damaged, etc.**

These reports help shared e-scooter companies to take appropriate action such as deploying staff to reposition or remove a vehicle, or taking further disciplinary action as needed.

Proposed Motion

Civic Administration BE DIRECTED to develop and implement a geographically confined small scale shared e-scooter pilot with a commercial vendor for 2023 in order to pilot the viability of such a program and related technologies including anti-sidewalk riding technology, geo-fencing technology to slow down shared e-scooters, prevent ridership and/or parking in certain areas, etc., that the City is unable to pilot by only participating in the personal e-scooter portion of the Provincial pilot.

Thank you.



Alex Petre

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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: **Results of the 2022 Bike Share Request for Proposal Process and Next Steps**
Date: **February 22, 2023**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions be taken with respect to the 2022 Bike Share Request for Proposals (RFP):

a. This report **BE RECEIVED** for information; it being noted that the results and learnings will be part of the development of the Mobility Master Plan; and

b. Civic Administration **BE DIRECTED** to develop a micromobiltiy services business case, including bike share services, for inclusion in the 2024-2027 Multi-Year Budget process.

Executive Summary

This report is to update Committee and Council that the City of London did not receive any compliant proposals from the 2022 Bike Share Request for Proposals (RFP) process. The RFP will be cancelled in accordance with the City's Procurement of Goods and Services Policy.

The RFP required a proponent who was able to provide bike share services without requiring annual operating funding from the City of London for standard operations. The RFP indicated that the City of London was able to invest up to $85,000 annually to provide subsidy to lower income families and individuals (on a pre-approved basis) to ensure the service is available, but that this was not to be considered an operating subsidy/funding.

City staff looked into the current status of bike-only shared micromobility systems in Canada and the United States. Findings indicate that:

- the number of bike-only micromobility systems has decreased as e-scooter based systems have been introduced;
- the impact of the pandemic and the adjustment of more employees working from home permanently or through hybrid models, continues to create uncertainty for operators and municipalities;
- successful bike share operations are based on longer-term contracts; and
- programs have a consistent source of funding for standard operations, either from a municipal operating subsidy and/or or from a major sponsor.

Moving forward, City staff propose to include the evaluation of bike share services as part of the Mobility Master Plan. In addition, City staff recommend including the potential need for an annual municipal operating subsidy in support of a future bike share system as part of the upcoming 2024-27 Multi-Year Budget process.

Linkage to the Corporate Strategic Plan

Municipal Council's 2019-2023 Strategic Plan for the City of London continues to recognize the importance of active transportation, cycling, and the need for a more

sustainable, inclusive, and resilient city. Providing micromobility solutions, such as bike share, addresses four of the five Areas of Focus, at one level or another:

- Strengthening Our Community
- Building a Sustainable City
- Growing our Economy
- Creating a Safe London for Women and Girls

On April 23, 2019, the following was approved by Municipal Council with respect to climate change:

> Therefore, a climate emergency be declared by the City of London for the purposes of naming, framing, and deepening our commitment to protecting our economy, our eco systems, and our community from climate change.

On April 12, 2022, Municipal Council approved the Climate Emergency Action Plan which includes Area of Focus 4, Transforming Transportation and Mobility.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

Relevant reports that can be found at www.london.ca under Council meetings include:

- Ontario Municipal Greenhouse Gas (GHG) Challenge Fund Transfer Payment Agreement for the Bike Share System (March 19, 2018 meeting of the Civic Works Committee (CWC), Item # 5.3)
- Bike Share System for London: Update and Next Steps (August 12, 2019 meeting of the Civic Works Committee (CWC), Item # 2.5)
- Cycling and Transportation Demand Management Upcoming Projects (March 30, 2021 meeting of the Civic Works Committee (CWC), Item # 2.12)
- Participation in Provincial E-scooter Pilot (June 21, 2022 meeting of the Civic Works Committee (CWC), Item # 4.2)

1.2 Background

Bike share is a transportation service where bicycles are available at a minimal cost for individuals to rent on a short-term basis (i.e., typically for trips under 30 minutes). These systems allow residents, students and visitors to borrow a bike from one location and return it to another location. The systems can handle both “pay-as-you-go” one-time users as well as regular users with typically discounted annual or seasonal membership fees.

Bike share operations in North America have evolved quickly. The City completed a bike share business case in 2019. To develop the background details, preliminary analysis and technical assistance, City staff worked with the consulting team of Arcadis IBI Group and Foursquare ITP. Various work was completed including a peer review of existing bike share systems, market share and propensity analysis focused on high-demand and revenue potential for bike share locations, stakeholder workshops and online public consultation. The business case was used to develop parameters for a bike share RFP.

In August 2020, the City issued its first bike share RFP. It was issued alongside a separate, standalone e-scooter share RFP. Given the American experience at the time with the evolution of their micromobility systems towards e-scooters, and the fact that many of the potential respondents to the City’s bike share RFP also operated e-scooter based systems, City staff believed it was advantageous to include an e-scooter share pilot RFP process at the same time as the bike share RFP. Noting that, at the time, London by-laws had not yet been reviewed to determine if and where e-scooters would be allowed to operate.

Due to the extenuating circumstances surrounding the pandemic, the City cancelled the RFP in late 2020. City staff did learn a lot more about the current state of the bike share service market, including the greater role that electric-assisted bicycles (e-bikes) were playing in new systems. Findings also included that many operators were using e-scooter share to subsidize bike share services given that e-scooter-based systems tend to have lower capital and operating costs compared to bikes.

In July 2022, City Council decided not to opt into the shared portion of the Provincial e-scooter pilot project (i.e., central operator rental e-scooters) due, in part, to safety concerns. This applies for the duration of the provincial pilot, which ends November 27th, 2024.

In Spring 2022, the City worked with Arcadis IBI Group to conduct an equity review and analysis of their previous bike share work for London. City staff recognized the need to review the bike share feasibility work done in 2019 and re-evaluate the proposed service area from an equity perspective. Additional research was also conducted on the associated benefits of bike share services when barriers are reduced such as providing subsidy to lower income families and individuals. Valuable learnings came from this additional equity work.

1.3 Outcome of the Request for Proposals

In November 2022, an updated bike share RFP was issued. The RFP built on the past bike share feasibility work, first bike share RFP findings, experiences in other Canadian municipalities, and the equity analysis. The RFP had a specific focus on equity and inclusion, and on climate.

The City would contribute up to $85,000 a year as part of an equity program (e.g., a subsidy) to ensure the service was available to lower income families and individuals. The RFP made clear that there was no available City operating subsidy/funding.

No compliant bids were received. The RFP will be cancelled in accordance with the City's Procurement of Goods and Services Policy.

Findings from this process included that the number of operators focused solely on bike share has decreased; successful bike share operations are based on longer-term contracts; and programs have a consistent source of funding for standard operations, either from a municipal subsidy and/or from a major sponsor.

This is in line with City staff research into current bike-only shared services in North America. Canadian examples include:

- Bikeshare Toronto is funded by the Toronto Parking Authority (i.e., parking revenue) and also has sponsorship from Bell Media;
- Hamilton Bike Share is run by a non-profit by the same name. The bikes are owned by the City of Hamilton. Funding support for standard operations includes funding from sponsorship and subsidies from the City of Hamilton;
- Bixi Montréal is a non-profit created by the City. Bixi is run by the City's parking authority. The system is owned by the City of Montréal; and
- Vancouver's Mobi by Shaw Go is operated by CycleHop Canada. It has sponsorship from Shaw Communications. The City of Vancouver provided a $5 million contribution for the launch and operation of the bike share for five years and provides ongoing in-kind support.

2.0 Discussion and Considerations

2.1 Next Steps

Many positive learnings have been gained from the past RFP attempts. Recent plans and priorities have highlighted the need to reconsider bike share options for London.

The impact of the pandemic and the adjustment of more employees working from home permanently or through hybrid models, continues to create uncertainty. Further the relationship between bike share and e-scooter share systems and other micromobility solutions as part of an integrated mobility system are being examined in many cities. From a technology perspective, mobility as a service (MaaS) is one way of integrating transportation solutions into an on-demand service. More information is also becoming available on the role of micromobility for work purposes, utility purposes (e.g., shopping, appointments), recreational opportunities and tourism.

These learnings and developments are particularly important to:

- London's Climate Emergency Action Plan gives impetus for providing more transportation choices in London that help decrease personal automobile use.

- The development of the City's Mobility Master Plan which includes an equity framework. Equity is at the forefront of transportation planning in London.

In many ways, a bike share based micromobility solution could be considered part of the overall public transportation system. As with transit systems, and based on experience in other cities, it is reasonable to expect that some public funding in the form of operating subsidies be provided for a service that provides a public benefit for citizens.

Moving forward, City staff propose to include the evaluation of bike share services and other micromobility solutions as part of the Mobility Master Plan. In addition, City staff will include the potential need for an annual municipal operating subsidy in support of a future bike share system or other micromobility solutions as part of the 2024-27 Multi-Year Budget process. This will include potential revenue sources that could be used as part of the operating subsidy.

3.0 Financial Impact/Considerations

There are direct municipal financial considerations for bike share moving forward. These will be included as part of the Mobility Master Plan process as well as the business case for the 2024-2027 Multi-Year Budget process.

Conclusion

Bike share services continue to evolve quickly. Experiences elsewhere are consistent with the City's RFP findings, currently showing that in order to be viable, bike share requires an ongoing source of funding from either an operating subsidy and/or a major sponsor.

There remain social, environmental and financial advantages to consider bike share for Londoners as another mode of transportation that promotes less reliance on personal vehicles. This is similar to public transit. City staff will include shared bike services as a consideration in the Mobility Master Plan and for the 2024-2027 Multi-Year Budget consideration.

Prepared by:	**Allison Miller, M.C.P., MCIP, RPP, Senior Coordinator, Transportation Demand Management**
	Jamie Skimming, P.Eng., Manager, Energy and Climate Change
Prepared and Submitted by:	**Jay Stanford, M.A., M.P.A. Director, Climate Change, Environment, and Waste Management**
Recommended by:	**Kelly Scherr, P.Eng., MBA, FEC, Deputy City Manager, Environment & Infrastructure**

Please consider this E – Mail as Added Agenda for consideration of the CWCommmittee with respect to Item 2.4 on the Feb 22/ 23 MTG - Bike Sharing Program & Next Steps ;

Councillor Rahman , Mayor Morgan - CWC Council Members ;

Background - I have participated in 1 Zoom call during the inception of this Bike Share Program , submitted one previous Added Agenda to previous Council meeting and communicated via E Mail @ Director Jay Sanford and fully understood with that response that if the RFProposal for a commercial partner was unsuccessful , this Bike Sharing Program would be deactivated/ terminated with no continuity of any Approved Budget or the upcoming 2023 – 2027 Budget cycle.

Recommendation ;

That the CWC receive this report , but move to terminate/ deactivate this Bike Sharing Program along with any unused but Approved Budget 2023 and along with that of the 0.33 to 0.50 FT Equivalent Staff associated with this program (Zoom Call Feedback). After our RFP failed and numerous Bike Sharing Programs in North America where commercial partners & shared execution programs have been terminated due to compliance issues or Commercial partners bankrupted , there is no justification for our City of London staff to recommend shifting this scope of work under the umbrella of the already challenged " Master Transportation Plan " for the 2023 – 2027 Budget Plan. I'm actually shocked checking the Get Involved London website today that this Bike Sharing Plan has developed new wings & referenced already under the Master Mobility Plan prior to this CWC meeting and your approval.

Council , we need to be Leaders in Public Service & Stewarts of both sound Budgeting / Spending with respect to direction going forward to meet the prioritization of program choices & challenges of our upcoming Strategic Plan ; and this is an opportunity to do that today . The $85 K budget to support the RFP is the equivalent of 2 ½ times my annual income or the average annual taxes of 24 City of London residential property owners.

THXS – Chris Butler

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: **2022 Drinking Water Annual Report and Summary Report for the City of London Drinking Water System**
Date: **February 22, 2023**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the 2022 Drinking Water Annual Report and Summary Report for the City of London Drinking Water System **BE RECEIVED** for information.

Executive Summary

Ontario Regulation 170/03 (Drinking Water Systems) requires the owner of a municipal drinking water system to ensure that an Annual Report and a Summary Report be prepared, covering the period of January 1 through to December 31 of the previous year. This report, along with its appendices, fulfills these requirements.

Linkage to the Corporate Strategic Plan

The 2019 – 2023 Strategic Plan identifies this objective under Leading in Public Service: Measure and publicly report on corporate performance.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- Civic Works Committee – February 1, 2022 - 2021 Drinking Water Annual Report and Summary Report for the City of London Drinking Water System

2.0 Discussion and Considerations

2.1 Regulatory Requirements

Ontario Regulation 170/03 (Drinking Water Systems) requires the owner of a municipal drinking water system to ensure that an Annual Report and a Summary Report be prepared, covering the period of January 1 through to December 31 of the previous year.

The Annual Report is to contain:

- A brief description of the drinking water system, including a list of water treatment chemicals used by the system;
- A summary of the results of required tests;
- A summary of any adverse test results reported and corrective actions taken; and
- A description of any major expenses incurred to install, repair or replace required equipment.

O. Reg. 170/03 further stipulates that:

a) The Owner shall ensure that a copy of the Annual Report is given without charge to every person who requests a copy;
b) Effective steps are taken to advise users of water from the system that copies of the Annual Report are available, without charge, and of how a copy may be obtained;
c) The Owner of a large municipal residential system serving more than 10,000 people is required to post a copy of the Annual Report to the municipality's website; and,
d) A Summary Report is to be prepared and presented to the members of the Municipal Council by no later than March 31 of the following year.

The Summary Report is to contain:

- A list of any regulatory requirements applicable to the system that were not met at any time during the period covered by the report, the duration of the failure, and the measures that were taken to correct the failure; and,
- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows and compared to the rated capacity of the system.

Due to the large number of pages, the 2022 Drinking Water Summary Report for the City of London Drinking Water System has been provided to members of Council in electronic format, with the 2022 Annual Report attached as an appendix. The Summary Report (without appendices) is attached as Appendix 'A' to this report.

The Elgin-Middlesex Pumping Station (EMPS) is jointly owned by the City of St. Thomas, the Town of Aylmer, and the City of London, and is operated by the Ontario Clean Water Agency (OCWA). The Annual Report for the EMPS (London portion) was made available to London on January 31, 2023. As required, it will form part of the overall 2022 Drinking Water Summary Report for the City of London Drinking Water System.

Conclusion

Receipt of Appendix 'A' of this report by members of Council fulfils the reporting requirements of O. Reg. 170/03, Schedule 22. The 2022 Drinking Water Summary Report is available to members of the public by request and will be posted on the City's website.

Prepared by:	**John Simon, P.Eng.** **Division Manager, Water Operations**
Submitted by:	**Ashley Rammeloo, MMSc., P.Eng.** **Director, Water, Wastewater, and Stormwater**
Recommended by:	**Kelly Scherr, P. Eng., MBA, FEC** **Deputy City Manager, Environment and Infrastructure**

Appendix 'A' – City of London 2022 Drinking Water Summary Report

c.c.
Scott Koshowski – Water Operations Engineer
Michael Schulthess – City Clerk
Aaron Rozentals – Division Manager – Water Engineering
Andrew Henry – Director – Regional Water Supply
Dan Huggins – Water Quality Manager
Dr. Alex Summers –Medical Officer of Health Middlesex-London Health Unit

CITY OF LONDON

2022 DRINKING WATER SUMMARY REPORT

System Name: City Of London Drinking Water System

System Rating:
Water Distribution Subsystem Class IV
Water Treatment Subsystem Class II
Average Day Demand: 126.041 MLD
Peak Day Demand: 161.701 MLD (July 14, 2022)
Population Served: 400,000 (approx.)
Source Water: Surface Water (Lake Huron, Lake Erie)
Drinking Water System Number: 260004917
Municipal Drinking Water Licence: 006-101

London
CANADA

CONTACT INFO:
Owner:
Corporation of the City of London
300 Dufferin Avenue, London, Ontario N6A 4L9
Contact: Mr. John Simon, P.Eng. Division Manager Water Operations
519-661-2489 ext. 4938

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Reporting Requirements

Ontario Regulation 170/03 requires that municipalities prepare a Summary Report for their drinking-water system for the preceding calendar year and submit it to the members of the Municipal Council by March 31 of each year. This report, presented to Municipal Council's Civic Works Committee on February 22, 2023, fulfills that requirement.

O. Reg 170/03 also requires the preparation of an Annual Report on the operation of the drinking-water system to be made available to members of the public.

Before February 28, 2023, a copy of the 2022 Annual Report and Summary Report for the City of London's water works will be provided to the local office of the Ministry of the Environment, Conservation and Parks (MECP) as a courtesy for information purposes.

The Elgin-Middlesex Pumping Station (EMPS) is jointly owned by the St. Thomas Area Secondary Water Supply System, the Aylmer Area Secondary Water Supply System, and the City of London. EMPS is operated by the Ontario Clean Water Agency (OCWA). The Annual Report for the EMPS (London portion) was provided by OCWA on January 31, 2023 and is included in this report.

Water Budget

The 2020-2023 operating and capital budgets represent financial sustainability for Londoners, whereby annual rate increases are approximately the average of the Consumer Price Index (CPI) and the Non-Residential Building Construction Price Index (NRBCPI). The 2020-2023 water operating and capital budgets support four core business objectives:

- Compliance
- Financial Management
- Customer Service
- Best Management Practices

The total Water budget for 2022 was $90.5 million, which includes long term infrastructure improvements. The Water Budget helps maintain London's advantage of a safe, clean, and secure water supply. The Water Service Area remains proactive in initiatives to ensure that this service continues to meet the demands and expectations of customers. Existing infrastructure requires ongoing renewal (replacement and rehabilitation) activities to manage the infrastructure gap, ensuring that future generations are not faced with a water system that is failing, unreliable, and expensive to maintain.

Impacts of Covid-19 on Operational Performance

The novel coronavirus (Covid-19) has continued to cause unprecedented interruption to the daily activities of individuals, businesses, and institutions around the world. The City of London continues to experience ongoing challenges, and there remains considerable uncertainty. Availability and cost of essential stock, inventory, supplies, and material is

concerning. The Water Service Area has taken steps to maintain product delivery, continue to closely monitor availability of supplies, and in some cases have implemented advanced procurement of material and products. The Water Service Area is an Essential Service that must maintain service continuity. Operationally throughout 2022, with all the impacts of Covid-19 and supply chain difficulties, the Water Service Area once again continued with “business-as-usual”, with only minor service level impacts seen on non-critical work processes.

Staffing/Business Continuity
Throughout 2022, even with impacts of Covid-19, continuity of service was never in jeopardy. Water Operations staff remained fully dedicated to the delivery of safe, reliable drinking water. During this time, staff continued with their work arrangements and environments, implemented new and updated existing procedures (ie. Corporate Health and Safety Standard Operating Guidelines) and worked diligently to ensure uninterrupted supply of this essential service.

Budget
Due to the Covid-19 pandemic and supply chain disruptions, there have been cost increases to operational material and supplies. The Water Service Area has continued to work within allocated budgets. Water demand has continued to be strong and essentially unaffected by the pandemic.

Maintenance and Construction
With the effects of the pandemic controlling and altering daily activities, the Water Operations Division continued to deliver essential water services. Water Operations Division and Water Engineering Division staff maintained, whenever possible, a “business-as-usual” level of service. Staff adapted to mandated requirements and found ways to continue their tasks and duties. The Corporation continued to provide support to staff by way of allocating necessary supplies, additional vehicles, sourcing and providing personal protective equipment.

Sampling & Water Quality Monitoring

In 2022, the MECP required large municipal drinking water systems to test for 70 different organic, inorganic, and chemical parameters. The City of London’s water sampling regime includes monthly testing for microbiological indicators and chlorine residuals from 57 standard locations across the City, as well over 3,000 random grab samples. Analysis is also performed for up to 117 parameters, including organics, inorganics, chemicals, pesticides, and metals at 13 standard locations around the City. This level of testing far exceeds the MECP’s minimum sampling requirements.

London also has 10 locations throughout the City where continuous in-line sampling of chlorine residual and pH is monitored. Staff also perform approximately 4,000 additional chlorine tests each year related to construction and maintenance activities. These efforts help ensure that the water within the distribution system is always of high quality, completely safe to consume, and consistent for manufacturing processes.

2022 Water Quality Sampling Summary

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
REGULATED INORGANICS					
Antimony	6	ug/L	0.6	**0.9 - 0.9**	No
Arsenic	10	ug/L	0.2	**0.2 - 0.5**	No
Barium	1000	ug/L	0.02	**13.7 - 20.9**	No
Boron	5000	ug/L	2	**17 - 31**	No
Cadmium	5	ug/L	0.003	**0.003 <MDL**	No
Chromium	50	ug/L	0.08	**0.17 - 0.26**	No
Fluoride	1.5	mg/L	0.06	**0.13 - 0.68**	No
Free Chlorine	--	mg/L	0.000	**0.3 - 1.4**	No
Lead	10	ug/L	0.01	**0.01 - 0.13**	No
Mercury	1	ug/L	0.01	**0.01 <MDL**	No
Selenium	50	ug/L	0.04	**0.13 - 0.24**	No
Sodium	20	mg/L	0.01	**12.4 - 18.2**	No
Uranium	20	ug/L	0.002	**0.037 - 0.039**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
NITRATES					
Nitrate (as nitrogen)	10	mg/L	0.006	**0.04 - 0.565**	No
Nitrate + Nitrite (as nitrogen)	--	mg/L	0.006	**0.04 - 0.565**	No
Nitrite (as nitrogen)	1	mg/L	0.003	**0.003 <MDL**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
TRIHALOMETHANES & HALOACETIC ACIDS					
Total Haloacetic Acids	80	ug/L	5.3	**5.3 - 25.5**	No
Dibromoacetic Acid	--	ug/L	2	**2 <MDL**	No
Dichloroacetic Acid	--	ug/L	2.6	**3.4 - 17.2**	No
Monobromoacetic acid	--	ug/L	2.9	**2.9 <MDL**	No
Monochloroacetic Acid	--	ug/L	4.7	**4.7 <MDL**	No
Trichloroacetic Acid	--	ug/L	5.3	**5.3 - 8.4**	No
Trihalomethanes (total)	100	ug/L	0.37	**15 - 58**	No
Bromodichloromethane	--	ug/L	0.26	**4.6 - 13**	No
Bromoform	--	ug/L	0.34	**0.34 <MDL**	No
Chloroform	--	ug/L	0.29	**7.6 - 41**	No
Dibromochloromethane	--	ug/L	0.37	**1.8 - 4.8**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
REGULATED ORGANICS					
Atrazine	--	ug/L	0.01	**0.01 - 0.04**	No
Atrazine + N-dealkylated metabolites	5	ug/L	0.01	**0.02 - 0.06**	No
De-ethylated Atrazine	--	ug/L	0.01	**0.01 - 0.02**	No
Azinphos-methyl	20	ug/L	0.05	**0.05 <MDL**	No
Benzene	1	ug/L	0.32	**0.32 <MDL**	No
Benzo(a)pyrene	0.01	ug/L	0.004	**0.004 <MDL**	No
Bromoxynil	5	ug/L	0.33	**0.33 <MDL**	No
Carbaryl	90	ug/L	0.05	**0.05 <MDL**	No
Carbofuran	90	ug/L	0.01	**0.01 <MDL**	No
Carbon tetrachloride	2	ug/L	0.17	**0.17 <MDL**	No
Chlorpyrifos	90	ug/L	0.02	**0.02 <MDL**	No
Diazinon	20	ug/L	0.02	**0.02 <MDL**	No
Dicamba	120	ug/L	0.2	**0.2 <MDL**	No
1,2-Dichlorobenzene	200	ug/L	0.41	**0.41 <MDL**	No
1,4-Dichlorobenzene	5	ug/L	0.36	**0.36 <MDL**	No
1,2-Dichloroethane	5	ug/L	0.35	**0.35 <MDL**	No
Dichloromethane	50	ug/L	0.35	**0.35 <MDL**	No
2,4-dichlorophenol	900	ug/L	0.15	**0.15 <MDL**	No
2,4-dichlorophenoxyacetic acid (2,4-D)	100	ug/L	0.19	**0.19 <MDL**	No
Diclofop-methyl	9	ug/L	0.4	**0.4 <MDL**	No
Dimethoate	20	ug/L	0.06	**0.06 <MDL**	No
Diquat	70	ug/L	1	**1 <MDL**	No
Diuron	150	ug/L	0.03	**0.03 <MDL**	No
Glyphosate	280	ug/L	1	**1 <MDL**	No
Malathion	190	ug/L	0.02	**0.02 <MDL**	No
MCPA	0.1	mg/L	0.00012	**0.00012 <MDL**	No
Metolachlor	50	ug/L	0.01	**0.01 - 0.02**	No
Metribuzin	80	ug/L	0.02	**0.02 <MDL**	No
Monochlorobenzene	80	ug/L	0.3	**0.3 <MDL**	No
Paraquat	10	ug/L	1	**1 <MDL**	No
Pentachlorophenol	60	ug/L	0.15	**0.15 <MDL**	No
Phorate	2	ug/L	0.01	**0.01 <MDL**	No
Picloram	190	ug/L	1	**1 <MDL**	No
Polychlorinated Biphenyls (PCBs)	3	ug/L	0.04	**0.04 <MDL**	No
Prometryne	1	ug/L	0.03	**0.03 <MDL**	No
Simazine	10	ug/L	0.01	**0.01 <MDL**	No
Terbufos	1	ug/L	0.01	**0.01 <MDL**	No
2,3,4,6-tetrachlorophenol	100	ug/L	0.2	**0.2 <MDL**	No
Triallate	230	ug/L	0.01	**0.01 <MDL**	No
Trichloroethylene	5	ug/L	0.44	**0.44 <MDL**	No
2,4,6-trichlorophenol	5	ug/L	0.25	**0.25 <MDL**	No
Trifluralin	45	ug/L	0.02	**0.02 <MDL**	No
Vinyl Chloride	1	ug/L	0.17	**0.17 <MDL**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations 2022	MAC Exceedance (Y/N)
NON-REGULATED INORGANICS/ORGANICS					
Alachlor	5	ug/L	0.02	**0.02 <MDL**	No
Alkalinity	--	mg/L as CaCO3	2	**78 - 96**	No
Aluminum	--	ug/L	1	**14 - 52**	No
Ammonia+Ammonium (N)	--	mg/L	0.04	**0.04 <MDL**	No
Calcium	--	mg/L	0.01	**26.7 - 33.4**	No
Chloride	--	mg/L	0.04	**10 - 18**	No
Cobalt	--	ug/L	0.004	**0.006 - 0.012**	No
Colour	--	TCU	3	**3 <MDL**	No
Conductivity	--	uS/cm	2	**237 - 300**	No
Copper	--	ug/L	0.2	**0.9 - 2**	No
Cyanide	200	ug/L	2	**2 <MDL**	No
1,1-Dichloroethylene (vinylidene chloride)	14	ug/L	0.33	**0.33 <MDL**	No
Dissolved Organic Carbon	--	mg/L	1	**2 - 2**	No
Ethylbenzene	140	ug/L	0.33	**0.33 <MDL**	No
Hardness	--	mg/L as CaCO3	0.05	**101 - 122**	No
Iron	--	ug/L	7	**7 <MDL**	No
Langelier's Index @ 20 C	--	@ 20 C	0	**-0.2 - -0.11**	No
Langelier's Index @ 4 C	--	@ 4 C	0	**-0.52 - -0.43**	No
Magnesium	--	mg/L	0.001	**8.49 - 9.4**	No
Manganese	--	ug/L	0.01	**0.13 - 0.28**	No
Nickel	--	ug/L	0.1	**0.4 - 0.7**	No
Nitrogen-Kjeldahl (N)	--	mg/L	0.05	**0.19 - 0.24**	No
Organic Nitrogen	--	mg/L	0.05	**0.17 - 0.21**	No
pH	--	No unit	0	**7.99 - 8.07**	No
Phosphorus	--	mg/L	0.003	**0.003 <MDL**	No
Potassium	--	mg/L	0.009	**1.01 - 1.38**	No
Silicon; reactive silicate	--	mg/L	0.02	**0.26 - 1.2**	No
Silver	--	ug/L	0.05	**0.05 <MDL**	No
Solids (Total Dissolved)	--	mg/L	30	**131 - 169**	No
Sulphate	--	mg/L	0.04	**25 - 29**	No
Sulphide	--	ug/L	6	**6 <MDL**	No
Surr 1,2-Dichloroethane-d4	--	Surr Rec %	0	**100 - 102**	No
Surr 4-Bromofluorobenzene	--	Surr Rec %	0	**95 - 96**	No
Surr Decachlorobiphenyl	--	%	0	**98 - 103**	No
Tetrachloroethylene (perchloroethylene)	10	ug/L	0.35	**0.35 <MDL**	No
Toluene	60	ug/L	0.36	**0.36 <MDL**	No
Total Chlorine-Field	--	mg/L	0	**1.26 - 1.38**	No
2,4,5-TP (Silvex)	--	ug/L	0.18	**0.18 <MDL**	No
Turbidity	1	NTU	0.1	**0.1 <MDL**	No
Xylene (Total)	90	ug/L	0.43	**0.43 <MDL**	No
m/p-xylene	--	ug/L	0.43	**0.43 <MDL**	No
o-xylene	--	ug/L	0.17	**0.17 <MDL**	No
Zinc	--	ug/L	2	**2 <MDL**	No

Parameter	Ontario Maximum Acceptable Concentration (MAC)	Units	Lab's Method Detection Limit (MDL)	Measured Concentrations	MAC Exceedance (Y/N)
				2022	
MICROBIOLOGICAL					
Escherichia Coli	0	cfu/100mL	0	**0 <MDL**	No
Total Coliform	0	cfu/100mL	0	**0 - 66**	Yes
Heterotrophic Plate Count (HPC)	--	cfu/1mL	0	**0 - 2000**	No

In 2022, there were ten (10) adverse microbiological results out of 3,070 samples taken. Seven involved the detection of Total Coliform bacteria (ranging from 1 to 66 cfu/100 mL), three were the result of NDOG (No Data Overgrown). In each case, staff implemented the mandatory adverse response procedure, which included notifying the MECP and the Middlesex-London Health Unit, and immediately re-sampled at each location. The re-sample results revealed no adverse indicators.

In all instances it is highly unlikely that there were ‘actual’ water quality issues at these sites, as all adverse samples were identified as having free chlorine residuals which were well above the minimum acceptable level at the time of the sampling (ranging between 0.33 to 0.98 mg/L). E. coli and Coliform bacteria cannot survive in chlorinated water; therefore, it is suspected that post-sampling contamination occurred. The re-sampling results support this conclusion. The microbiological testing procedure is extremely sensitive; accidental sample contamination can occur through operator or laboratory error, despite the specific procedures and precautions being adhered to while processing samples.

System Statistics and Major Events

During the period from January 1, 2022, through to December 31, 2022, a total of 45,977,168,000 litres of water were purchased, at a cost of more than $26,500,000 from the Joint Water Boards and subsequently pumped into London via the Arva Pumping Station and the London components within the Elgin Middlesex Pumping Station. Average day demand was 126,041,100 litres. Peak day consumption continued a downward trend. Peak day demand occurred on July 14, 2022, being 161,701,000 litres.

A summary of system pumpage can be found in the full version of the Summary Report. The data includes monthly average and maximum daily flows. These values are also compared to the rated flow rate capacities identified in London’s Municipal Drinking Water Licence. There were no occurrences of flow rate exceedance during the specified time period.

Listed below are some 2022 statistics for the City of London Distribution System:

Approximate Replacement Value of Drinking Water System	**$5,900,000,000**
Number of Pumping Stations	**9**
Total Number of Water Services	**>120,000**
Length of Watermain	**1,635 km**
Number of Watermain Breaks	**77**
Number of Water Service Leaks	**286**

Municipalities Receiving London Water

In the Municipality of Middlesex Centre, the villages of Arva, Ballymote, and Delaware continued to receive their drinking water under contract from the City of London during 2022. The Municipality of Middlesex Centre has been provided a copy of the Annual Report as per O. Reg 170/03.

Several residences within Central Elgin also continued to receive drinking water from the transmission watermain that supplies the City of London from the EMPS. For this reason, Central Elgin has also been provided a copy of the report.

2022 Annual Report
(London)

Ontario

Drinking-Water Systems Regulation O. Reg. 170/03

Drinking Water System Number:	**260004917**
Municipal Drinking-Water Licence:	**006-001**
Drinking-Water System Name:	**City of London Drinking Water System**
Drinking-Water System Owner:	**The Corporation of the City of London**
Drinking-Water System Category:	**Large Municipal Residential System**
Period being reported:	**January 1, 2022 to December 31, 2022**

Does your Drinking-Water System serve more than 10,000 people? **Yes**

Is your annual report available to the public at no charge on a web site? **Yes**

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection:

City of London – City Hall
Customer Service Division – 8th Floor
(Public Service Information Area)
300 Dufferin Avenue, London, ON

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Middlesex Centre Distribution System	260004202
Includes: Arva Waterworks	260004202
Ballymote Waterworks	260004202
Delaware Distribution System	260063323

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water? **Yes**

Indicate how you notified system users that your annual report is available, and is free of charge.

Public access/notice via the web: **Yes**
Public access/notice via Government Office: **Yes**
Public access/notice via a newspaper: **No**
Public access/notice via Public Request: **Yes**
Public access/notice via a Public Library: **No**
Public access/notice via other method: **No**

Describe your Drinking-Water System:
There are two primary water supplies in the City of London. These are both surface water sources and are:
- Lake Huron Primary Water Supply System (LHPWSS)

- Elgin Area Primary Water Supply System (EAPWSS)

During 2022 the London-Elgin-Middlesex Booster Station was operated by a designated Operating Authority that being, Ontario Clean Water Agency. The annual report for the London-Elgin-Middlesex Booster Station was not available at the time this report was created and therefore, it will be provided under separate cover.

List all water treatment chemicals used over this reporting period:

- Liquid Chlorine
- Sodium Hypochlorite
- Fluorosilicic Acid (hydrofluorosilicic acid)

Were any significant expenses incurred to?

Large numbers of Water Service Leaks continue to dominate repair/remediation efforts. Approximately 270 water service leaks occurred in 2022, attributing to nearly a 4:1 ratio of water service leaks to water main breaks.

Springbank Reservoir #1 underwent significant remediation and refurbishment to the internal roof slab T beams, as well as reconstruction of the exterior roof slab water proofing. This refurbishment is anticipated to provide an additional 50 years of life expectancy of this asset.

Ontario

Drinking-Water Systems Regulation O. Reg. 170/03

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre.

Bacteriological Adverse

				Parameters			
Adverse Incident Date	Corrective Action	Corrective Action Date	Adverse Water Quality Indicator # (AWQI #)	E. coli (cfu/100ml)	Total Coliform (cfu/100ml)	HPC / Background (cfu/1ml)	Free Cl2 (mg/L)
31-Jan-2022 [1]			157753	NDOGT	NDOGT	NDOGT	0.89
	Resample	2-Feb-2022		0	0	0	1.01
	Resample	2-Feb-2022		0	0	0	1.01
	Resample	2-Feb-2022		0	0	0	0.94
	Resample	4-Feb-2022		0	0	0	1.10
	Resample	4-Feb-2022		0	0	0	1.12
	Resample	4-Feb-2022		0	0	0	1.15
11-May-2022 [2]			158370	0	1	2	0.80
	Resample	13-May-2022		0	0	0	0.62
	Resample	13-May-2022		0	0	0	0.62
20-May-2022 [3]			158426	0	2	<10	0.66
	Resample	21-May-2022		0	0	0	0.75
	Resample	21-May-2022		0	0	0	0.68
	Resample	21-May-2022		0	0	0	0.85
27-May-2022 [4]			158509	0	2	<10	0.74
	Resample	28-May-2022		0	0	0	0.68
	Resample	28-May-2022		0	0	0	0.83
	Resample	28-May-2022		0	0	0	0.69
13-Jun-2022 [5]			158695	0	2	<10	0.89
	Resample	14-Jun-2022		0	0	0	1.01
	Resample	14-Jun-2022		0	0	0	0.97
	Resample	14-Jun-2022		0	0	0	0.93
13-Jul-2022 [6]			159146	0	66	<10	0.88
	Resample	14-Jul-2022		0	0	0	0.92
	Resample	14-Jul-2022		0	0	0	1.03
	Resample	14-Jul-2022		0	0	0	1.05
9-Aug-2022 [7]			159521	0	1	<10	0.64
	Resample	11-Aug-2022		0	0	<10	0.54
	Resample	11-Aug-2022		0	0	<10	0.63
	Resample	11-Aug-2022		0	0	<10	0.73

Bacteriological Adverse con't							
				Parameters			
Adverse Incident Date	Corrective Action	Corrective Action Date	Adverse Water Quality Indicator # (AWQI #)	E. coli (cfu/100ml)	Total Coliform (cfu/100ml)	HPC / Background (cfu/1ml)	Free Cl2 (mg/L)
29-Aug-2022 [8]			159781	0	1	<10	0.98
	Resample	30-Aug-2022		0	0	0	0.65
	Resample	30-Aug-2022		0	0	0	1.02
	Resample	30-Aug-2022		0	0	0	0.98
11-Oct-2022 [9]			160309	NDOGN	NDOGN	NDOGN	0.33
		13-Oct-2022		0	0	0	0.97
		13-Oct-2022		0	0	0	0.99
		13-Oct-2022		0	0	0	0.94
		14-Oct-2022		0	0	3	0.99
		14-Oct-2022		0	0	0	0.97
		14-Oct-2022		0	0	0	0.91
12-Oct-2022 [10]			160322	NDOGT	NDOGT	NDOGT	0.60
	Resample	14-Oct-2022		0	0	0	0.68
	Resample	14-Oct-2022		0	0	0	0.76
	Resample	15-Oct-2022		0	0	0	0.51
	Resample	15-Oct-2022		0	0	0	0.53

Notes:

[1]**Details:** A water sample collected from a hydrant at 166 Berkshire Dr was reported as NDOGT (No Data, Overgrown with Target Bacteria for Total Coliforms (TC) and E. coli (EC). The lab also reported the samples as PSS, indicating the presence of settled sediments.

Corrective Action: The original site was immediately re-sampled and samples were also taken at sites upstream and downstream from the original site. This sampling was repeated approximately 42 hours later. There were no indicators of adverse water quality in any of the re-sample results.

[2]**Details:** A Total Coliform count of 1 per 100 mL was detected in a sample collected from 18 Harrison Cr.

Corrective Action: The original site was immediately re-sampled. Another sample was also taken at a site upstream from the original site. Because the original site was at a dead-end, no downstream sample was collected. There were no indicators of adverse water quality in any of the re-sample results.

[3]Details: A Total Coliform count of 2 per 100 mL was detected in a sample collected from 869 Commissioners Rd. W.(#2 Reservoir).

Corrective Action: The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

[4]Details: A Total Coliform count of 2 per 100 mL was detected in a sample collected from 3502 Manning Dr.

Corrective Action: The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

[5]Details: A Total Coliform count of 2 per 100 mL was detected in a sample collected from 844 Commissioners Rd W.

Corrective Action: The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

[6]Details: A Total Coliform count of 66 per 100 mL was detected in a sample collected from 869 Commissioners Rd. W. (#2 Reservoir).

Corrective Action: The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

[7]Details: A Total Coliform count of 1 per 100 ml. was detected in a sample collected from 175 Whisperwood Ave.

Corrective Action: The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

[8]Details: A Total Coliform count of 1 per 100 mL was detected in a sample collected from 5200 Highbury Ave S.

Corrective Action: The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. There were no indicators of adverse water quality in any of the re-sample results.

[9]Details: A sample collected from 39 Northcrest Dr. was reported as NDOGN for both Total Coliforms and for E. coli.

Corrective Action: The original site was immediately re-sampled. Samples were also taken at sites upstream and downstream from the original site. This sampling was repeated the next day. There were no indicators of adverse water quality in any of the re-sample results.

[10]Details: A sample collected from 1322 Sprucedale Ave was reported as NDOGN for both Total Conforms and for E. coli.

Corrective Action: The original site was immediately re-sampled. A sample was also taken upstream from the original site. The original site was at the dead-end of a cul-de-sac, so there was no downstream site to sample. This sampling was repeated the next day. There were no indicators of adverse water quality in any of the re-sample results.

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	# of E. coli Samples Taken	Range of E. coli (cfu/100mL)	# of Total Coliform Samples Taken	Range of Coliform (cfu/100mL)	# of HPC / Background Samples	Range of HPC (cfu/1mL)
Treated	N/A	N/A	N/A	N/A	N/A	N/A
Distribution	3070	0 - 0	3070	0 - 66	3070	0 - 2000

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	# of Grab Samples	Continuous Monitoring	Range of Results
Turbidity	56	N/A	0.04 - 0.75 NTU
Alkalinity	5	N/A	78 - 89 mg/L as CaCO3
Lead	6	N/A	<0.01 - 0.13 µg/L
Chlorine*	3102	87600	0.30 - 1.40 mg/L
Fluoride**	104	17520	0.12 - 0.79 mg/L

*London has 10 locations with continuous online chlorine monitoring
**Continuous online fluoride monitoring occurs at Arva and SERPs

Note: For continuous monitors use 8760 as the number of samples

Summary of Inorganic parameters tested during this reporting period or the most recent sample results.

As outlined below, sampling was carried out for inorganic and organic parameters at the following sites: Arva Pumping Station and Southeast Reservoir and Pumping Station.

SITE: Arva Pumping Station - Treated Distribution

a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Antimony	28/Jun/22	0.9	ug/L	No
September 21, 2017	Arsenic	28/Jun/22	0.2 <MDL	ug/L	No
September 21, 2017	Barium	28/Jun/22	13.7	ug/L	No
September 21, 2017	Boron	28/Jun/22	17	ug/L	No
September 21, 2017	Cadmium	28/Jun/22	0 <MDL	ug/L	No
September 21, 2017	Chromium	28/Jun/22	0.26	ug/L	No
September 21, 2017	Fluoride	5/Jan/22	0.47	mg/L	No
September 21, 2017	Fluoride	12/Jan/22	0.50	mg/L	No
September 21, 2017	Fluoride	19/Jan/22	0.47	mg/L	No
September 21, 2017	Fluoride	26/Jan/22	0.55	mg/L	No
September 21, 2017	Fluoride	2/Feb/22	0.45	mg/L	No
September 21, 2017	Fluoride	9/Feb/22	0.50	mg/L	No
September 21, 2017	Fluoride	16/Feb/22	0.45	mg/L	No
September 21, 2017	Fluoride	23/Feb/22	0.56	mg/L	No
September 21, 2017	Fluoride	2/Mar/22	0.56	mg/L	No
September 21, 2017	Fluoride	9/Mar/22	0.57	mg/L	No
September 21, 2017	Fluoride	16/Mar/22	0.53	mg/L	No
September 21, 2017	Fluoride	23/Mar/22	0.48	mg/L	No
September 21, 2017	Fluoride	30/Mar/22	0.51	mg/L	No
September 21, 2017	Fluoride	6/Apr/22	0.48	mg/L	No
September 21, 2017	Fluoride	13/Apr/22	0.52	mg/L	No
September 21, 2017	Fluoride	20/Apr/22	0.47	mg/L	No
September 21, 2017	Fluoride	27/Apr/22	0.50	mg/L	No
September 21, 2017	Fluoride	4/May/22	0.55	mg/L	No
September 21, 2017	Fluoride	11/May/22	0.66	mg/L	No
September 21, 2017	Fluoride	18/May/22	0.57	mg/L	No
September 21, 2017	Fluoride	25/May/22	0.36	mg/L	No
September 21, 2017	Fluoride	1/Jun/22	0.65	mg/L	No
September 21, 2017	Fluoride	29/Jun/22	0.60	mg/L	No
September 21, 2017	Fluoride	6/Jul/22	0.13	mg/L	No
September 21, 2017	Fluoride	13/Jul/22	0.54	mg/L	No
September 21, 2017	Fluoride	20/Jul/22	0.53	mg/L	No
September 21, 2017	Fluoride	27/Jul/22	0.55	mg/L	No
September 21, 2017	Fluoride	3/Aug/22	0.54	mg/L	No

September 21, 2017	Fluoride	10/Aug/22	0.53	mg/L	No

September 21, 2017	Fluoride	17/Aug/22	0.58	mg/L	No
September 21, 2017	Fluoride	24/Aug/22	0.64	mg/L	No
September 21, 2017	Fluoride	31/Aug/22	0.62	mg/L	No
September 21, 2017	Fluoride	7/Sep/22	0.58	mg/L	No
September 21, 2017	Fluoride	14/Sep/22	0.63	mg/L	No
September 21, 2017	Fluoride	21/Sep/22	0.61	mg/L	No
September 21, 2017	Fluoride	28/Sep/22	0.56	mg/L	No
September 21, 2017	Fluoride	5/Oct/22	0.60	mg/L	No
September 21, 2017	Fluoride	12/Oct/22	0.50	mg/L	No
September 21, 2017	Fluoride	19/Oct/22	0.52	mg/L	No
September 21, 2017	Fluoride	26/Oct/22	0.59	mg/L	No
September 21, 2017	Fluoride	2/Nov/22	0.54	mg/L	No
September 21, 2017	Fluoride	9/Nov/22	0.50	mg/L	No
September 21, 2017	Fluoride	16/Nov/22	0.52	mg/L	No
September 21, 2017	Fluoride	23/Nov/22	0.39	mg/L	No
September 21, 2017	Fluoride	30/Nov/22	0.39	mg/L	No
September 21, 2017	Fluoride	7/Dec/22	0.38	mg/L	No
September 21, 2017	Fluoride	21/Dec/22	0.34	mg/L	No
September 21, 2017	Fluoride	28/Dec/22	0.35	mg/L	No
September 21, 2017	Lead	8/Mar/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	8/Sep/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	7/Dec/22	0.02	ug/L	No
September 21, 2017	Mercury	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Nitrate (as nitrogen)	8/Mar/22	0.565	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	28/Jun/22	0.373	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	8/Sep/22	0.267	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	7/Dec/22	0.283	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	8/Mar/22	0.565	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	28/Jun/22	0.373	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	8/Sep/22	0.267	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	7/Dec/22	0.283	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	8/Mar/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	28/Jun/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	8/Sep/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	7/Dec/22	0.003 <MDL	mg/L	No
September 21, 2017	Selenium	28/Jun/22	0.13	ug/L	No
September 21, 2017	Sodium	28/Jun/22	12.4	mg/L	No
September 21, 2017	Uranium	28/Jun/22	0.039	ug/L	No

b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Alachlor	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Atrazine	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Atrazine + N-dealkylated metabolites	28/Jun/22	0.02	ug/L	No
September 21, 2017	De-ethylated Atrazine	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Azinphos-methyl	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Benzene	28/Jun/22	0.32 <MDL	ug/L	No
September 21, 2017	Benzo(a)pyrene	28/Jun/22	0.004 <MDL	ug/L	No
September 21, 2017	Bromoxynil	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Carbaryl	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Carbofuran	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Carbon tetrachloride	28/Jun/22	0.17 <MDL	ug/L	No
September 21, 2017	Chlorpyrifos	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Diazinon	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Dicamba	28/Jun/22	0.2 <MDL	ug/L	No
September 21, 2017	1,2-Dichlorobenzene	28/Jun/22	0.41 <MDL	ug/L	No
September 21, 2017	1,4-Dichlorobenzene	28/Jun/22	0.36 <MDL	ug/L	No
September 21, 2017	1,2-Dichloroethane	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	Dichloromethane	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	2,4-dichlorophenol	28/Jun/22	0.15 <MDL	ug/L	No
September 21, 2017	2,4-dichlorophenoxyacetic acid (2,4-D)	28/Jun/22	0.19 <MDL	ug/L	No
September 21, 2017	Diclofop-methyl	28/Jun/22	0.4 <MDL	ug/L	No
September 21, 2017	Dimethoate	28/Jun/22	0.06 <MDL	ug/L	No
September 21, 2017	Diquat	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Diuron	28/Jun/22	0.03 <MDL	ug/L	No
September 21, 2017	Glyphosate	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Malathion	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	MCPA	28/Jun/22	0 <MDL	mg/L	No
September 21, 2017	Metolachlor	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Metribuzin	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Paraquat	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Pentachlorophenol	28/Jun/22	0.15 <MDL	ug/L	No
September 21, 2017	Phorate	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Picloram	28/Jun/22	1 <MDL	ug/L	No
September 21, 2017	Polychlorinated Biphenyls (PCBs)	28/Jun/22	0.04 <MDL	ug/L	No
September 21, 2017	Prometryne	28/Jun/22	0.03 <MDL	ug/L	No
September 21, 2017	Simazine	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Terbufos	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	2,3,4,6-tetrachlorophenol	28/Jun/22	0.2 <MDL	ug/L	No
September 21, 2017	Triallate	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Trichloroethylene	28/Jun/22	0.44 <MDL	ug/L	No
September 21, 2017	2,4,6-trichlorophenol	28/Jun/22	0.25 <MDL	ug/L	No
September 21, 2017	Trifluralin	28/Jun/22	0.02 <MDL	ug/L	No

September 21, 2017	Trihalomethanes (total)	8/Mar/22	18	ug/L	No
September 21, 2017	Bromodichloromethane	8/Mar/22	5.7	ug/L	No
September 21, 2017	Bromoform	8/Mar/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Mar/22	11	ug/L	No
September 21, 2017	Dibromochloromethane	8/Mar/22	1.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	28/Jun/22	23	ug/L	No
September 21, 2017	Bromodichloromethane	28/Jun/22	6.7	ug/L	No
September 21, 2017	Bromoform	28/Jun/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	28/Jun/22	14	ug/L	No
September 21, 2017	Dibromochloromethane	28/Jun/22	2.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	8/Sep/22	29	ug/L	No
September 21, 2017	Bromodichloromethane	8/Sep/22	8	ug/L	No
September 21, 2017	Bromoform	8/Sep/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Sep/22	17	ug/L	No
September 21, 2017	Dibromochloromethane	8/Sep/22	3.6	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Dec/22	18	ug/L	No
September 21, 2017	Bromodichloromethane	7/Dec/22	6	ug/L	No
September 21, 2017	Bromoform	7/Dec/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	7/Dec/22	9.1	ug/L	No
September 21, 2017	Dibromochloromethane	7/Dec/22	2.6	ug/L	No
September 21, 2017	Vinyl Chloride	28/Jun/22	0.17 <MDL	ug/L	No

SITE: Arva Pumping Station - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	5.4	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	5.4	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Mar/22	6.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	6.1	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	4.5	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	5.3 <MDL	ug/L	N

September 21, 2017	Total Haloacetic Acids	28/Jun/22	14.7	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	9.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	5.4	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	7.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	7.1	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	23.9	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	16	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	7.9	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	3.4	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	8.2	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	8.2	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Alkalinity	28/Jun/22	80	mg/L as CaCO3	No
September 21, 2017	Aluminum	28/Jun/22	52	ug/L	No
September 21, 2017	Ammonia+Ammonium (N)	28/Jun/22	0.04 <MDL	mg/L	No
September 21, 2017	Calcium	28/Jun/22	26.7	mg/L	No
September 21, 2017	Chloride	28/Jun/22	10	mg/L	No
September 21, 2017	Cobalt	28/Jun/22	0.006	ug/L	No
September 21, 2017	Colour	28/Jun/22	3 <MDL	TCU	No
September 21, 2017	Conductivity	28/Jun/22	237	uS/cm	No
September 21, 2017	Copper	28/Jun/22	2	ug/L	No
September 21, 2017	Cyanide; total	28/Jun/22	2 <MDL	ug/L	No
September 21, 2017	1,1-Dichloroethylene (vinylidene chloride)	28/Jun/22	0.33 <MDL	ug/L	No

September 21, 2017	Dissolved Organic Carbon	28/Jun/22	2	mg/L	No
September 21, 2017	Ethylbenzene	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Field pH	28/Jun/22	8.1	no unit	No
September 21, 2017	Field Temperature	28/Jun/22	15.4	celcius	No
September 21, 2017	Field Turbidity	28/Jun/22	0.19	NTU	No
September 21, 2017	Hardness	28/Jun/22	101	mg/L as CaCO3	No
September 21, 2017	Iron	28/Jun/22	7 <MDL	ug/L	No
September 21, 2017	Langelier`s Index	28/Jun/22	-0.52	@ 20º C	N
September 21, 2017	Langelier`s Index	28/Jun/22	-0.2	@ 4º C	N
September 21, 2017	Magnesium	28/Jun/22	8.49	mg/L	No
September 21, 2017	Manganese	28/Jun/22	0.28	ug/L	No
September 21, 2017	Monochlorobenzene	28/Jun/22	0.3 <MDL	ug/L	No
September 21, 2017	Nickel	28/Jun/22	0.4	ug/L	No
September 21, 2017	Nitrogen-Kjeldahl (N)	28/Jun/22	0.24	mg/L	No
September 21, 2017	Organic Nitrogen	28/Jun/22	0.21	mg/L	No
September 21, 2017	pH	28/Jun/22	8.07	No unit	No
September 21, 2017	pH-Field	28/Jun/22	8.1	no unit	No
September 21, 2017	Phosphorus	28/Jun/22	0.003 <MDL	mg/L	No
September 21, 2017	Potassium	28/Jun/22	1.01	mg/L	No
September 21, 2017	Silicon; reactive silicate	28/Jun/22	1.2	mg/L	No
September 21, 2017	Silver	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Solids (Total Dissolved)	28/Jun/22	131	mg/L	No
September 21, 2017	Sulphate	28/Jun/22	25	mg/L	No
September 21, 2017	Sulphide	28/Jun/22	6 <MDL	ug/L	No
September 21, 2017	Surr 1,2-Dichloroethane-d4	28/Jun/22	102	Surr Rec %	No
September 21, 2017	Surr 4-Bromofluorobenzene	28/Jun/22	95	Surr Rec %	No
September 21, 2017	Surr Decachlorobiphenyl	28/Jun/22	98	%	No
September 21, 2017	Temperature-Field	28/Jun/22	15.4	celcius	No
September 21, 2017	Tetrachloroethylene (perchloroethylene)	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	Toluene	28/Jun/22	0.36 <MDL	ug/L	No
September 21, 2017	Total Chlorine-Field	28/Jun/22	1.26	mg/L	No
September 21, 2017	Total Chlorine-Field	28/Jun/22	1.26	mg/L	No
September 21, 2017	2-(2,4,5-Trichlorophenoxy)propanoic acid (2,4,5-TP)	28/Jun/22	0.18 <MDL	ug/L	No
September 21, 2017	Turbidity	28/Jun/22	0.1 <MDL	NTU	No
September 21, 2017	Turbidity-Field	28/Jun/22	0.19	NTU	No
September 21, 2017	Xylene (Total)	28/Jun/22	0.43 <MDL	ug/L	No
September 21, 2017	m/p-Xylene	28/Jun/22	0.43 <MDL	ug/L	No
September 21, 2017	o-xylene	28/Jun/22	0.17 <MDL	ug/L	No
September 21, 2017	Zinc	28/Jun/22	2 <MDL	ug/L	No

SITE: Southeast Reservoir and Pumping Station - Treated Distribution

a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Antimony	28/Jun/22	0.9	ug/L	No
September 21, 2017	Arsenic	28/Jun/22	0.5	ug/L	No
September 21, 2017	Barium	28/Jun/22	20.9	ug/L	No
September 21, 2017	Boron	28/Jun/22	31	ug/L	No
September 21, 2017	Cadmium	28/Jun/22	0.003 <MDL	ug/L	No
September 21, 2017	Chromium	28/Jun/22	0.17	ug/L	No
September 21, 2017	Fluoride	5/Jan/22	0.46	mg/L	No
September 21, 2017	Fluoride	12/Jan/22	0.47	mg/L	No
September 21, 2017	Fluoride	19/Jan/22	0.49	mg/L	No
September 21, 2017	Fluoride	26/Jan/22	0.44	mg/L	No
September 21, 2017	Fluoride	2/Feb/22	0.46	mg/L	No
September 21, 2017	Fluoride	9/Feb/22	0.45	mg/L	No
September 21, 2017	Fluoride	16/Feb/22	0.44	mg/L	No
September 21, 2017	Fluoride	23/Feb/22	0.46	mg/L	No
September 21, 2017	Fluoride	2/Mar/22	0.42	mg/L	No
September 21, 2017	Fluoride	9/Mar/22	0.44	mg/L	No
September 21, 2017	Fluoride	16/Mar/22	0.46	mg/L	No
September 21, 2017	Fluoride	23/Mar/22	0.43	mg/L	No
September 21, 2017	Fluoride	30/Mar/22	0.43	mg/L	No
September 21, 2017	Fluoride	6/Apr/22	0.43	mg/L	No
September 21, 2017	Fluoride	13/Apr/22	0.48	mg/L	No
September 21, 2017	Fluoride	20/Apr/22	0.44	mg/L	No
September 21, 2017	Fluoride	27/Apr/22	0.47	mg/L	No
September 21, 2017	Fluoride	4/May/22	0.51	mg/L	No
September 21, 2017	Fluoride	11/May/22	0.51	mg/L	No
September 21, 2017	Fluoride	18/May/22	0.52	mg/L	No
September 21, 2017	Fluoride	25/May/22	0.36	mg/L	No
September 21, 2017	Fluoride	1/Jun/22	0.53	mg/L	No
September 21, 2017	Fluoride	29/Jun/22	0.48	mg/L	No
September 21, 2017	Fluoride	6/Jul/22	0.51	mg/L	No
September 21, 2017	Fluoride	13/Jul/22	0.53	mg/L	No
September 21, 2017	Fluoride	20/Jul/22	0.55	mg/L	No
September 21, 2017	Fluoride	27/Jul/22	0.60	mg/L	No
September 21, 2017	Fluoride	3/Aug/22	0.56	mg/L	No
September 21, 2017	Fluoride	10/Aug/22	0.58	mg/L	No
September 21, 2017	Fluoride	17/Aug/22	0.68	mg/L	No
September 21, 2017	Fluoride	24/Aug/22	0.65	mg/L	No
September 21, 2017	Fluoride	31/Aug/22	0.62	mg/L	No
September 21, 2017	Fluoride	7/Sep/22	0.60	mg/L	No
September 21, 2017	Fluoride	14/Sep/22	0.64	mg/L	No

September 21, 2017	Fluoride	21/Sep/22	0.61	mg/L	No
September 21, 2017	Fluoride	28/Sep/22	0.56	mg/L	No
September 21, 2017	Fluoride	5/Oct/22	0.62	mg/L	No
September 21, 2017	Fluoride	12/Oct/22	0.58	mg/L	No
September 21, 2017	Fluoride	19/Oct/22	0.59	mg/L	No
September 21, 2017	Fluoride	26/Oct/22	0.59	mg/L	No
September 21, 2017	Fluoride	2/Nov/22	0.57	mg/L	No
September 21, 2017	Fluoride	9/Nov/22	0.66	mg/L	No
September 21, 2017	Fluoride	16/Nov/22	0.62	mg/L	No
September 21, 2017	Fluoride	23/Nov/22	0.56	mg/L	No
September 21, 2017	Fluoride	30/Nov/22	0.56	mg/L	No
September 21, 2017	Fluoride	7/Dec/22	0.52	mg/L	No
September 21, 2017	Fluoride	21/Dec/22	0.46	mg/L	No
September 21, 2017	Fluoride	28/Dec/22	0.49	mg/L	No
September 21, 2017	Lead	8/Mar/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	8/Sep/22	0.01 <MDL	ug/L	No
September 21, 2017	Lead	7/Dec/22	0.01 <MDL	ug/L	No
September 21, 2017	Mercury	28/Jun/22	0.01 <MDL	ug/L	No
September 21, 2017	Nitrate (as nitrogen)	8/Mar/22	0.05	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	28/Jun/22	0.04	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	8/Sep/22	0.05	mg/L	No
September 21, 2017	Nitrate (as nitrogen)	7/Dec/22	0.04	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	8/Mar/22	0.05	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	28/Jun/22	0.04	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	8/Sep/22	0.05	mg/L	No
September 21, 2017	Nitrate + Nitrite (as nitrogen)	7/Dec/22	0.04	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	8/Mar/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	28/Jun/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	8/Sep/22	0.003 <MDL	mg/L	No
September 21, 2017	Nitrite (as nitrogen)	7/Dec/22	0.003 <MDL	mg/L	No
September 21, 2017	Selenium	28/Jun/22	0.24	ug/L	No
September 21, 2017	Sodium	28/Jun/22	18.2	mg/L	No
September 21, 2017	Uranium	28/Jun/22	0.037	ug/L	No

b) ORGANIC PARAMETERS (including THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Alachlor	28/Jun/22	0.02 <MDL	ug/L	No
September 21, 2017	Atrazine	28/Jun/22	0.04	ug/L	No
September 21, 2017	Atrazine + N-dealkylated metabolites	28/Jun/22	0.06	ug/L	No
September 21, 2017	De-ethylated Atrazine	28/Jun/22	0.02	ug/L	No
September 21, 2017	Azinphos-methyl	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Benzene	28/Jun/22	0.32 <MDL	ug/L	No

September 21, 2017	Benzo(a)pyrene	28/Jun/22	0.004	<MDL	ug/L	No
September 21, 2017	Bromoxynil	28/Jun/22	0.33	<MDL	ug/L	No
September 21, 2017	Carbaryl	28/Jun/22	0.05	<MDL	ug/L	No
September 21, 2017	Carbofuran	28/Jun/22	0.01	<MDL	ug/L	No
September 21, 2017	Carbon tetrachloride	28/Jun/22	0.17	<MDL	ug/L	No
September 21, 2017	Chlorpyrifos	28/Jun/22	0.02	<MDL	ug/L	No
September 21, 2017	Diazinon	28/Jun/22	0.02	<MDL	ug/L	No
September 21, 2017	Dicamba	28/Jun/22	0.2	<MDL	ug/L	No
September 21, 2017	1,2-Dichlorobenzene	28/Jun/22	0.41	<MDL	ug/L	No
September 21, 2017	1,4-Dichlorobenzene	28/Jun/22	0.36	<MDL	ug/L	No
September 21, 2017	1,2-Dichloroethane	28/Jun/22	0.35	<MDL	ug/L	No
September 21, 2017	Dichloromethane	28/Jun/22	0.35	<MDL	ug/L	No
September 21, 2017	2,4-dichlorophenol	28/Jun/22	0.15	<MDL	ug/L	No
September 21, 2017	2,4-dichlorophenoxyacetic acid (2,4-D)	28/Jun/22	0.19	<MDL	ug/L	No
September 21, 2017	Diclofop-methyl	28/Jun/22	0.4	<MDL	ug/L	No
September 21, 2017	Dimethoate	28/Jun/22	0.06	<MDL	ug/L	No
September 21, 2017	Diquat	28/Jun/22	1	<MDL	ug/L	No
September 21, 2017	Diuron	28/Jun/22	0.03	<MDL	ug/L	No
September 21, 2017	Glyphosate	28/Jun/22	1	<MDL	ug/L	No
September 21, 2017	Malathion	28/Jun/22	0.02	<MDL	ug/L	No
September 21, 2017	MCPA	28/Jun/22	0.00012	<MDL	mg/L	No
September 21, 2017	Metolachlor	28/Jun/22	0.02		ug/L	No
September 21, 2017	Metribuzin	28/Jun/22	0.02	<MDL	ug/L	No
September 21, 2017	Paraquat	28/Jun/22	1	<MDL	ug/L	No
September 21, 2017	Pentachlorophenol	28/Jun/22	0.15	<MDL	ug/L	No
September 21, 2017	Phorate	28/Jun/22	0.01	<MDL	ug/L	No
September 21, 2017	Picloram	28/Jun/22	1	<MDL	ug/L	No
September 21, 2017	Polychlorinated Biphenyls (PCBs)	28/Jun/22	0.04	<MDL	ug/L	No
September 21, 2017	Prometryne	28/Jun/22	0.03	<MDL	ug/L	No
September 21, 2017	Simazine	28/Jun/22	0.01	<MDL	ug/L	No
September 21, 2017	Terbufos	28/Jun/22	0.01	<MDL	ug/L	No
September 21, 2017	2,3,4,6-tetrachlorophenol	28/Jun/22	0.2	<MDL	ug/L	No
September 21, 2017	Triallate	28/Jun/22	0.01	<MDL	ug/L	No
September 21, 2017	Trichloroethylene	28/Jun/22	0.44	<MDL	ug/L	No
September 21, 2017	2,4,6-trichlorophenol	28/Jun/22	0.25	<MDL	ug/L	No
September 21, 2017	Trifluralin	28/Jun/22	0.02	<MDL	ug/L	No
September 21, 2017	Trihalomethanes (total)	8/Mar/22	16		ug/L	No
September 21, 2017	Bromodichloromethane	28/Jun/22	26		ug/L	No
September 21, 2017	Bromoform	8/Sep/22	47.00	<MDL	ug/L	No
September 21, 2017	Chloroform	7/Dec/22	22		ug/L	No
September 21, 2017	Dibromochloromethane	8/Mar/22	5.4		ug/L	No
September 21, 2017	Trihalomethanes (total)	28/Jun/22	7.5		ug/L	No
September 21, 2017	Bromodichloromethane	8/Sep/22	12		ug/L	No
September 21, 2017	Bromoform	7/Dec/22	6.80	<MDL	ug/L	No
September 21, 2017	Chloroform	8/Mar/22	0.34		ug/L	No
September 21, 2017	Dibromochloromethane	28/Jun/22	0.34		ug/L	No

September 21, 2017	Trihalomethanes (total)	8/Sep/22	0.34	ug/L	No
September 21, 2017	Bromodichloromethane	7/Dec/22	0.34	ug/L	No
September 21, 2017	Bromoform	8/Mar/22	8.40 <MDL	ug/L	No
September 21, 2017	Chloroform	28/Jun/22	16	ug/L	No
September 21, 2017	Dibromochloromethane	8/Sep/22	30	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Dec/22	12	ug/L	No
September 21, 2017	Bromodichloromethane	8/Mar/22	2.6	ug/L	No
September 21, 2017	Bromoform	28/Jun/22	2.60 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Sep/22	4.6	ug/L	No
September 21, 2017	Dibromochloromethane	7/Dec/22	2.5	ug/L	No
September 21, 2017	Vinyl Chloride	28/Jun/22	0.17 <MDL	ug/L	No

c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Alkalinity	28/Jun/22	96	mg/L as CaCO3	No
September 21, 2017	Aluminum	28/Jun/22	14	ug/L	No
September 21, 2017	Ammonia+Ammonium (N)	28/Jun/22	0.04 <MDL	mg/L	No
September 21, 2017	Calcium	28/Jun/22	33.4	mg/L	No
September 21, 2017	Chloride	28/Jun/22	18	mg/L	No
September 21, 2017	Cobalt	28/Jun/22	0.012	ug/L	No
September 21, 2017	Colour	28/Jun/22	3 <MDL	TCU	No
September 21, 2017	Conductivity	28/Jun/22	300	uS/cm	No
September 21, 2017	Copper	28/Jun/22	0.9	ug/L	No
September 21, 2017	Cyanide; total	28/Jun/22	2 <MDL	ug/L	No
September 21, 2017	1,1-Dichloroethylene (vinylidene	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Dissolved Organic Carbon	28/Jun/22	2	mg/L	No
September 21, 2017	Ethylbenzene	28/Jun/22	0.33 <MDL	ug/L	No
September 21, 2017	Field pH	28/Jun/22	7.42	no unit	No
September 21, 2017	Field Temperature	28/Jun/22	12	celcius	No
September 21, 2017	Field Turbidity	28/Jun/22	0.21	NTU	No
September 21, 2017	Hardness	28/Jun/22	122	mg/L as CaCO3	No
September 21, 2017	Iron	28/Jun/22	7 <MDL	ug/L	No
September 21, 2017	Langelier`s Index	28/Jun/22	-0.43	@ 20º C	No
September 21, 2017	Langelier`s Index	28/Jun/22	-0.11	@ 4º C	No
September 21, 2017	Magnesium	28/Jun/22	9.4	mg/L	No
September 21, 2017	Manganese	28/Jun/22	0.13	ug/L	No
September 21, 2017	Monochlorobenzene	28/Jun/22	0.3 <MDL	ug/L	No
September 21, 2017	Nickel	28/Jun/22	0.7	ug/L	No
September 21, 2017	Nitrogen-Kjeldahl (N)	28/Jun/22	0.19	mg/L	No
September 21, 2017	Organic Nitrogen	28/Jun/22	0.17	mg/L	No
September 21, 2017	pH	28/Jun/22	7.99	No unit	No
September 21, 2017	pH-Field	28/Jun/22	7.42	no unit	No
September 21, 2017	Phosphorus	28/Jun/22	0.003 <MDL	mg/L	No

September 21, 2017	Potassium	28/Jun/22	1.38	mg/L	No
September 21, 2017	Silicon; reactive silicate	28/Jun/22	0.26	mg/L	No
September 21, 2017	Silver	28/Jun/22	0.05 <MDL	ug/L	No
September 21, 2017	Solids (Total Dissolved)	28/Jun/22	169	mg/L	No
September 21, 2017	Sulphate	28/Jun/22	29	mg/L	No
September 21, 2017	Sulphide	28/Jun/22	6 <MDL	ug/L	No
September 21, 2017	Surr 1,2-Dichloroethane-d4	28/Jun/22	100	Surr Rec %	No
September 21, 2017	Surr 4-Bromofluorobenzene	28/Jun/22	96	Surr Rec %	No
September 21, 2017	Surr Decachlorobiphenyl	28/Jun/22	103	%	No
September 21, 2017	Temperature-Field	28/Jun/22	12	celcius	No
September 21, 2017	Tetrachloroethylene (perchloroethylene)	28/Jun/22	0.35 <MDL	ug/L	No
September 21, 2017	Toluene	28/Jun/22	0.36 <MDL	ug/L	No
September 21, 2017	Total Chlorine-Field	28/Jun/22	1.38	mg/L	No
September 21, 2017	Total Chlorine-Field	28/Jun/22	1.38	mh/L	No
September 21, 2017	2-(2,4,5-Trichlorophenoxy)propanoic acid (2,4,5-TP)	28/Jun/22	0.18 <MDL	ug/L	No
September 21, 2017	Turbidity	28/Jun/22	0.1 <MDL	NTU	No
September 21, 2017	Turbidity-Field	28/Jun/22	0.21	NTU	No
September 21, 2017	Xylene (Total)	28/Jun/22	0.43 <MDL	ug/L	No
September 21, 2017	m/p-Xylene	28/Jun/22	0.43 <MDL	ug/L	No
September 21, 2017	o-xylene	28/Jun/22	0.17 <MDL	ug/L	No
September 21, 2017	Zinc	28/Jun/22	2 <MDL	ug/L	No

Summary of Inorganic/Organic parameters tested during this reporting period.

As outlined below, sampling was carried out for THM's & HAA's at 603 Wonderland Rd. S., 525 Crestwood Dr., 214 Rathowan St., 4318 Colonel Talbot Rd., 4562 Colonel Talbot Rd., and 950 East Springbank Gate.

SITE: 603 Wonderland Rd. S. - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	11.4	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	5.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	13.7	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	8.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	5.4	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	9	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	5.4	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	5.4	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

SITE: 525 Crestwood Dr. - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	14.8	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	8.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	6.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	16.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	8.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	7.2	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	8.6	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	8.6	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	6.9	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	6.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

SITE: Fire Hydrant at 214 Rathowan St. - Treated Distribution

b) ORGANIC PARAMETERS (THM & HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	12	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	6.5	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	7.3	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	7.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	4.7	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	5.4	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	5.4	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

SITE: 4318 Colonel Talbot Rd. - Treated Distribution

b) ORGANIC PARAMETERS (THM & HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	13.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	7.2	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.9	ug/L	N
September 21, 2017	Total Haloacetic Acids	28/Jun/22	15.3	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	28/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	28/Jun/22	9.1	ug/L	N
September 21, 2017	(Monobromoacetic acid)	28/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	28/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	28/Jun/22	6.2	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	25.5	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	17.2	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	8.4	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	15	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	8.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	6.1	ug/L	N

SITE: 4562 Colonel Talbot Rd. (Hydrant) - Treated Distribution

b) ORGANIC PARAMETERS (THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Trihalomethanes (total)	8/Mar/22	20	ug/L	No
September 21, 2017	Bromodichloromethane	8/Mar/22	6.2	ug/L	No
September 21, 2017	Bromoform	8/Mar/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Mar/22	11	ug/L	No
September 21, 2017	Dibromochloromethane	8/Mar/22	2.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	28/Jun/22	35	ug/L	No
September 21, 2017	Bromodichloromethane	28/Jun/22	8.6	ug/L	No
September 21, 2017	Bromoform	28/Jun/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	28/Jun/22	23	ug/L	No
September 21, 2017	Dibromochloromethane	28/Jun/22	3	ug/L	No
September 21, 2017	Trihalomethanes (total)	8/Sep/22	58	ug/L	No
September 21, 2017	Bromodichloromethane	8/Sep/22	13	ug/L	No
September 21, 2017	Bromoform	8/Sep/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	8/Sep/22	41	ug/L	No
September 21, 2017	Dibromochloromethane	8/Sep/22	4.8	ug/L	No
September 21, 2017	Trihalomethanes (total)	7/Dec/22	32	ug/L	No
September 21, 2017	Bromodichloromethane	7/Dec/22	8.8	ug/L	No
September 21, 2017	Bromoform	7/Dec/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	7/Dec/22	20	ug/L	No
September 21, 2017	Dibromochloromethane	7/Dec/22	3.3	ug/L	No
September 21, 2017	Surr 1,2-Dichloroethane-d4	28/Jun/22	101	Surr Rec %	No
September 21, 2017	Surr 4-Bromofluorobenzene	28/Jun/22	95	Surr Rec %	No

SITE: 950 East Springbank Gate - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	8/Mar/22	12.1	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Mar/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Mar/22	6.6	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Mar/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Mar/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Mar/22	5.5	ug/L	N
September 21, 2017	Total Haloacetic Acids	29/Jun/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	29/Jun/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	29/Jun/22	5.3	ug/L	N
September 21, 2017	(Monobromoacetic acid)	29/Jun/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	29/Jun/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	29/Jun/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	8/Sep/22	7.7	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	8/Sep/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	8/Sep/22	7.7	ug/L	N
September 21, 2017	(Monobromoacetic acid)	8/Sep/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	8/Sep/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	8/Sep/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	7/Dec/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	7/Dec/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	7/Dec/22	4.7	ug/L	N
September 21, 2017	(Monobromoacetic acid)	7/Dec/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	7/Dec/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	7/Dec/22	5.3 <MDL	ug/L	N

SITE: 365DD - London Pipeline - Treated Distribution

b) ORGANIC PARAMETERS (HAA)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Total Haloacetic Acids	5/Jan/22	5.5	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	5/Jan/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	5/Jan/22	5.5	ug/L	N
September 21, 2017	(Monobromoacetic acid)	5/Jan/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	5/Jan/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	5/Jan/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	6/Apr/22	5.3 <MDL	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	6/Apr/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	6/Apr/22	5	ug/L	N
September 21, 2017	(Monobromoacetic acid)	6/Apr/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	6/Apr/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	6/Apr/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	5/Jul/22	7.9	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	5/Jul/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	5/Jul/22	7.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	5/Jul/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	5/Jul/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	5/Jul/22	5.3 <MDL	ug/L	N
September 21, 2017	Total Haloacetic Acids	11/Oct/22	14.5	ug/L	N
September 21, 2017	(Dibromoacetic Acid)	11/Oct/22	2 <MDL	ug/L	N
September 21, 2017	(Dichloroacetic Acid)	11/Oct/22	8.9	ug/L	N
September 21, 2017	(Monobromoacetic acid)	11/Oct/22	2.9 <MDL	ug/L	N
September 21, 2017	(Monochloroacetic Acid)	11/Oct/22	4.7 <MDL	ug/L	N
September 21, 2017	(Trichloroacetic Acid)	11/Oct/22	5.6	ug/L	N

SITE: 365DD London Pipeline - Treated Distribution

b) ORGANIC PARAMETERS (THM)

Date of Municipal Drinking Water Licence	Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
September 21, 2017	Trihalomethanes (total)	5/Jan/22	15	ug/L	No
September 21, 2017	Bromodichloromethane	5/Jan/22	4.9	ug/L	No
September 21, 2017	Bromoform	5/Jan/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	5/Jan/22	8.4	ug/L	No
September 21, 2017	Dibromochloromethane	5/Jan/22	2	ug/L	No
September 21, 2017	Trihalomethanes (total)	6/Apr/22	15	ug/L	No
September 21, 2017	Bromodichloromethane	6/Apr/22	4.6	ug/L	No
September 21, 2017	Bromoform	6/Apr/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	6/Apr/22	7.6	ug/L	No
September 21, 2017	Dibromochloromethane	6/Apr/22	2.6	ug/L	No
September 21, 2017	Trihalomethanes (total)	5/Jul/22	20	ug/L	No
September 21, 2017	Bromodichloromethane	5/Jul/22	6.2	ug/L	No
September 21, 2017	Bromoform	5/Jul/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	5/Jul/22	11	ug/L	No
September 21, 2017	Dibromochloromethane	5/Jul/22	2.7	ug/L	No
September 21, 2017	Trihalomethanes (total)	11/Oct/22	23	ug/L	No
September 21, 2017	Bromodichloromethane	11/Oct/22	7.1	ug/L	No
September 21, 2017	Bromoform	11/Oct/22	0.34 <MDL	ug/L	No
September 21, 2017	Chloroform	11/Oct/22	14	ug/L	No
September 21, 2017	Dibromochloromethane	11/Oct/22	2.6	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

None.

2022 Summary of Water Pumpage

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Saturday	1/Jan/22	78,766	23,036	104,621
Sunday	2/Jan/22	83,214	22,896	117,610
Monday	3/Jan/22	102,992	23,169	121,313
Tuesday	4/Jan/22	102,852	23,235	118,533
Wednesday	5/Jan/22	98,866	23,247	118,280
Thursday	6/Jan/22	98,688	23,062	***123,892***
Friday	7/Jan/22	98,528	23,193	120,706
Saturday	8/Jan/22	94,376	23,268	116,855
Sunday	9/Jan/22	98,824	24,114	118,203
Monday	10/Jan/22	94,294	23,900	123,606
Tuesday	11/Jan/22	101,136	24,002	118,712
Wednesday	12/Jan/22	96,000	23,355	116,987
Thursday	13/Jan/22	96,528	22,479	116,301
Friday	14/Jan/22	87,344	23,096	117,204
Saturday	15/Jan/22	84,480	23,863	117,588
Sunday	16/Jan/22	95,280	23,924	119,317
Monday	17/Jan/22	***115,260***	23,768	114,789
Tuesday	18/Jan/22	81,392	23,909	118,153
Wednesday	19/Jan/22	93,408	23,459	119,798
Thursday	20/Jan/22	93,664	***25,363***	121,507
Friday	21/Jan/22	94,238	25,016	120,381
Saturday	22/Jan/22	87,008	24,894	119,568
Sunday	23/Jan/22	96,472	24,238	120,372
Monday	24/Jan/22	99,582	23,797	118,306
Tuesday	25/Jan/22	100,800	23,912	121,330
Wednesday	26/Jan/22	102,770	23,902	121,035
Thursday	27/Jan/22	90,310	23,909	120,307
Friday	28/Jan/22	99,620	24,015	119,351
Saturday	29/Jan/22	95,516	23,968	120,160
Sunday	30/Jan/22	95,222	23,965	122,006
Monday	31/Jan/22	95,048	23,953	123,172
January 2022 Monthly Max		115,260	25,363	123,892
January 2022 Monthly Average		95,790	23,762	119,511
January 2022 Total		2,873,712	712,871	3,585,343

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Tuesday	1/Feb/22	101,890	22,459	118,712
Wednesday	2/Feb/22	83,984	26,694	117,555
Thursday	3/Feb/22	79,052	22,884	121,102
Friday	4/Feb/22	112,122	22,512	116,821
Saturday	5/Feb/22	101,464	22,237	120,770
Sunday	6/Feb/22	100,244	22,208	***122,227***
Monday	7/Feb/22	76,798	24,621	121,149
Tuesday	8/Feb/22	71,662	***32,217***	118,986
Wednesday	9/Feb/22	89,294	26,907	119,696
Thursday	10/Feb/22	96,818	27,674	118,855
Friday	11/Feb/22	96,706	28,010	114,231
Saturday	12/Feb/22	90,536	27,938	115,881
Sunday	13/Feb/22	97,754	24,925	119,184
Monday	14/Feb/22	99,552	22,418	115,769
Tuesday	15/Feb/22	93,120	24,638	118,885
Wednesday	16/Feb/22	98,672	27,618	117,947
Thursday	17/Feb/22	98,320	23,835	115,729
Friday	18/Feb/22	94,048	21,463	115,849
Saturday	19/Feb/22	90,960	21,317	114,081
Sunday	20/Feb/22	90,816	21,456	111,370
Monday	21/Feb/22	101,092	21,287	115,953
Tuesday	22/Feb/22	93,020	24,941	113,677
Wednesday	23/Feb/22	85,784	23,136	118,052
Thursday	24/Feb/22	94,504	21,829	119,039
Friday	25/Feb/22	96,970	20,248	116,091
Saturday	26/Feb/22	101,612	14,078	115,352
Sunday	27/Feb/22	102,016	16,062	118,529
Monday	28/Feb/22	***132,258***	15,744	115,082
February 2022 Monthly Max		132,258	32,217	122,227
February 2022 Monthly Max		95,395	23,263	117,378
February 2022 Total		2,671,068	651,356	3,286,572

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Tuesday	1/Mar/22	46,662	***32,138***	***123,333***
Wednesday	2/Mar/22	91,930	28,311	119,565
Thursday	3/Mar/22	101,650	24,769	120,218
Friday	4/Mar/22	96,716	24,112	120,941
Saturday	5/Mar/22	96,586	24,227	118,107
Sunday	6/Mar/22	96,062	24,988	120,712
Monday	7/Mar/22	96,276	24,836	117,392
Tuesday	8/Mar/22	91,144	25,130	120,333
Wednesday	9/Mar/22	97,452	23,655	119,980
Thursday	10/Mar/22	102,292	23,340	119,206
Friday	11/Mar/22	93,480	24,354	117,947
Saturday	12/Mar/22	93,042	23,585	118,093
Sunday	13/Mar/22	87,424	22,988	113,456
Monday	14/Mar/22	93,568	23,581	118,615
Tuesday	15/Mar/22	94,544	22,794	117,113
Wednesday	16/Mar/22	94,736	25,029	118,976
Thursday	17/Mar/22	98,192	23,856	118,102
Friday	18/Mar/22	95,136	23,828	116,258
Saturday	19/Mar/22	86,288	24,543	112,860
Sunday	20/Mar/22	86,880	25,078	118,159
Monday	21/Mar/22	90,512	25,102	117,756
Tuesday	22/Mar/22	91,792	25,162	117,630
Wednesday	23/Mar/22	92,112	25,977	117,864
Thursday	24/Mar/22	96,272	25,733	116,706
Friday	25/Mar/22	92,512	25,890	117,613
Saturday	26/Mar/22	87,200	24,402	114,759
Sunday	27/Mar/22	92,224	24,357	118,159
Monday	28/Mar/22	96,496	20,298	117,019
Tuesday	29/Mar/22	101,170	22,077	119,639
Wednesday	30/Mar/22	82,156	23,437	119,573
Thursday	31/Mar/22	***108,114***	21,504	118,231
March 2022 Monthly Max		108,114	32,138	123,333
March 2022 Monthly Average		92,601	24,486	118,204
March 2022 Total		2,870,620	759,081	3,664,312

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Friday	1/Apr/22	100,804	20,905	118,665
Saturday	2/Apr/22	96,386	21,159	120,702
Sunday	3/Apr/22	100,692	20,925	117,558
Monday	4/Apr/22	96,500	20,672	118,187
Tuesday	5/Apr/22	98,222	20,665	119,902
Wednesday	6/Apr/22	89,196	20,421	119,989
Thursday	7/Apr/22	***109,850***	19,479	118,731
Friday	8/Apr/22	94,640	23,648	118,513
Saturday	9/Apr/22	94,386	23,748	115,879
Sunday	10/Apr/22	93,270	23,777	119,527
Monday	11/Apr/22	93,262	23,730	118,007
Tuesday	12/Apr/22	98,800	***24,431***	119,172
Wednesday	13/Apr/22	98,320	20,609	117,125
Thursday	14/Apr/22	90,816	22,897	116,757
Friday	15/Apr/22	87,056	22,904	114,695
Saturday	16/Apr/22	90,256	21,909	110,587
Sunday	17/Apr/22	90,016	23,541	111,866
Monday	18/Apr/22	98,320	23,678	118,052
Tuesday	19/Apr/22	89,456	23,708	116,321
Wednesday	20/Apr/22	96,416	23,602	119,905
Thursday	21/Apr/22	96,256	23,658	118,110
Friday	22/Apr/22	99,680	23,675	118,282
Saturday	23/Apr/22	85,504	23,254	116,763
Sunday	24/Apr/22	96,416	22,806	122,379
Monday	25/Apr/22	96,528	23,130	117,065
Tuesday	26/Apr/22	96,450	19,097	120,057
Wednesday	27/Apr/22	105,352	21,328	118,675
Thursday	28/Apr/22	95,230	21,442	***123,098***
Friday	29/Apr/22	106,126	21,594	121,294
Saturday	30/Apr/22	96,360	21,398	120,238
April 2022 Monthly Max		109,850	24,431	123,098
April 2022 Monthly Average		96,019	22,260	118,203
April 2022 Total		2,880,566	667,790	3,546,101

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Sunday	1/May/22	95,754	21,310	117,515
Monday	2/May/22	96,798	22,969	117,174
Tuesday	3/May/22	95,284	23,033	115,949
Wednesday	4/May/22	96,000	22,905	116,988
Thursday	5/May/22	100,224	22,806	118,520
Friday	6/May/22	89,888	23,571	117,292
Saturday	7/May/22	82,576	24,981	121,199
Sunday	8/May/22	91,296	25,463	120,592
Monday	9/May/22	100,512	25,815	124,974
Tuesday	10/May/22	110,078	25,906	127,979
Wednesday	11/May/22	109,410	***26,888***	131,112
Thursday	12/May/22	109,718	25,815	133,955
Friday	13/May/22	109,474	25,846	136,673
Saturday	14/May/22	110,464	25,892	137,822
Sunday	15/May/22	118,414	26,125	142,393
Monday	16/May/22	109,848	25,875	122,595
Tuesday	17/May/22	109,462	25,693	125,723
Wednesday	18/May/22	97,032	25,771	124,676
Thursday	19/May/22	89,510	25,777	129,382
Friday	20/May/22	90,126	25,256	130,732
Saturday	21/May/22	101,938	25,055	122,303
Sunday	22/May/22	68,264	14,642	115,475
Monday	23/May/22	98,524	23,155	123,766
Tuesday	24/May/22	98,768	23,962	126,843
Wednesday	25/May/22	107,312	23,970	124,537
Thursday	26/May/22	96,000	24,068	128,042
Friday	27/May/22	103,424	24,073	123,462
Saturday	28/May/22	99,072	24,801	126,094
Sunday	29/May/22	106,720	24,769	136,669
Monday	30/May/22	114,656	24,854	143,539
Tuesday	31/May/22	***133,184***	24,929	***143,550***
May 2022 Monthly Max		133,184	26,888	143,550
May 2022 Monthly Average		101,282	24,386	126,694
May 2022 Total		3,139,730	755,975	3,927,525

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Wednesday	1/Jun/22	118,976	19,730	132,927
Thursday	2/Jun/22	104,512	19,348	126,656
Friday	3/Jun/22	110,640	20,781	132,421
Saturday	4/Jun/22	103,648	21,893	133,014
Sunday	5/Jun/22	111,920	21,797	128,759
Monday	6/Jun/22	105,984	21,128	126,999
Tuesday	7/Jun/22	101,926	21,233	122,934
Wednesday	8/Jun/22	106,096	21,871	125,209
Thursday	9/Jun/22	94,242	22,218	128,149
Friday	10/Jun/22	110,282	24,374	126,768
Saturday	11/Jun/22	109,894	22,197	127,372
Sunday	12/Jun/22	98,904	22,348	128,445
Monday	13/Jun/22	115,552	20,759	133,612
Tuesday	14/Jun/22	111,392	22,116	141,457
Wednesday	15/Jun/22	127,440	12,199	141,910
Thursday	16/Jun/22	135,312	***30,440***	153,537
Friday	17/Jun/22	123,808	24,896	143,900
Saturday	18/Jun/22	108,816	22,954	135,187
Sunday	19/Jun/22	110,544	22,874	140,264
Monday	20/Jun/22	111,024	23,020	129,988
Tuesday	21/Jun/22	123,920	23,045	150,156
Wednesday	22/Jun/22	***135,856***	23,062	155,994
Thursday	23/Jun/22	127,776	23,205	151,734
Friday	24/Jun/22	132,000	23,059	155,964
Saturday	25/Jun/22	135,168	22,429	152,384
Sunday	26/Jun/22	126,880	20,116	150,966
Monday	27/Jun/22	135,584	22,496	149,543
Tuesday	28/Jun/22	127,008	22,354	151,591
Wednesday	29/Jun/22	120,704	21,131	142,012
Thursday	30/Jun/22	132,464	24,824	***156,885***
June 2022 Monthly Max		135,856	30,440	156,885
June 2022 Monthly Average		117,276	22,130	139,225
June 2022 Total		3,518,272	663,897	4,176,737

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Friday	1/Jul/22	114,000	20,526	136,781
Saturday	2/Jul/22	114,496	22,433	138,963
Sunday	3/Jul/22	123,648	***24,864***	150,180
Monday	4/Jul/22	120,268	24,078	151,790
Tuesday	5/Jul/22	124,524	23,187	138,036
Wednesday	6/Jul/22	125,868	16,145	145,600
Thursday	7/Jul/22	127,996	22,539	153,642
Friday	8/Jul/22	132,480	22,549	156,525
Saturday	9/Jul/22	131,680	22,496	150,714
Sunday	10/Jul/22	131,686	24,164	155,210
Monday	11/Jul/22	***143,948***	20,766	150,343
Tuesday	12/Jul/22	118,592	22,449	155,249
Wednesday	13/Jul/22	135,920	21,389	149,399
Thursday	14/Jul/22	130,192	22,481	***161,701***
Friday	15/Jul/22	139,744	24,158	160,388
Saturday	16/Jul/22	131,840	24,015	159,356
Sunday	17/Jul/22	135,824	22,331	145,713
Monday	18/Jul/22	109,344	22,451	139,433
Tuesday	19/Jul/22	124,000	24,235	143,156
Wednesday	20/Jul/22	118,048	23,220	136,425
Thursday	21/Jul/22	111,712	21,477	140,273
Friday	22/Jul/22	119,552	21,299	148,682
Saturday	23/Jul/22	124,000	21,783	140,112
Sunday	24/Jul/22	110,048	21,603	130,877
Monday	25/Jul/22	118,450	22,301	138,752
Tuesday	26/Jul/22	114,960	23,588	145,185
Wednesday	27/Jul/22	119,824	23,542	139,277
Thursday	28/Jul/22	118,794	22,009	143,762
Friday	29/Jul/22	108,240	22,891	149,347
Saturday	30/Jul/22	139,280	22,048	138,250
Sunday	31/Jul/22	110,144	21,967	137,198
July 2022 Monthly Max		143,948	24,864	161,701
July 2022 Monthly Average		123,519	22,419	146,139
July 2022 Total		3,829,102	694,984	4,530,317

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Monday	1/Aug/22	115,232	22,712	135,791
Tuesday	2/Aug/22	111,388	22,080	131,550
Wednesday	3/Aug/22	114,754	22,745	137,095
Thursday	4/Aug/22	106,736	22,844	129,436
Friday	5/Aug/22	110,454	21,629	132,390
Saturday	6/Aug/22	106,120	22,782	133,089
Sunday	7/Aug/22	110,728	22,020	134,969
Monday	8/Aug/22	109,128	22,173	130,021
Tuesday	9/Aug/22	106,944	21,938	130,891
Wednesday	10/Aug/22	108,928	20,347	133,639
Thursday	11/Aug/22	114,592	21,827	135,999
Friday	12/Aug/22	118,720	21,938	139,101
Saturday	13/Aug/22	119,808	21,949	129,928
Sunday	14/Aug/22	105,456	22,707	133,547
Monday	15/Aug/22	110,448	22,720	143,044
Tuesday	16/Aug/22	109,904	***24,313***	137,779
Wednesday	17/Aug/22	***124,688***	22,729	137,623
Thursday	18/Aug/22	124,176	22,641	140,529
Friday	19/Aug/22	119,520	23,552	***145,265***
Saturday	20/Aug/22	115,632	22,648	136,296
Sunday	21/Aug/22	101,952	22,736	126,220
Monday	22/Aug/22	105,600	22,449	129,483
Tuesday	23/Aug/22	109,516	22,229	134,682
Wednesday	24/Aug/22	112,726	22,332	142,626
Thursday	25/Aug/22	123,072	22,261	137,301
Friday	26/Aug/22	109,280	22,395	134,359
Saturday	27/Aug/22	108,646	22,438	132,570
Sunday	28/Aug/22	108,956	22,531	137,931
Monday	29/Aug/22	119,124	22,343	138,871
Tuesday	30/Aug/22	115,120	23,288	129,975
Wednesday	31/Aug/22	110,308	23,349	134,008
August 2022 Monthly Max		124,688	24,313	145,265
August 2022 Monthly Average		112,505	22,472	135,033
August 2022 Total		3,487,656	696,645	4,186,008

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Thursday	1/Sep/22	110,538	***24,797***	139,495
Friday	2/Sep/22	114,938	24,163	142,233
Saturday	3/Sep/22	118,548	24,062	137,952
Sunday	4/Sep/22	106,068	24,128	122,977
Monday	5/Sep/22	99,916	24,166	132,929
Tuesday	6/Sep/22	114,614	24,110	143,374
Wednesday	7/Sep/22	***127,484***	22,700	142,993
Thursday	8/Sep/22	119,106	22,642	***144,535***
Friday	9/Sep/22	122,880	22,734	142,890
Saturday	10/Sep/22	115,234	22,835	142,709
Sunday	11/Sep/22	114,728	22,754	138,576
Monday	12/Sep/22	114,874	22,764	135,038
Tuesday	13/Sep/22	114,960	22,699	132,705
Wednesday	14/Sep/22	111,344	22,810	137,602
Thursday	15/Sep/22	123,744	22,839	137,716
Friday	16/Sep/22	116,024	22,729	140,994
Saturday	17/Sep/22	116,208	22,721	136,283
Sunday	18/Sep/22	104,976	22,705	137,609
Monday	19/Sep/22	115,824	22,712	133,337
Tuesday	20/Sep/22	105,584	22,692	133,075
Wednesday	21/Sep/22	112,416	21,096	130,056
Thursday	22/Sep/22	124,110	17,474	124,255
Friday	23/Sep/22	91,742	18,060	126,127
Saturday	24/Sep/22	118,700	12,535	122,516
Sunday	25/Sep/22	103,258	11,158	124,252
Monday	26/Sep/22	114,814	11,410	124,304
Tuesday	27/Sep/22	114,582	10,487	122,191
Wednesday	28/Sep/22	108,158	10,510	124,244
Thursday	29/Sep/22	114,892	10,665	124,440
Friday	30/Sep/22	106,000	18,674	125,602
September 2022 Monthly Max		127,484	24,797	144,535
September 2022 Monthly Average		113,209	20,194	133,434
September 2022 Total		3,396,264	605,831	4,003,010

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Saturday	1/Oct/22	106,592	17,622	121,244
Sunday	2/Oct/22	98,248	20,132	125,886
Monday	3/Oct/22	106,324	22,239	125,370
Tuesday	4/Oct/22	106,958	19,307	124,306
Wednesday	5/Oct/22	***107,616***	23,125	***127,162***
Thursday	6/Oct/22	103,552	23,185	125,769
Friday	7/Oct/22	93,648	23,158	122,006
Saturday	8/Oct/22	89,312	23,150	115,466
Sunday	9/Oct/22	86,736	21,791	111,261
Monday	10/Oct/22	98,784	23,281	118,761
Tuesday	11/Oct/22	100,688	23,364	122,209
Wednesday	12/Oct/22	100,416	23,162	122,749
Thursday	13/Oct/22	100,528	22,511	118,916
Friday	14/Oct/22	87,344	21,722	119,084
Saturday	15/Oct/22	91,488	24,278	115,050
Sunday	16/Oct/22	96,144	23,239	119,148
Monday	17/Oct/22	96,032	23,303	116,838
Tuesday	18/Oct/22	94,090	23,281	115,150
Wednesday	19/Oct/22	91,706	24,169	115,650
Thursday	20/Oct/22	91,810	24,863	117,024
Friday	21/Oct/22	92,544	***25,999***	118,341
Saturday	22/Oct/22	86,388	25,947	119,177
Sunday	23/Oct/22	101,292	23,929	118,969
Monday	24/Oct/22	96,382	23,933	122,261
Tuesday	25/Oct/22	100,448	23,938	119,993
Wednesday	26/Oct/22	86,720	23,933	118,430
Thursday	27/Oct/22	96,832	23,879	119,544
Friday	28/Oct/22	98,896	23,850	117,655
Saturday	29/Oct/22	89,264	23,943	114,248
Sunday	30/Oct/22	85,824	23,955	115,499
Monday	31/Oct/22	93,300	24,184	111,940
October 2022 Monthly Max		107,616	25,999	127,162
October 2022 Monthly Average		95,997	23,173	119,197
October 2022 Total		2,975,906	718,372	3,695,104

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Tuesday	1/Nov/22	89,384	24,224	118,056
Wednesday	2/Nov/22	96,322	24,114	117,808
Thursday	3/Nov/22	93,190	24,162	115,293
Friday	4/Nov/22	91,910	24,244	117,046
Saturday	5/Nov/22	84,204	***25,413***	115,563
Sunday	6/Nov/22	96,974	25,113	124,005
Monday	7/Nov/22	93,674	23,924	115,741
Tuesday	8/Nov/22	93,830	23,945	121,463
Wednesday	9/Nov/22	102,428	23,914	119,622
Thursday	10/Nov/22	94,506	22,998	121,635
Friday	11/Nov/22	97,770	22,134	116,940
Saturday	12/Nov/22	94,264	22,081	115,239
Sunday	13/Nov/22	93,036	22,035	118,690
Monday	14/Nov/22	97,706	22,170	119,453
Tuesday	15/Nov/22	98,272	22,047	117,656
Wednesday	16/Nov/22	95,312	21,623	117,580
Thursday	17/Nov/22	86,112	24,852	119,000
Friday	18/Nov/22	106,726	22,944	124,146
Saturday	19/Nov/22	95,094	22,837	124,921
Sunday	20/Nov/22	104,880	22,871	***126,285***
Monday	21/Nov/22	***115,886***	22,762	123,541
Tuesday	22/Nov/22	99,530	22,941	123,147
Wednesday	23/Nov/22	100,358	22,883	120,986
Thursday	24/Nov/22	100,172	21,098	122,510
Friday	25/Nov/22	98,250	21,337	118,911
Saturday	26/Nov/22	98,458	21,052	118,157
Sunday	27/Nov/22	96,890	21,198	118,877
Monday	28/Nov/22	96,554	21,202	118,883
Tuesday	29/Nov/22	97,346	21,213	119,574
Wednesday	30/Nov/22	97,464	22,512	123,020
November 2022 Monthly Max		115,886	25,413	126,285
November 2022 Monthly Average		96,883	22,861	119,792
November 2022 Total		2,906,502	685,843	3,593,749

DAY	DATE	ARVA PUMPAGE (m^3)	SERPS PUMPAGE (m^3)	TOTAL LONDON CONSUMPTION (m^3)
Thursday	1/Dec/22	104,978	22,676	***128,894***
Friday	2/Dec/22	***112,552***	20,002	120,491
Saturday	3/Dec/22	98,320	22,174	116,661
Sunday	4/Dec/22	91,078	22,396	126,890
Monday	5/Dec/22	102,020	20,305	122,212
Tuesday	6/Dec/22	102,344	21,020	119,193
Wednesday	7/Dec/22	96,952	18,897	119,457
Thursday	8/Dec/22	97,230	11,785	120,176
Friday	9/Dec/22	102,730	24,572	118,846
Saturday	10/Dec/22	96,126	20,683	115,907
Sunday	11/Dec/22	94,618	21,636	118,283
Monday	12/Dec/22	99,074	25,501	122,343
Tuesday	13/Dec/22	103,470	23,484	119,228
Wednesday	14/Dec/22	110,686	20,032	126,998
Thursday	15/Dec/22	108,242	20,275	122,091
Friday	16/Dec/22	97,764	23,913	122,579
Saturday	17/Dec/22	96,292	22,678	123,818
Sunday	18/Dec/22	97,422	21,722	123,654
Monday	19/Dec/22	104,302	20,893	124,519
Tuesday	20/Dec/22	106,786	19,928	123,670
Wednesday	21/Dec/22	109,356	21,190	124,120
Thursday	22/Dec/22	105,834	16,833	117,738
Friday	23/Dec/22	84,318	21,018	119,992
Saturday	24/Dec/22	99,182	20,826	118,881
Sunday	25/Dec/22	91,690	17,969	109,884
Monday	26/Dec/22	105,524	11,866	107,356
Tuesday	27/Dec/22	96,980	11,630	112,330
Wednesday	28/Dec/22	104,280	16,976	115,957
Thursday	29/Dec/22	83,394	***30,460***	116,560
Friday	30/Dec/22	88,022	27,478	115,162
Saturday	31/Dec/22	85,930	23,639	111,711
December 2022 Monthly Max		112,552	30,460	128,894
December 2022 Monthly Average		99,274	20,789	119,536
December 2022 Total		3,077,496	644,457	3,705,601

2022 Annual Report (EMPS – London)

Drinking-Water System Number:	260004917
Drinking-Water System Name:	**Elgin Middlesex Pumping Station – City of London Distribution System**
Drinking-Water System Owner:	City of London
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2022 through December 31, 2022

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

City of London
300 Dufferin Ave
London, ON
N6B 1Z2
www.london.ca

Elgin Area Primary Water Supply System
Treatment Plant
43665 Dexter Line, Union, ON

Complete for all other Categories.

Number of Designated Facilities served:

N/A

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [ ]

Number of Interested Authorities you report to: N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?
Yes [ ] No [ ]

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Systems that receive their drinking water directly from the London EMPS:

Drinking Water System Name	Drinking Water System Number
City of London Distribution System	260004917

Systems that receive their drinking water indirectly from the London EMPS:

Drinking Water System Name	Drinking Water System Number
Municipality of Central Elgin	260004761

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [X] No [ ]

Indicate how you notified system users that your annual report is available, and is free of charge.

[X] Public access/notice via the web
[X] Public access/notice via Government Office
[ ] Public access/notice via a newspaper
[X] Public access/notice via Public Request
[ ] Public access/notice via a Public Library
[ ] Public access/notice via other method ____

Describe your Drinking-Water System

The Elgin Middlesex Pumping Station (EMPS) receives water from the Elgin Area Primary Water Supply System (EAPWSS), which is located to the east of Port Stanley. Water from the EAPWSS is pumped into the EAPWSS site reservoirs located at the EMPS. The total capacity of the 2 reservoirs is 54,600$m^{3.}$ Through various secondary water supply systems, the EMPS serves the Cities of London, St. Thomas, Town of Aylmer, Municipalities of Central Elgin, Malahide and Southwold.

The EMPS is a shared facility. Booster pumps are dedicated to directing water to the City of London, St. Thomas Secondary and/or Aylmer Area Secondary Water Supply Systems. The EMPS houses a surge facility to service the London transmission main.

Three pipelines exit the EMPS: one pipeline runs North along Highbury Avenue into the Southeast Reservoir Pumping Station (SERPS) to service the London distribution system, the second exits to the south of the EMPS property and extends West to service the St. Thomas Area Secondary Water Supply System; the third exits to the South, to Highway 3 and then runs in an Easterly direction to service the municipalities on the Aylmer Area Secondary Water Supply System.

List all water treatment chemicals used over this reporting period

No re-treatment of water directed into the London system took place at the EMPS in 2022.

Were any significant expenses incurred to?

[ ] Install required equipment
[X] Repair required equipment
[X] Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

- Completed air compressor repairs
- Completed lighting and motion control upgrades
- Replacement of ASCO Valves on HLP04
- Engineering for surge tank compressor replacement
- EMPS PFD Consolidation

Notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
N/A	N/A	N/A	N/A	N/A	N/A

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.coli Results (CFU/100 mL) (min #)-(max #)	Range of Total Coliform Results (CFU/100 mL) (min #)-(max #)	Number of Heterotrophic Plate Count (HPC) Samples	Range of HPC Results (CFU/1 mL) (min #)-(max #)
Distribution	53	(0) – (0)	(0) – (0)	53	(<10)-(20)

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

Parameter	Number of Grab Samples (Continuous Monitoring)	Min	Max	Avg
Free Chlorine Residual (mg/L)	8760	0.58	1.16	0.89

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: result value is based on one sample)	January 5, 2022 April 6, 2022 July 5, 2022 October 11, 2022	15 15 20 23	µg/L µg/L µg/L µg/L	NO
THM Running Annual Average (RAA)	2022	18.25	µg/L	NO
HAA (NOTE: result value is based on one sample)	January 5, 2022 April 6, 2022 July 5, 2022 October 11, 2022	5.5 ND 7.9 14.5	µg/L µg/L µg/L µg/L	NO
HAA Running Annual Average (RAA)	2022	8.3	µg/L	NO

ND = Non-detect

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: **Request for Proposal RFP-2022-245 Contract Award of Pollution Prevention Control Plan (PPCP) Update Study**
Date: **February 22, 2023**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions **BE TAKEN** with respect to Request for Proposal RFP-2022-245 for the Pollution Prevention Control Plan (PPCP) Update Study:

a) GM BluePlan Engineering Limited **BE APPOINTED** consulting engineers to complete the Pollution Prevention Control Plan (PPCP) Update Study, in the total amount of $300,839.00 (including contingency), excluding HST, in accordance with Section 15 of the City of London's Procurement of Goods and Services Policy;

b) the financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix "A";

c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;

d) the approval given, herein, **BE CONDITIONAL** upon the Corporation entering into a formal contract; and

e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

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Executive Summary

Purpose

The purpose of this report is to award a contract for the Pollution Prevention Control Plan (PPCP) Update Study. This PPCP Master Plan update study is undertaken every 5 years to provide an update on the Recommended Implementation Plan (Table 9-3 from Phase 3 of the PPCP, see Appendix B) for the projects that have been suggested during the initial PPCP report.

Context

The City of London's Pollution Prevention Control Plan, which was undertaken as a Master Plan in accordance with Municipal Engineers Association Municipal Class Environmental Assessment guidelines, was completed in three phases, beginning in 2014. The purpose of Phase One was to identify and locate all Combined Sewer Overflows (CSOs) and Sanitary Sewer Overflows (SSOs) within the City. Phase Two included twelve modelling assignments. The modelling assignments were completed to characterize the overflows and to determine the discharge frequency and overflow volume for each overflow during various rainfall event simulations. The purpose of

Phase Three was to evaluate, prioritize, and recommend preferred measures to mitigate overflows. The Phase Three report was originally completed in 2018.

The primary objective of the PPCP is to develop and implement a plan to achieve a long-term solution that will limit the volume and frequency of untreated wastewater discharges to the Thames River and receiving streams from combined sewer and sanitary sewer overflows (CSOs and SSOs) throughout the City, while maintaining an acceptable level of service and protection against basement flooding. This plan follows the principles outlined in the Ministry of the Environment, Conservation and Parks (MECP) Procedure F-5-5.

Procedure F-5-5 outlines the minimum overflow controls for municipal and private combined and partially separated sewer systems. The primary goals of the Procedure are to eliminate the occurrence of dry weather SSOs, to capture 90% of wet weather flows in an average year, and to minimize the potential for impacts on human health and aquatic life.

Linkage to the Corporate Strategic Plan

The following report supports the 2019 – 2023 Strategic Plan through the strategic focus area of Building a Sustainable City:

- London's Infrastructure is built, maintained and operated to meet the long-term needs of our community;
- London's growth and development is well planned and sustainable over the long term.
- London has a strong and healthy environment.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- Civic Works Committee - November 21, 2017 - Agenda Item # 7 - Pollution Prevention and Control Plan Update
- Civic Works Committee – May 24, 2017 – Agenda Item #9 – Pollution Prevention and Control Plan Phase Three - Consultant Appointment Continuation
- Civic Works Committee – March 8, 2016 – Agenda Item #11 – Pollution Prevention and Control Plan InfoWorks Modelling Consultant Appointments
- Civic Works Committee – August 25, 2014 – Agenda Item #13 – Pollution Prevention and Control Plan InfoWorks Modelling Consultant Appointment
- Civic Works Committee – February 3, 2014 – Agenda Item #4 – Pollution Prevention and Control Plan Consultant Appointment Continuation (ES2464-11)
- Civic Works Committee – May 14, 2012 – Agenda Item #12 – Consultant Appointment - Pollution Prevention and Control Plan Project ES5419

2.0 Discussion and Considerations

2.1 Work Description

The PPCP Master Plan update will include a review and summarization of all related background information from the previous reports and studies including the Recommended Implementation Plan (Appendix B) from Phase 3 of the 2018 PPCP. This will include an updated prioritized action plan for the next 5 years that includes short, medium, and long term goals. This plan should include both program (such as weeping tile disconnection programs), and capital works projects. A cost benefit

analysis with consideration of available external funding and/or cost sharing opportunities shall be included.

An updated Recommended Implementation Plan (Appendix B) shall be produced based on the status of City projects that were completed or in progress since 2018.

A review shall be undertaken to better achieve the objectives that were recommended in the last PPCP report. Areas to focus on will include the following:

Weeping Tile Disconnection:

Phase 3 of the PPCP identified multiple areas would benefit from a weeping tile disconnection program. This PPCP update study will focus on the feasibility of weeping tile disconnection along with implementation plans or stragies to achieve required extraneous flow removal. If weeping tile disconnection strategies are not deemed to be viable, the consultant shall identify alternative options while considering factors such as cost of implementation and overall effectiveness.

Hydraulic Sewer Model:

The City of London has hydraulic pipe models of the sanitary sewer system. The consultant will use hydraulic modelling to identify opportunities and limitations and to provide recommendations in the PPCP Update Study.

First Nations Relationships:

Known as Deshkan Ziibi to the the Anishinaabeg (Chippewas of the Thames First Nation) and Lunaapeewuk (Munsee-Delaware Nation, Delaware Nation) and Kahwy^hatati to the Onyota:ka (Oneida Nation of the Thames), the Thames River is a natural feature of paramount importance and significance. It is important to recognize that these Nations have inherent, ancestral ties to the land, spanning thousands of years prior to European arrival and subsequent colonization. In the spirit of reconciliation, a respectful approach and a mindful, collaborative effort is needed to include Indigenous communities in this process. This will be accomplished through the development of an Indigenous consultation plan which will include effective engagement and consultation strategies along with relevant and meaningful opportunities for community involvement throughout the study process.

3.0 Financial Impact/Considerations

3.1 Procurement Process

The selection of a consultant for the Pollution Prevention Control Plan (PPCP) Update Study followed the Request for Proposal (RFP) procurement, in accordance with section 15 of the Procurement of Goods and Services Policy. A RFP process was chosen due to the technical considerations and experience necessary.

Following public posting of the Pollution Prevention Control Plan (PPCP) Update Study RFP, three proposal submissions were received and evaluated by staff from Environment and Infrastructure. Evaluation criteria included previous experience, methodology, project team qualifications, and cost. The proposal submitted by GM BluePlan Engineering Limited with an upset limit of $300,839.00 (excluding HST, including 10% contingency) was the highest scoring submission and is recommended for approval in accordance with Section 15.2 of the Procurement of Goods and Services Policy.

Funds have been budgeted in the sewer capital budget to support the PPCP Update Study in Appendix ‘A’, ‘Sources of Financing’.

Conclusion

City staff have reviewed the proposal submissions and have recommended GM BluePlan Engineering Limited be awarded the contact for the Pollution Prevention Control Plan (PPCP) Master Plan Update Study. This Pollution Prevention and Control Plan Master Plan Update Study will provide the City, Ministry of the Environment, Conservation and Parks (MECP), and community with an update to the long term plan for limiting the volume and frequency of untreated wastewater discharges to the Thames River and receiving streams from throughout the City.

Prepared by:	**Kyle Chambers, P.Eng** **Division Manager, Sewer Engineering**
Submitted by:	**Ashley M. Rammeloo, MMSc., P.Eng** **Director, Water, Wastewater, and Stormwater**
Recommended by:	**Kelly Scherr, P. Eng., MBA, FEC** **Deputy City Manager, Environment & Infrastructure**

Attachments:

Appendix ‘A’ – Sources of Financing

Appendix ‘B’ – Recommended Implementation Plan (Table 9-3 from Phase 3 of the PPCP

CC: K.Christensen, A.O’Brien

Appendix "A"

#23026
February 22, 2023
(Appoint Consulting Engineer)

Chair and Members
Civic Works Committee

RE: Request for Proposal RFP-2022-245 Contract Award of Pollution Prevention Control Plan (PPCP) Update Study
(Subledger NT23ES03)
Capital Project ES2463 - Sewer Overflow Investigation and Mitigation Program
GM BluePlan Engineering Limited - $300,839.00 (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 recommendation of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

Estimated Expenditures	Approved Budget	Committed To Date	This Submission	Balance for Future Work
Engineering	1,487,002	1,094,539	306,134	86,329
Construction	480,407	19,599	0	460,808
City Related Expenses	49,564	49,564	0	0
Total Expenditures	$2,016,973	$1,163,702	$306,134	$547,137
Sources of Financing				
Drawdown from Sewage Works Renewal Reserve Fund	2,016,973	1,163,702	306,134	547,137
Total Financing	$2,016,973	$1,163,702	$306,134	$547,137

Financial Note:

Contract Price	$300,839
Add: HST @13%	39,109
Total Contract Price Including Taxes	339,948
Less: HST Rebate	-33,814
Net Contract Price	$306,134

Jason Davies
Manager of Financial Planning & Policy

jg

Table ES-2. Recommended Implementation Plan

Project Implementation Number	Group ID.	Group Description	Recommendation	SSO(s) Impacts	Infrastructure/Construction Cost Estimate	Engineering Cost Estimate	Considerations	Implementation Timeframe
S1	N/A	N/A	Egerton Street sewer separation (from Dundas Street to 75 m north of Brydges Street, King Street from Egerton St to Kellogg Lane) and King Street (from Egerton Street to Kellogg Lane)	N/A	$5,800,000 [a]	-	This planned project will help reduce the wet weather flows in the sanitary system in the Vauxhall sewershed.	Short-Term Phase 1 - 2018
S2	Group A	King/Thames, York/Ridout and Richmond	Storm Sewer Separation Phase 1 (River to Talbot Street, and Talbot Street south to CN rail tracks), Phase 2 (Talbot Street to Clarence Street, and Talbot Street from York Street to King Street), Phase 3 (Richmond Street – York Street to Dundas Street), Phase 4 (King Street – Richmond Street to Wellington Street), Phase 5 (Clarence Street – York Street to Dundas Street; York Street – Clarence Street to Wellington Street)	SW-01, CW-04	$45,336,000 [a,d]	$ 4,450,000 [d]	This project will help reduce the wet weather flows in the Group A catchment area. Remaining phases of downtown sewer separation are recommended in subsequent years, depending on budget availability etc.	Short-Term Phase 1 - 2018 Phase 2 – 2019 Phase 3 – 2020 Phase 4 – 2021 Phase 5 – 2022
S3	Group A and C	King/Thames, York/Ridout and Richmond and Pall Mall Relief System	Storm sewer disconnection at MC-02 and DS-01	SW-01, CW-04, PM-02, PM-09, SD-05, PM-03	$4,000	-	Verify no sanitary PDC connections remain upstream of storm sewers.	Short-Term
S4	Group A and C	King/Thames, York/Ridout and Richmond and Pall Mall Relief System	Conduct an I&I reduction analysis to determine the feasibility of reducing the I&I by 50 percent in the PM-02, PM-03, and PM-09 catchment areas. Conduct a second study to determine the feasibility of removing storm flows from the Pall Mall Storm and Relief sewer to utilize sewer as in-line storage for the Pall Mall Trunk SSOs.	SW-01, CW-04, PM-02, PM-09, SD-05, PM-03	-	$250,000	This should be carried out to determine the feasibility/ effectiveness of I&I reduction and removal of storm flows	Short-Term
S5	Group D	Cavendish	Construct the new proposed Cavendish Trunk. Monitor the overflow volume at SD-01 after completion of the construction of the new Cavendish Trunk to reassess this SSO	SD-01	$2,695,000 [a]	$10,000 (flow monitoring)	Phase 1 of the Cavendish trunk is planned for construction in 2018. SD-01 has a relatively large overflow volume during the typical year.	Short-Term
S6	Group E	Edward/Tecumseh	That an I&I study to identify the sources of I&I and determine the feasibility of removing the I&I be conducted before any infrastructure upgrades are implemented for CP-09	CP-09	-	$150,000	This study should be initiated in 2018 of 2019 to determine the potential for I&I reduction in this catchment area.	Short-Term

Table ES-2. Recommended Implementation Plan

Project Implementation Number	Group ID.	Group Description	Recommendation	SSO(s) Impacts	Infrastructure/Construction Cost Estimate	Engineering Cost Estimate	Considerations	Implementation Timeframe
S7	Group B	Cathcart/ Devonshire	Implement a targeted weeping tile disconnection program to achieve a 60 percent participation rate, which corresponds to 250 homes in the Group B catchment area	SP-45, SW-03	$1,948,000	-	Requires home owner participation	Short-Term
M1	N/A	N/A	Storm Sewer Separation for the City's combined sewer areas (that are not included in S1, S2, and M2). This includes separating 80% of the City's combined sewers by 2029 (through complete infrastructure renewal and road reconstruction).[b]	N/A	$87,040,000 [c]	$13,040,000 [e]	The planned sewer separation projects will help reduce wet weather flow within the City's sanitary system. Please refer to the Canada-Ontario Lake Erie Action Plan for phosphorus reduction for further details.	Medium- Term
M2	Group A	King/Thames, York/ Ridout and Richmond	Storm Sewer Separation Phase 6 (Wellington Street – Dundas Street to King Street; King Street – Wellington Street to Colborne Street), and Phase 7 (York Street – Wellington Street to Colborne Street)	SW-01, CW-04	$25,210,000 [d]	$3,150,000.00 [d]	This project will help reduce the wet weather flows in the Group A catchment area. Remaining phases of downtown sewer separation are recommended in subsequent years, depending budget availability etc.	Medium-Term
M3	Group F	Evergreen/ Riverview	Implement the proposed Horton/Wharncliffe Sewer Realignment infrastructure upgrades. Monitor the overflow volume at SN-05 after completion of the construction of the new proposed Horton/Wharncliffe Sewer Realignment to reassess this SSO	SN-05	$5,100,000 [f]	$10,000 (flow monitoring) $765,000 [e]	Needs to be implemented before Group A and Group C pipe capacity upgrades, but implemented after some wet weather flow reduction is achieved upstream so that flows to the Greenway WWTP are not substantially increased.	Medium-Term
M4	Group H	Medway PS	Implement a targeted weeping tile disconnection program in the Group H catchment area.	N/A	$17,243,000 [g]		Requires home owner participation.	Medium-Term
M5	Group I	Sunninghill PS	Implement a targeted weeping tile disconnection program in the Group I catchment area.	N/A	$1,907,000 [g]		Requires home owner participation.	Medium-Term
L1	N/A	N/A	Storm Sewer Separation for the City's combined sewer areas (that are not included in S1, S2, M1, and M2). This includes separating all of the City's remaining combined sewers (through complete infrastructure renewal and road reconstruction). [b]	N/A	$21,760,000	$3,260,000 [e]	The planned sewer separation projects will help reduce wet weather flow within the City's sanitary system. Please refer to the Canada-Ontario Lake Erie Action Plan for phosphorus reduction for further details.	Long-Term
L2	Group A and C	King/Thames, York/ Ridout and Richmond and Pall Mall Relief System	Upsizing the 900-mm-diameter pipe from the intersection of King St. and Ridout St. to Wharncliffe Rd. and Becher St. to a 1,200-mm-diameter pipe. Increase SW-01 invert elevation to pipe obvert.	SW-01, CW-04, PM-02, PM-09, SD-05, PM-03	$6,205,000 [h]	$931,000 [e]	This is a requirement to reduce discharges and has a major impact on SSO volumes and frequency. The pipe capacity increases at Wharncliffe/ Horton need to be implemented first. To avoid excessive construction in the downtown core, this should not be implemented until the sewer separation projects are complete.	Long-Term

Table ES-2. Recommended Implementation Plan

Project Implementation Number	Group ID.	Group Description	Recommendation	SSO(s) Impacts	Infrastructure/Construction Cost Estimate	Engineering Cost Estimate	Considerations	Implementation Timeframe
L3	Group A and C	King/Thames, York/ Ridout and Richmond and Pall Mall Relief System	Depending on outcome of S4 feasibility study, complete I&I removal projects and then increase the SSO control elevations along the Pall Mall trunk sewer to reduce the potential for overflow, (Option 1). Alternatively, remove adequate storm flow from the Pall Mall Storm and Relief sewer such that the storm and relief sewer can be utilized for inline storage for the Pall Mall Trunk SSO overflows (Option 2). Option 2 also involves upsizing the Pall Mall Trunk sewer downstream of Ann Street Park to Dundas Street to a 900-mm-diameter pipe.	SW-01, CW-04, PM-02, PM-09, SD-05, PM-03	N/A [i]		The implementation depends on the outcome of S4 feasibility studies. Either Option 1 or Option 2 should be implemented. These are preferred approaches to improve capacity and reduce SSOs than increasing the Pall Mall sewer pipe size. Increasing the SSO control elevations and the pipe upsizing associated with Option 2 should not be implemented until after upsizing the 900-mm-diameter pipe from the intersection of King St. and Ridout St. to Wharncliffe Rd. and Becher St. to a 1,200-mm-diameter pipe.	Long-Term (if feasible)
L4	Group A and C	King/Thames, York/ Ridout and Richmond and Pall Mall Relief System	Replace the Pall Mall trunk sewer with a 900-mm-diameter pipe from Elizabeth St. and Lorne Ave. to Dundas St. and then increase the SSO control elevations along Pall Mall trunk to reduce the potential for overflow (Option 3).	SW-01, CW-04, PM-02, PM-09, SD-05, PM-03	$24,066,000	$3,610,000 [e]	This option should only be implemented if Option 1 and Option 2 are determined to not be feasible. If required, this pipe upsizing should not be completed until after upsizing the 900-mm-diameter pipe, from the intersection of King St. and Ridout St. to Wharncliffe Rd. and Becher St. to a 1,200-mm-diameter pipe.	Long-Term (if required)
L5	Group E	Edward/Tecumseh	Complete I&I removal projects.	CP-09	N/A [i]		Relatively low overflow volume. This is a preferred approach to improve capacity and reduce SSOs than increasing pipe sizes.	Long-Term (if feasible)
L6	Group E	Edward/Tecumseh	Upsize the sewers downstream of CP-09 to Wharncliffe and Horton.	CP-09	$10,652,000	$1,598,000 [e]	Relatively low overflow volume. This option should only be implemented if sufficient I&I reduction cannot be achieved (based on the I&I study).	Long-Term (if required)

[a] Cost based on tendered value

[b] Source: City of London (2017b)

[c] Cost based on a unit cost, with the assumption that the average cost of this full road reconstruction (watermain, sewer and selected utility upgrade/replacement) is equivalent to installing 900 mm diameter sewers at 5 m depth.

[d] Source: AECOM (2017)

[e] Cost assumed from 15% of construction cost

[f] Source: R.V. Anderson Associates Limited (2016)

[g] Cost based on the assumption that 100% of the homes with weeping tile connections in the catchment area will participate in disconnecting weeping tiles from the sanitary system.

[h] Assuming bridge work on the King Street Pedestrian Bridge is not required

[i] Cost of reducing I&I to be determined during I&I reduction feasibility study

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: **2022 Administrative Amendments to the Traffic and Parking By-law**

Date: **February 22, 2023**

Recommendation

That on the recommendation of the Deputy City Manager, Environment & Infrastructure, the proposed by-law, attached as Appendix A **BE INTRODUCED** at the Municipal Council meeting to be held on March 7, 2023, for the purpose of amending the Traffic and Parking By-law (PS-114).

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

1.1 Previous Report Related to this Matter

- Civic Works Committee – November 23, 2021 – Traffic and Parking By-law Process Improvement and Consolidation

1.2 Purpose of this Report

The Traffic and Parking By-law (PS-113) amendments were consolidated into PS-114 on December 7, 2021. Criteria for when staff may administratively amend the by-law was part of the new by-law. The by-law includes a requirement that all administrative amendments be reported to Council by April for the previous year's changes. The following report summarizes all the administrative amendments in 2022 and includes a by-law amendment (Appendix A) for Council to approve those amendments.

2.0 Discussion and Considerations

2.1 No Stopping (Schedule 3)

Street	Side	From	To	Period	Explanation	Effective Dates
Carfrae Crescent	East	Gerrard Street	Grand Avenue	7:30 am to 9:00 am Monday to Friday	Temporary for filming	2022-10-31 to 2022-11-12
Creamery Road	Both	Dundas Street	North limit of Creamery Road	Anytime	Temporary for 2022 London Airshow.	2022-09-09 to 2022-09-11
Dakota Place	Both	South limit of Dakota Place	Huron Street	Anytime	Temporary for 2022 London Airshow.	2022-09-09 to 2022-09-11
Dundas Street	Both	Crumlin Sideroad	East City limit	Anytime	Temporary for 2022 London Airshow.	2022-09-09 to 2022-09-11
Evelyn Street	Both	Rebecca Road	East City limit	Anytime	Temporary for 2022 London Airshow.	2022-09-09 to 2022-09-11
King Street	North	A point 30 m west of Covent Market Place	Richmond Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04
King Street	North	A point 90 m west of Clarence Street	Colborne Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04
King Street	South	A point 54 m east of Ridout Street N	Clarence Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-03
King Street	South	A point 80 m east of Wellington St	Wellington Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04

King Street	South	A point 77 m east of Richmond Street	A point 50 m west of Clarence Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-03
Kostis Avenue	Both	Dundas Street	North limit of Kostis Avenue	8:00 a.m. to 9:00 p.m. Friday 8:00 a.m. to 5:00 p.m. Saturday & Sunday	Temporary for 2022 London Airshow.	2022-09-09 to 2022-09-11
Rebecca Road	Both	Robin's Hill Road	Evelyn Drive	Anytime	Temporary for 2022 London Airshow.	2022-09-09 to 2022-09-11
Robin's Hill Road	Both	Crumlin Sideroad	Rebecca Road	Anytime	Temporary for 2022 London Airshow.	2022-09-09 to 2022-09-11

2.2 No Parking (Schedule 4)

Street	Side	From	To	Period	Explanation	Effective Dates
Dufferin Avenue	North	Clarence Street	A point 70 m east of Clarence	Anytime	Temporary due to construction	2022-02-13 to 2022-12-31
Dufferin Avenue	North	A point 63 m east of Talbot Street	A point 65 m east of Richmond Street	Anytime	Temporary due to construction	2022-02-13 to 2022-12-31
Goodfellow Court	South	Meadowgate Boulevard	A point 61 m east of Meadowgate Boulevard	Anytime	Roadway width is less than 7.3 m	2022-10-21
Jalna Boulevard	East	Sholto Drive (south intersection)	Archer Crescent	Anytime	Replaced with new wording.	2022-06-29
Jalna Boulevard	East	Sholto Drive (south intersection)	A point 94m south of Sholto Drive	Anytime	Within 20 m of an intersection	2022-06-29
King Street	North	A point 32 m west of Richmond Street	A point 38 m west of Richmond Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04

King Street	North	A point 52 m west of Richmond Street	A point 38 m west of Richmond Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04
King Street	South	A point 42 m east of Clarence Street	A point 67 m east of Clarence Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04
Marconi Boulevard	North	Exmouth Drive	A point 52 m west of Exmouth Drive	Anytime	Bus stop	2022-11-02
Paulpeel Avenue	West	Lismer Lane	Paulpeel Avenue	Anytime	Roadway width is less than 7.3 m	2022-11-16
Upper Avenue	South & East	Foster Avenue	A point 94 m west of Foster Avenue	Anytime	Within 20 meters of a curve where visibility is restricted	2022-03-03

2.3 Bus Stops (Schedule 5)

Street	Side	From	To	Explanation	Effective Dates
King Street	North	A point 62 m east of Richmond Street to a point 71 m east of Richmond Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04
King Street	South	From a point 27 m east of Ridout Street N to a point 47 m east of Ridout Street N	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04

2.4 Loading Zones (Schedule 7)

Street	Side	Area	Time	Explanation	Effective Dates
Dundas Street	North	From a point 71 m east of Adelaide Street N to a point 88 m east of Adelaide Street N	8:00 a.m. to 6:00 p.m.	Where no alternative locations (e.g., alleys, off street) are available and where the proposed loading zones do not impact the safety or capacity of the road	2022-08-04

King Street	North	A point 71 m east of Talbot Street to a point 100 m east of Talbot Street	8:00 a.m. to 6:00 p.m.	As identified in the Rapid Transit Environmental Assessment	2022-03-04
King Street	North	A point 62 m east of Richmond Street to a point 71 m east of Richmond Street	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04
King Street	South	From a point 27 m east of Ridout Street N to a point 47 m east of Ridout Street N	Anytime	As identified in the Rapid Transit Environmental Assessment	2022-03-04

2.4 Prohibited Turns (Schedule 11)

Intersection	Direction	Prohibited Turn	Explanation	Effective Dates
Colborne Street with Queens Avenue	Northbound	Right	One-way street	2022-11-25
Colborne Street with Queens Avenue	Southbound	Left	One-way street	2022-11-25
Commissioners Road E with Charlie Hajar Way	Eastbound & Westbound	“U” Turn	Turns are prohibited by an island.	2022-03-30
Dundas Street with Ridout Street N	Eastbound	Straight through (except cyclists)	Temporary due to construction	2022-03-07 to 2022-07-09 and 2022-07-19 to 2022-11-10
King Street with Richmond Street	Eastbound Right-Turning	Right (6:00 a.m. to 1:00 a.m.)	As identified in the Rapid Transit Environmental Assessment	2022-03-04
King Street with Ridout Street N	Eastbound Right-Turning	Right (on red traffic signal light)	Two-stage bicycle box in front of turning movement	2022-03-04
King Street with Talbot Street	Eastbound Right-Turning	Right (6:00 a.m. to 1:00 a.m.)	As identified in the Rapid Transit Environmental Assessment	2022-03-04
King Street with Wellington Street	Eastbound Right-Turning	Right (6:00 a.m. to 1:00 a.m.) Buses Excepted	As identified in the Rapid Transit Environmental Assessment	2022-03-04

Maitland Street with Dundas Street	Northbound Right-Turning	Right (on red traffic signal light)	Two-stage bicycle box in front of turning movement	2022-11-25
Ridout Street N with King Street	Northbound	Right (on red traffic signal light)	As identified in the Rapid Transit Environmental Assessment	Removed 2022-03-04
Ridout Street N with Dundas Street	Southbound	Left (Except bicycles)	Temporary due to construction	2022-03-07 to 2022-12-31
Talbot Street with King Street	Northbound	Right	No longer need for construction	Removed 2022-03-04
Wellington Street with Dundas Street	Northbound	Left (Except bicycles)	Temporary due to construction	2022-03-07 to 2022-12-31
Wellington Street with Dundas Street	Southbound	Right (Except bicycles)	Temporary due to construction	2022-03-07 to 2022-12-31
William Street with Dundas Street	Northbound Right-Turning	Right (on red traffic signal light)	Two-stage bicycle box in front of turning movement	2022-11-25

2.5 Reserved Lanes (Schedule 13)

Highways	Between	Lane	Time /Day	Dir.	Class/ Type of Vehicle	Explanation	Effective Dates
King Street	Ridout Street N & Wellington Street	1st lane from South	Anytime	EB	Transit	As identified in the Rapid Transit EA	2022-03-03
King Street	Thames Street & Ridout Street N	1st lane from North	Anytime	EB	Bicycle	As identified in the Rapid Transit EA	Removed 2022-03-03
King Street	Thames Street & Rectory Street	1st lane from South	Anytime	WB	Bicycle	As identified in the Rapid Transit EA	Removed 2022-03-03

2.6 Stop Signs (Schedule 14)

Traffic	Street	Intersection	Explanation	Effective Dates
Northbound	Baxter Street	Purcell Drive	Replaced Yield Sign with Stop Sign	2022-10-20

Northbound	Bourdeau Road	Frederick Crescent	Replaced Yield Sign with Stop Sign	2022-10-20
Northbound	Castle Rock Place	Singleton Avenue	Replaced Yield Sign with Stop Sign	2022-07-08
Eastbound & Southbound	Cresthaven Crescent	Longworth Road	Replaced Yield Sign with Stop Sign	2022-11-16
Westbound	Crestview Crescent (north & south intersections)	Longworth Road	Replaced Yield Sign with Stop Sign	2022-11-16
Southbound	Crestwood Drive	Longworth Road	Replaced Yield Sign with Stop Sign	2022-11-16
Eastbound	Edgar Drive (North & South intersections)	Coombs Avenue	Replaced Yield Sign with Stop Sign	2022-06-30
Westbound	Hamley Road	Meg Drive	Replaced Yield Sign with Stop Sign	2022-11-16
Northbound	Hungerford Street	Purcell Drive	Replaced Yield Sign with Stop Sign	2022-10-20
Eastbound	Hungerford Street	Wildgoose Road	Replaced Yield Sign with Stop Sign	2022-10-20
Eastbound	Irish Lane	Meg Drive	Replaced Yield Sign with Stop Sign	2022-11-16
Westbound & Eastbound	Neville Drive	Coombs Avenue	Replaced Yield Sign with Stop Sign	2022-06-30
Northbound & Southbound	Paulpeel Avenue	Legendary Drive	Replaced Yield Sign with Stop Sign	2022-11-16
Eastbound	Pawnee Crescent (south intersections)	Pawnee Road	Replaced Yield Sign with Stop Sign	2022-09-09
Northbound	Pawnee Road	Chippewa Drive	Replaced Yield Sign with Stop Sign	2022-09-09
Eastbound	Pebblecreek Walk	Torreys Pine Way	Replaced Yield Sign with Stop Sign	2022-06-30
Southbound	Robbie's Way	Creekview Chase	Replaced Yield Sign with Stop Sign	2022-11-11

Northbound	Sawgrass Link	Torreys Pines Way	Replaced Yield Sign with Stop Sign	2022-06-30
Westbound	Shamrock Road	Meg Drive	Replaced Yield Sign with Stop Sign	2022-11-16
Westbound	Talisman Crescent (north & south intersections)	Longworth Road	Replaced Yield Sign with Stop Sign	2022-11-16
Westbound	Tamblyn Drive	Coombs Avenue	Replaced Yield Sign with Stop Sign	2022-06-30
Southbound	Thistleridge Crescent (north & south intersections)	Longworth Road	Replaced Yield Sign with Stop Sign	2022-11-16
Eastbound	Trellis Crescent	Rosecliffe Terrace	Replaced Yield Sign with Stop Sign	2022-06-24
Eastbound & Westbound	Waterwheel Road	Gough Avenue	Replaced Yield Sign with Stop Sign	2022-06-03
Westbound	Waterwheel Road	Rollingacres Drive	Replaced Yield Sign with Stop Sign	2022-06-03
Northbound	Wildgoose Road	Purcell Drive	Replaced Yield Sign with Stop Sign	2022-10-20

2.7 Yield Signs (Schedule 15)

Traffic	Street	Yield To	Explanation	Effective Dates
Southbound	Morgan Avenue	Morgan Crescent	Traffic Circle	2022-07-20
Northbound	Morgan Avenue	Singleton Avenue (north intersection)	Traffic Circle	2022-07-20
Northbound	Morgan Avenue	Singleton Avenue (south intersection)	Traffic Circle	2022-07-20
Eastbound	Morgan Crescent	Morgan Avenue	Traffic Circle	2022-07-20
Southbound	Sawgrass Link	Pebblecreek Walk	Duplicate wording in the by-law	Removed 2022-06-30
Eastbound & Westbound	Singleton Avenue	Morgan Avenue (north intersection)	Traffic Circle	2022-07-20
Westbound	Singleton Avenue	Morgan Avenue (south intersection)	Traffic Circle	2022-07-20

2.7 One-way Streets (Schedule 16)

Portions of King Street from Ridout Street N to Glebe Street, Queens Avenue from Ridout Street N to Clarence Street and Ridout Street N from King Street to Queens Avenue were changed to two-way operation and back to one-way operation at various times from January 31, 2022 to December 22, 2022 to maintain access to properties during construction. One-way operation on all three streets were reinstated by the December 22, 2022.

It should be noted that all temporary amendments have been reverted to their original wording and are not shown in Appendix A. Appendix A includes the removal of existing wording in the Schedules to accommodate the above.

Conclusion

The ability for staff to make administrative amendments to the Traffic and Parking By-law has significantly reduced the length of time for the implementation of the changes. This has improved customer interactions. This report summarizes all the administrative amendments in 2022.

Amendments are required to PS-114 Traffic and Parking By-law, Schedule 3 (No Stopping), Schedule 4 (No Parking), Schedule 5 (Bus Stops), Schedule 7 (Loading Zones), Schedule 11 (Prohibited Turns), Schedule 13 (Reserved Lanes), Schedule 14 (Stop Signs), Schedule 15 (Yield Signs) and Schedule 16 (One-way Streets) to formalize 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**

February 8, 2023/

Attach: Appendix A – By-law to Amend the Traffic and Parking By-law (PS-114) with the 2022 administrative amendments

APPENDIX A By-law to amend the Traffic and Parking By-law (PS-114) with the 2022 administrative amendments

Bill No.

By-law No. PS-114

A by-law to amend By-law PS-114 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 3 (No Stopping) of the PS-114 By-law is hereby amended by **deleting** the following rows:

1-Street	2-Side	3-From	4-To	5-Period
King Street	North	A point 30 m west of Covent Market Place	Colborne Street	Anytime
King Street	South	A point 54 m east of Ridout Street N	A point 71 m east of Richmond Street	Anytime

Schedule 3 (No Stopping) of the PS-114 By-law is hereby amended by **adding** the following rows:

1-Street	2-Side	3-From	4-To	5-Period
King Street	North	A point 30 m west of Covent Market Place	Richmond Street	Anytime
King Street	North	A point 90 m west of Clarence Street	Colborne Street	Anytime
King Street	South	A point 54 m east of Ridout Street N	Clarence Street	Anytime
King Street	South	A point 80 m east of Wellington St	Wellington Street	Anytime
King Street	South	A point 77 m east of Richmond Street	A point 50 m west of Clarence Street	Anytime

2. No Parking

Schedule 4 (No Parking) of the PS-114 By-law is hereby amended by **deleting** the following rows:

1-Street	2-Side	3-From	4-To	5-Period
Jalna Boulevard	East	Sholto Drive (south intersection)	Archer Crescent	Anytime
King Street	South	Ridout Street N	A point 75 m east of Ridout Street N	Anytime
King Street	South	A point 66 m east of Talbot Street	A point 98 m east of said street	Anytime
King Street	South	A point 55 m west of Clarence Street	Clarence Street	Anytime
King Street	South	A point 86m west of Richmond Street	A point 78m west of Richmond Street	Anytime Police Vehicle Only
King Street	South	A point 88m west of Wellington Street	Wellington Street	Anytime

Schedule 4 (No Parking) of the PS-114 By-law is hereby amended by **adding** the following rows:

1-Street	2-Side	3-From	4-To	5-Period
Goodfellow Court	South	Meadowgate Boulevard	A point 61 m east of Meadowgate Boulevard	Anytime
Jalna Boulevard	East	Sholto Drive (south intersection)	A point 94m south of Sholto Drive	Anytime
King Street	North	A point 32 m west of Richmond Street	A point 38 m west of Richmond Street	Anytime
King Street	North	A point 52 m west of Richmond Street	A point 38 m west of Richmond Street	Anytime
King Street	South	A point 42 m east of Clarence Street	A point 67 m east of Clarence Street	Anytime
Marconi Boulevard	North	Exmouth Drive	A point 52 m west of Exmouth Drive	Anytime
Paulpeel Avenue	West	Lismer Lane	Paulpeel Avenue	Anytime
Upper Avenue	South & East	Foster Avenue	A point 94 m west of Foster Avenue	Anytime

3. Bus/Paratransit Stops

Schedule 5 (Bus/Paratransit Stops) of the PS-114 By-law is hereby amended by **deleting** the following rows:

1-Street	2-Side	3-From	4-To

King Street	South	Clarence Street	A point 48m east of Wellington Street
King Street	South	A point 76 m west of Richmond Street	Richmond Street
King Street	South	A point 53m west of Talbot Street	Talbot Street

Schedule 5 (Bus/Paratransit Stops) of the PS-114 By-law is hereby amended by **adding** the following rows:

1-Street	2-Side	3-From	4-To
King Street	South	From a point 27 m east of Ridout Street N to a point 47 m east of Ridout Street N	Anytime
King Street	South	A point 33 m west of Talbot Street	A point 13 m west of Talbot Street
King Street	South	A point 45 m west of Wellington Street	A point 15m west of Wellington Street

4. Loading Zones

Schedule 7 (Loading Zones) of the PS-114 By-law is hereby amended by **deleting** the following rows:

1-Street	2-Side	3-Area	5-Time
King Street	North	A point 62 m east of Talbot Street to a point 37 m west of Covent Market Place	8:00 a.m. to 6:00 p.m.
King Street	South	From a point 34 m east of Ridout Street N to a point 54 m east of Ridout Street N	

Schedule 7 (Loading Zones) of the PS-114 By-law is hereby amended by **adding** the following row:

1-Street	2-Side	3-Area	5-Time
Dundas Street	North	From a point 71 m east of Adelaide Street N to a point 88 m east of Adelaide Street N	8:00 a.m. to 6:00 p.m.
King Street	North	A point 71 m east of Talbot Street to a point 100 m east of Talbot Street	8:00 a.m. to 6:00 p.m.
King Street	North	A point 62 m east of Richmond Street to a point 71 m east of Richmond Street	Anytime
King Street	South	From a point 27 m east of Ridout Street N to a point 47 m east of Ridout Street N	Anytime

5. Prohibited Turns

Schedule 11 (Prohibited Turns) of the PS-114 By-law is hereby amended by **deleting** the following row:

1-Intersection	2-Direction	3-Prohibited Turn
Ridout Street N with King Street	Northbound	Right (on red traffic signal light)

Schedule 11 (Prohibited Turns) of the PS-114 By-law is hereby amended by **adding** the following rows:

1-Intersection	2-Direction	3-Prohibited Turn
Colborne Street with Queens Avenue	Northbound	Right
Colborne Street with Queens Avenue	Southbound	Left
Commissioners Road E with Charlie Hajar Way	Eastbound & Westbound	“U” Turn
King Street with Richmond Street	Eastbound Right-Turning	Right (6:00 a.m. to 1:00 a.m.)
King Street with Ridout Street N	Eastbound Right-Turning	Right (on red traffic signal light)
King Street with Talbot Street	Eastbound Right-Turning	Right (6:00 a.m. to 1:00 a.m.)
King Street with Wellington Street	Eastbound Right-Turning	Right (6:00 a.m. to 1:00 a.m.) Buses Excepted
Maitland Street with Dundas Street	Northbound Right-Turning	Right (on red traffic signal light)
Ridout Street N with King Street	Northbound	Right (on red traffic signal light)
Talbot Street with King Street	Northbound	Right
William Street with Dundas Street	Northbound Right-Turning	Right (on red traffic signal light)

6. Reserved Lanes

Schedule 13 (Reserved Lanes) of the PS-114 By-law is hereby amended by **deleting** the following rows:

1-Highways	2-Between	3-Lane	4-Time/Day	5-Direction	6-Class/Type of Vehicle
King Street	Thames Street & Ridout Street N	1st lane from North	Anytime	Westbound	Bicycle
King Street	Thames Street & Rectory Street	1st lane from South	Anytime	Eastbound	Bicycle

Schedule 13 (Reserved Lanes) of the PS-114 By-law is hereby amended by **adding** the following rows:

1-Highways	2-Between	3-Lane	4-Time/Day	5-Direction	6-Class/Type of Vehicle
King Street	Ridout Street N & Wellington Street	1st lane from South	Anytime	Eastbound	Transit

7. Stop Signs

Schedule 14 (Stop Signs) of the PS-114 By-law is hereby amended by **deleting** the following rows:

1- Traffic	2-Street	3-Intersection
Northbound	Baxter Street	Purcell Drive
Northbound	Bourdeau Road	Frederick Crescent
Northbound	Castle Rock Place	Singleton Avenue
Eastbound & Southbound	Cresthaven Crescent	Longworth Road
Westbound	Crestview Crescent (north & south intersections)	Longworth Road
Southbound	Crestwood Drive	Longworth Road
Eastbound	Edgar Drive (North & South intersections)	Coombs Avenue
Westbound	Hamley Road	Meg Drive
Northbound	Hungerford Street	Purcell Drive
Eastbound	Hungerford Street	Wildgoose Road
Eastbound	Irish Lane	Meg Drive
Westbound & Eastbound	Neville Drive	Coombs Avenue
Northbound & Southbound	Paulpeel Avenue	Legendary Drive
Eastbound	Pawnee Crescent (south intersections)	Pawnee Road
Northbound	Pawnee Road	Chippewa Drive
Eastbound	Pebblecreek Walk	Torrey Pines Way
Southbound	Robbie's Way	Creekview Chase
Northbound	Sawgrass Link	Torrey Pines Way
Westmount	Shamrock Road	Meg Drive
Westbound	Talisman Crescent (north & south intersections)	Longworth Road
Westbound	Tamblyn Drive	Coombs Avenue
Southbound	Thistleridge Crescent (north & south intersections)	Longworth Road
Eastbound	Trellis Crescent	Rosecliffe Terrace
Eastbound & Westbound	Waterwheel Road	Gough Avenue
Westbound	Waterwheel Road	Rollingacres Drive

Northbound	Wildgoose Road	Purcell Drive

Yield Signs

Schedule 15 (Yield Signs) of the PS-114 By-law is hereby amended by **deleting** the following rows:

1-Traffic	2-Street	3-Yield To
Northbound	Baxter Street	Purcell Drive
Northbound	Bourdeau Road	Frederick Crescent
Northbound	Castle Rock Place	Singleton Avenue
Eastbound & Southbound	Cresthaven Crescent	Longworth Road
Westbound	Crestview Crescent (north & south intersections)	Longworth Road
Eastbound	Edgar Drive (north & south intersections)	Coombs Avenue
Southbound	Friars Way	Annadale Drive
Westbound	Hamley Road	Meg Drive
Northbound	Hungerford Street	Purcell Drive
Eastbound	Hungerford Street	Wildgoose Road
Eastbound	Irish Lane	Meg Drive
Southbound & Eastbound	Jinnies Street (west & east intersections)	Singleton Avenue
Southbound & Eastbound	Jinnies Way	Morgan Avenue
Westbound	Jinnies Way	Morgan Avenue
Westbound & Eastbound	Neville Drive	Coombs Avenue
Northbound & Southbound	Paulpeel Avenue	Legendary Drive
Eastbound	Pawnee Crescent (south intersections)	Pawnee Road
Northbound	Pawnee Road	Chippewa Drive
Eastbound	Pebblecreek Walk	Torreys Pine Way
Northbound	Pincombe Drive	Singleton Avenue
Southbound	Revelstoke Gate	Singleton Avenue
Southbound	Sawgrass Link	Pebblecreek Walk
Westmount	Shamrock Road	Meg Drive
Westbound	Talisman Crescent (north & south intersections)	Longworth Road
Westbound	Tamblyn Drive	Coombs Avenue
Westbound	Trellis Crescent	Rosecliffe Drive
Eastbound & Westbound	Waterwheel Road	Gough Avenue
Westbound	Waterwheel Road	Rollingacres Drive
Northbound	Wildgoose Road	Purcell Drive

Schedule 15 (Yield Signs) of the PS-114 By-law is hereby amended by **adding** the following rows:

1-Traffic	2-Street	3-Yield To

Southbound	Morgan Avenue	Morgan Crescent
Northbound	Morgan Avenue	Singleton Avenue (north intersection)
Northbound	Morgan Avenue	Singleton Avenue (south intersection)
Eastbound	Morgan Crescent	Morgan Avenue
Eastbound & Westbound	Singleton Avenue (north intersection)	Morgan Avenue
Westbound	Singleton Avenue (south intersection)	Morgan Avenue

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

PASSED in Open Council on March 7, 2023.

Josh Morgan

Mayor

Michael Schulthess

City Clerk

First Reading – March 7, 2023
Second Reading – March 7, 2023
Third Reading – March 7, 2023

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: **February 22, 2023**

Recommendation

That on the recommendation of the Deputy City Manager, Environment & Infrastructure, the proposed by-law, attached as Appendix A **BE INTRODUCED** at the Municipal Council meeting to be held on March 7, 2023, for the purpose of amending the Traffic and Parking By-law (PS-114).

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

1.1 Previous Report Related to this Matter

- Civic Works Committee – March 10, 2020 – Area Speed Limit Implementation
- Civic Works Committee – June 22, 2021 – Waterloo and Piccadilly Area Study Recommendations

1.2 Purpose of this Report

The Traffic and Parking By-law (PS-114) requires amendments (Appendix A) to improve road operations and safety. Included in this is the next phase of area speed limit implementation that will improve neighbourhood safety, livability, and walkability. The amendments in the following section are proposed.

2.0 Discussion and Considerations

2.1 No Parking

Gordon Avenue

Due to vehicles parking on both sides of Gordon Avenue within the marked travel lanes adjacent to the left turn lane it is recommended to implement "No Parking Anytime" zones on both sides of Gordon Avenue from 104 m south of Commissioners Road W to Commissioners Road W.

Riverbend Road

Due to vehicles parking on both sides of Riverbend Road within the marked travel lanes adjacent to the left turn lane and both sides of the property access to 1868 Oxford

Street W and 1220 Riverbend Road, it is recommended to implement “No Parking Anytime” zones on both sides of Riverbend Road from 173 m south of Oxford Street W to Oxford Street W.

2.2 Limited Parking

Waterloo and Piccadilly Area Study Recommendations

Pursuant to the June 22, 2021 report to Civic Works Committee, Civic Administration was directed to implement the recommendations in the Waterloo and Piccadilly Area Traffic Study. A road diet is recommended on Waterloo Street to reduce traffic speeding within the school zone while providing additional on-street parking capacity. Based on the findings of the report, a road diet is recommended on Waterloo Street, with one northbound traffic lane to be converted to on-street parking between Harvard Street and Piccadilly Street except at the intersections. This change is expected to yield approximately 22 parking spaces, which could be signed with a maximum 2-hour limit to match current restrictions along Piccadilly Street.

It is also recommended to extend the same 2-hour parking on the east side of Waterloo Street from Pall Mall Street to the existing parking at Dufferin Avenue except at intersections. This will add another 280 m or 42 parking spaces to assist with parking capacity and result in a consistent road cross-section from Dundas Street to Piccadilly Street.

2.3 Prohibited Turns

Dundas Street

The bicycle lane on King Street from Ridout Street N to Wellington Street has been eliminated due to the implementation of Rapid Transit. Dundas Place is now the main eastbound and westbound primary cycling route downtown, it is recommended to exempt cyclists from the turn restrictions on Dundas Street at Clarence Street, at Richmond Street and at Ridout Street. Dundas Street at Talbot Street currently exempts cyclists from the turning restrictions.

2.4 Designed Lane Movements

The Rapid Transit construction on King Street requires that the northerly lane at Richmond Street turn left and the southerly lane at Clarence Street turn right.

2.5 Area Speed Limits

The following four area speed limit zones are being recommended for the next phase of implementation of this city-wide program:

- The East London area bounded by Clarke Road, Canadian Pacific Railway, Industrial Road and Dundas Street;
- The North-East London area bounded by Highbury Avenue N, City Limit, Clarke Road, Huron Street except Kilally Road from Highbury Avenue N to Webster Street at 60 km/h; Kilally Road from Webster Street to Clarke Road at 70 km/h; Fanshawe Park Road E from Highbury Avenue N to 1,200 m east of Highbury Avenue N at 60 km/h; Fanshawe Park Road E from 1,200 m east of Highbury Avenue N to Clarke Road at 80 km/h ; Sunningdale Road E from Highbury Avenue N to 200 m east of Highbury Avenue N at 70 km/h; and Sunningdale Road E from 200 m east of Highbury Avenue N to Clarke Road at 80 km/h; and

- The North-West London area bounded by Canadian National Railway, Hyde Park Road, Gainsborough Road, Wonderland Road N, Oxford Street W; except Sarnia Road at 60 km/h; and
- The West London area bounded by Hyde Park Road, Oxford Street W, Wonderland Road N and Riverside Drive.

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

2.6 By-law and By-law Schedule Corrections

A review of the PS-114 Traffic and Parking By-law and its Schedules reveals the following need correcting as shown in Appendix A:

- It is recommended to add “Bicycles Excepted” to Part 1 - Traffic Section 12 Designated Lane Movements Subsection 2. This is to exempt cyclists from the designated turn lane restriction consistent with the bus exception;
- Schedule 12 Designated Lane Movements is missing the Time of Day and Direction columns. This was inadvertently deleted when PS-113 was consolidated into PS-114;
- Schedule 24 Rate of Speed requires a correction to the limits of the Highbury Ave N 60 km/h zone beginning 250 m north of Dundas Street; and,
- Part 4 – Fire Routes Section 68 Subsection 2 reference “signs in accordance with Schedule 36 to this By-law, shall be deemed to be official signs pursuant to this By-law, so long as they were in place on the date of the passage of this By-law.” This entry a correction to the noted Schedule from 36 to Schedule 2 which is Non-Standard Signs. This was missed when PS-113 was consolidated into PS-114.

Conclusion

Amendments are required to PS-114 Traffic and Parking By-law, Schedule 3 (No Stopping), Schedule 4 (No Parking), Schedule 8 (Limited Parking), Schedule 11 (Prohibited Turns), Schedule 22 (Designated Lane Movements), Schedule 24 (Rate of Speed) and Schedule 25 (Area Speed Limits) to implement 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**

February 8, 2023/

Attach: Appendix A – By-law to Amend the Traffic and Parking By-law (PS-114)
Appendix B – Area Speed Limit Zone Maps

APPENDIX A By-law to amend the Traffic and Parking By-law (PS-114)

Bill No.

By-law No. PS-114

A by-law to amend By-law PS-114 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. PS-114 Traffic and Parking Bylaw

Part 1 of the PS-114 By-law is hereby amended by **deleting** the following:

PART 1 – Traffic

Designated Lane Movements (Schedule 12)

(2) Subsection (1) does not apply to buses operated by the London Transit Commission when official “Buses Excepted” are erected and on display.

Part 1 of the PS-114 By-law is hereby amended by **adding** the following:

PART 1 – Traffic

Designated Lane Movements (Schedule 12)

(2) Subsection (1) does not apply to buses operated by the London Transit Commission when official “Buses Excepted” and “Bicycles Excepted” tabs are erected and on display.

Part 4 of the PS-114 By-law is hereby amended by **deleting** the following:

PART 4 – Fire Routes

Official Signs (Schedule 2)

68. (1) In this part, "official sign" means a fire route sign in the form set out in Schedule 2 to this by- law.

(2) Fire route signs bearing the words "By-law P.S.-69-216" or "By-law P.S.-87-418" or "By-law P.S.-99-285" or "By-law P.S.-101-73" or "By-law PS-107", or signs in accordance with Schedule 36 to this By-law, shall be deemed to be official signs pursuant to this By-law, so long as they were in place on the date of the passage of this By-law.

(3) Similarly, all fire route signs legally in place on the 31st of December 1992 in areas annexed to the Corporation as of January 1, 1993 and formerly located in and forming part of the Town of Westminster, the Township of London, the Township of Delaware, the Township of North Dorchester or the Township of West Nissouri, shall be deemed to be official signs pursuant to this by-law.

(4) All signs used to replace fire route signs described in subsection (2) and (3) of this section, shall be in the form as set out is Schedule 2 to this by-law.

Part 4 of the PS-114 By-law is hereby amended by **adding** the following:

PART 4 – Fire Routes

Official Signs (Schedule 2)

68. (1) In this part, "official sign" means a fire route sign in the form set out in Schedule 2 to this by- law.

(2) Fire route signs bearing the words "By-law P.S.-69-216" or "By-law P.S.-87-418" or "By-law P.S.-99-285" or "By-law P.S.-101-73" or "By-law PS-107", or signs in accordance with Schedule 2 to this By-law, shall be deemed to be official signs pursuant to this By-law, so long as they were in place on the date of the passage of this By-law.

(3) Similarly, all fire route signs legally in place on the 31st of December 1992 in areas annexed to the Corporation as of January 1, 1993 and formerly located in and forming part of the Town of Westminster, the Township of London, the Township of Delaware, the Township of North Dorchester or the Township of West Nissouri, shall be deemed to be official signs pursuant to this by-law.

(4) All signs used to replace fire route signs described in subsection (2) and (3) of this section, shall be in the form as set out is Schedule 2 to this by-law.

2. No Stopping

Schedule 3 (No Stopping) of the PS-114 By-law is hereby amended by **deleting** the following row:

1-Street	2-Side	3-From	4-To	5-Period
Waterloo Street	East	Oxford Street E	Pall Mall Street	4:00 pm to 6:00 pm Monday to Friday

Schedule 3 (No Stopping) of the PS-114 By-law is hereby amended by **adding** the following row:

1-Street	2-Side	3-From	4-To	5-Period
Waterloo Street	East	Oxford Street E	Piccadilly Street	4:00 pm to 6:00 pm Monday to Friday

3. No Parking

Schedule 4 (No Parking) of the PS-114 By-law is hereby amended by **deleting** the following row:

1-Street	2-Side	3-From	4-To	5-Period
Waterloo Street	East	St. James Street	A point 25 m south of Dufferin Avenue	Anytime

Schedule 4 (No Parking) of the PS-114 By-law is hereby amended by **adding** the following rows:

1-Street	2-Side	3-From	4-To	5-Period
Gordon Avenue	Both	A point 104 m south of Commissioners Road W	Commissioners Road W	Anytime
Riverbend Road	Both	A point 173 m south of Oxford Street W	Oxfords Street W	Anytime
Waterloo Street	East	A point 38 m south of Princess Avenue	A point 30 m north of Princess Avenue	Anytime
Waterloo Street	East	St. James Street	Piccadilly Street	Anytime

4. Limited Parking

Schedule 8 (Limited Parking) of the PS-114 By-law is hereby amended by **adding** the following row:

1-Street	2-Side	3-Area	4-Time	5-Period
Waterloo Street	East	Dufferin Avenue to Piccadilly Street	8:00 a.m. to 6:00 p.m.	2 Hours Monday to Friday

5. Prohibited Turns

Schedule 11 (Prohibited Turns) of the PS-114 By-law is hereby amended by **deleting** the following rows:

1-Intersection	2-Direction	3-Prohibited Turn
Dundas Street with Clarence Street	Eastbound & Westbound	Right (7:00 a.m. to 9:00 a.m. & 3:00 p.m. to 6:00 p.m. Monday- Friday)
Dundas Street with Clarence Street	Eastbound & Westbound	Left (7:00 a.m. to 9:00 a.m. & 3:00 p.m. to 6:00 p.m. Monday- Friday)
Dundas Street with Richmond Street	Eastbound & Westbound	Left
Dundas Street with Richmond Street	Eastbound & Westbound	Right (7:00 a.m. to 9:00 a.m. & 3:00 p.m. to 6:00 p.m. Monday- Friday)
Dundas Street with Ridout Street N	Eastbound Right-Turning	Right (on red traffic signal light)

Schedule 11 (Prohibited Turns) of the PS-114 By-law is hereby amended by **adding** the following rows:

1-Intersection	2-Direction	3-Prohibited Turn
Dundas Street with Clarence Street	Eastbound & Westbound	Right (7:00 a.m. to 9:00 a.m. & 3:00 p.m. to 6:00 p.m. Monday- Friday) Bicycles Excepted
Dundas Street with Clarence Street	Eastbound & Westbound	Left (7:00 a.m. to 9:00 a.m. & 3:00 p.m. to 6:00 p.m. Monday- Friday) Bicycles Excepted
Dundas Street with Richmond Street	Eastbound & Westbound	Left Bicycles Excepted

1-Intersection	2-Direction	3-Prohibited Turn
Dundas Street with Richmond Street	Eastbound & Westbound	Right (7:00 a.m. to 9:00 a.m. & 3:00 p.m. to 6:00 p.m. Monday- Friday) Bicycles Excepted
Dundas Street with Ridout Street N	Eastbound Right-Turning	Right (on red traffic signal light) Bicycles Excepted

6. Designated Lane Movements

Schedule 22 (Designated Lane Movements) of the PS-114 by-law is hereby amended by deleting it in its entirety and replacing it with the following:

1-Highway	2-Between	3-Lane	4-Time/Date	5-Direction
Adelaide Street N	A point 44 m north of Commissioners Road E and Commissioners Road E	2nd & 3rd lane from west	Anytime	Southbound
Commissioners Road E	Wellington Road and a point 70 m east of Wellington Road	4th & 5th lanes from north	Anytime	Westbound
Dundas Street	A point 43 m west of Adelaide Street N and Adelaide St N	1st lane from south	Anytime	Eastbound
Dundas Street	A point 93 m west of Ridout Street N and Ridout Street N	1st lane from south	Anytime	Westbound (Except buses)
Dundas Street	A point 93 m west of Ridout Street N and Ridout Street N	2nd lane from south	Anytime	Eastbound
Dundas Street	Wellington Street and 260 m west of Wellington Street	1st lane from north	Anytime	Eastbound
Dundas Street	Wellington Street and 260 m west of Wellington Street	2nd lane from north	Anytime	Westbound
Grand Avenue	A point 30 m west of Wellington Road and Wellington Road	1st & 2nd lanes from south	Anytime	Northbound
Grey Street	A point 46 m east of Wellington Street and Wellington Street	1st & 2nd lanes from south	Anytime	Eastbound
Southbound ramp from Highbury Avenue S to Commissioners Road E	A point 123 m south of Commissioners Rd E and Commissioners Road E	1st lane from east	Anytime	Eastbound
Eastbound ramp from Highway 401 to Highbury Avenue S	A point 30 m west of Highbury Avenue S and	1st & 2nd lanes from north	Anytime	Southbound

1-Highway	2-Between	3-Lane	4-Time/Date	5-Direction
	Highbury Avenue S			
King Street	A point 68 m west of Talbot Street and Talbot Street	1st lane from north	Anytime	Westbound
King Street	A point 35 m west of Richmond Street and Richmond Street	1st lane from north	Anytime	Eastbound
King Street	A point 90 m west of Clarence Street and Clarence Street	1st lane from south	Anytime	Eastbound
Oxford Street W	Wonderland Road N and a point 235 m east of Wonderland Road N	1st lane from north	Anytime	Westbound (Except buses)
Platt's Lane	A point 30 m south of Western Road and Western Road	1st & 2nd lanes from east	Anytime	Northbound
Queens Avenue	A point 40 m east of Richmond Street and Richmond Street	1st lane from north	Anytime	Westbound (Except buses)
Queens Avenue	A point 35 m east of Talbot Street and Talbot Street	1st lane from north	Anytime	Westbound (Except buses)
Queens Avenue	Ridout Street N and a point 23 m east of Ridout Street	1st lane from south	Anytime	Westbound
Regent Street	A point 10 m west of Adelaide Street N and Adelaide Street N	1st lane from south	Anytime	Eastbound
Ridout Street N	A point 52 m north of King Street and King Street	1st & 2nd lanes from east	Anytime	Southbound
Western Road	A point 35 m west of Richmond Street and Richmond Street	1st & 2nd land from south	Anytime	Eastbound
Wharncliffe Road S	A point 65 m south of Horton Street E and Horton Street	1st lane from east	Anytime	Northbound
Wellington Street	Wolfe Street and Central Avenue	2nd lane from east	Anytime	Northbound

7. Rate of Speed

Schedule 24 (Rate of Speed) of the PS-114 By-law is hereby amended by **deleting** the following row:

1-Street	2- From	3-To	4-Maximum Rate of Speed
Highbury Avenue N	A point 150 m north of Jensen Road	A point 350 m south of Sunningdale Road E	60 km/h

Schedule 24 (Rate of Speed) of the PS-114 By-law is hereby amended by **adding** the following row:

1-Street	2- From	3-To	4-Maximum Rate of Speed
Highbury Avenue N	A point 250 m north of Dundas Street	A point 350 m south of Sunningdale Road E	60 km/h

8. Speed Limits

Schedule 25 (Area Speed Limits) of the By-law PS-114 is hereby amended by **adding** the following rows:

1-Area Limit	2-Maximum Rate of Speed
Canadian National Railway - Hyde Park Road - Sarnia Road - Wonderland Road N - Oxford Street W	40 km/h
Clark Road – Canadian Pacific Railway – Industrial Road – Dundas Street	40 km/h
Highbury Avenue N – Kilally Road – Clarke Road – Huron Street	40 km/h
Highbury Avenue N – Fanshawe Park Road E – Clarke Road – Kilally Road	40 km/h
Highbury Avenue N – Sunningdale Road E – Clarke Road – Fanshawe Park Road E	40 km/h
Highbury Avenue N – City Limit – Clarke Road – Sunningdale Road E	40 km/h
Hyde Park Road - Gainsborough Road - Wonderland Road N - Sarnia Road	40 km/h
Hyde Park Road, Oxford Street W - Wonderland Road N - Riverside Drive	40 km/h

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

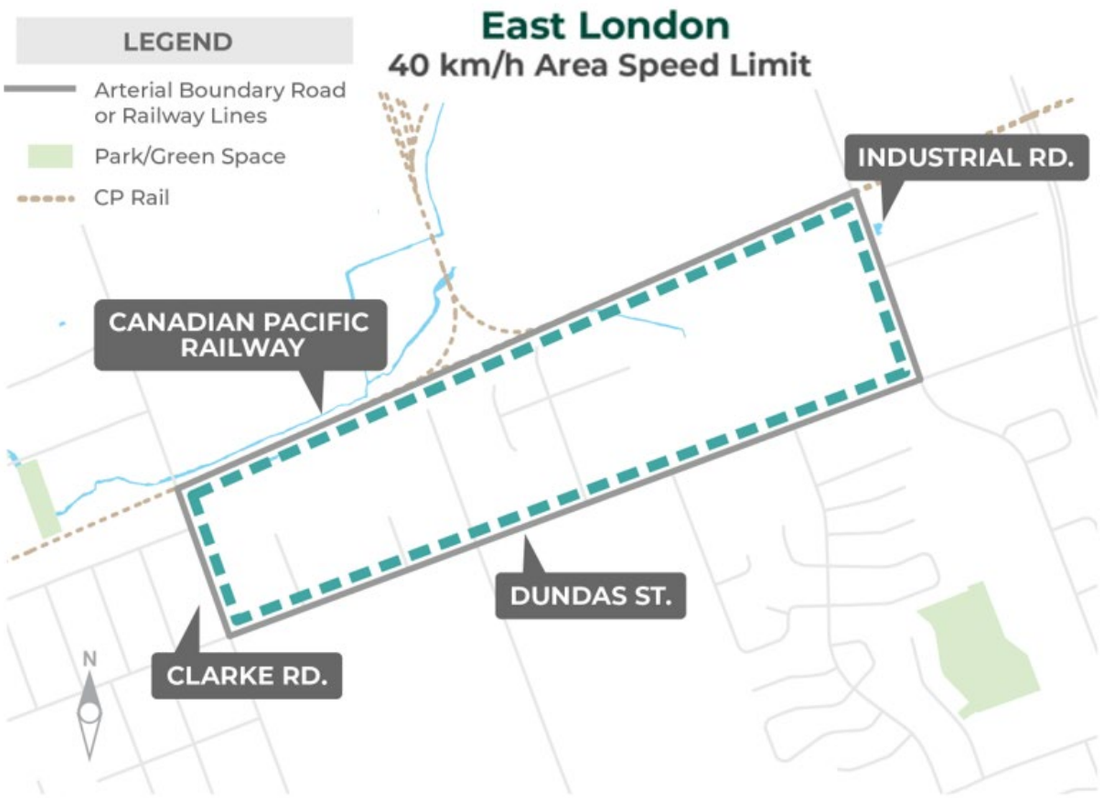
PASSED in Open Council on March 7, 2023.

Josh Morgan
Mayor

Michael Schulthess
City Clerk

First Reading – March 7, 2023
Second Reading – March 7, 2023
Third Reading – March 7, 2023

APPENDIX B: Area Speed Limit Zone Maps




CITY LIMITS
CLARKE RD.
80
SUNNINGDALE RD. E
70
80
FANSHAWE PARK RD.
60
HIGHBURY AVE. N
Ceder Hollow Park
Kilally Woods
70
KILALLY RD.
60
Cayuga Park
Jubilee Park
Pawnee Park
Huronview Park
HURON ST.
N
North-East London
40 km/h Area Speed Limit
LEGEND
Arterial Boundary Road
Park/Green Space
CN Rail
Arterial Road
(speed limit marked on map)


North-West London
40 km/h Area Speed Limit
LEGEND
Arterial Boundary Road or Railway Lines
Park/Green Space
CN Rail
Arterial Road (speed limit marked on map)
GAINSBOROUGH RD.
WONDERLAND RD. N
Medway Park
Gainsborough Meadows
Thistledown Park
Maple Grove Park
60
SARNIA RD.
HYDE PARK RD.
CANADIAN NATIONAL RAILWAY
OXFORD ST. W
N


LEGEND
Arterial Boundary Road
Park/Green Space
CN Rail
West London
40 km/h Area Speed Limit
WONDERLAND RD. N
OXFORD ST. W
Oakridge Optimist Community Park
Kelly Park
HYDE PARK RD.
RIVERSIDE DR.
N

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: **Contract Amendment: Detailed Design for Bradley Avenue Extension – Wharncliffe Road South to Jalna Boulevard**

Date: **February 22, 2023**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to the additional engineering fees for the detailed design of the Bradley Avenue Extension:

(a) The contract with WSP E&I Canada Limited **BE INCREASED** by $293,625.75 to $801,634.75 (excluding HST) to complete additional detailed design activities for drainage improvements to the White Oaks Drain culvert, in accordance with Section 20.3 (e) of the Procurement of Goods and Services Policy;

(b) The financing for this appointment **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix A;

(c) The Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this contract amendment; and,

(d) The Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

Executive Summary

The Bradley Avenue Extension Environmental Assessment (EA) Addendum recommended that the White Oaks Drain culvert be assessed at the detailed design stage, and upgraded to mitigate flood impacts and ensure compliance with applicable City and Provincal standards.

This report seeks the approval of Council to increase the existing Bradley Avenue Extension engineering consultant contract with WSP E&I Canada Limited by $293,625.75 to $801,634.75 to complete additional detailed design activities required for drainage improvements to the White Oaks Drain.

In accordance with the City's Procurement of Goods and Services Policy, Council approval of this contract amendment is required.

Linkage to the Corporate Strategic Plan

The following report supports the Strategic Plan through the strategic focus area of Building a Sustainable City by:

- improving London's resiliency to respond to potential future challenges;
- increasing actions to respond to climate change and severe weather;

- building infrastructure to support future development and protect the environment; and,
- improving safety for all modes of transportation.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- Environment and Transportation Committee – August 2005 – Bradley Avenue Extension, White Oak Road to Bostwick Road – Environmental Study Report
- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Civic Works Committee – December 1, 2015 – Bradley Avenue Extension – Wharncliffe Road South to Wonderland Road South Appointment of Consulting Engineer
- Civic Works Committee – April 24, 2017 – Contract Award: Tender No. 17-57 – 2017 Bradley Avenue West Extension
- Civic Works Committee – June 19, 2018 – Bradley Avenue Extension – Phase 2 Wharncliffe Road South to Jalna Boulevard Detailed Design Appointment of Consulting Engineer
- Strategic Priorities and Policy Committee – October 20, 2020 – 2021 Development Charges Update Covering Report and Proposed By-law
- Civic Works Committee – June 22, 2021 – Appointment of Consulting Engineer for the Dingman Creek Subwatershed Stage 2 Lands: Schedule C Municipal Class Environmental Assessment
- Civic Works Committee report September 13, 2022 – Bradley Avenue Extension, White Oak Road to Jalna Boulevard (West Leg) Municipal Class Environmental Assessment Addendum

2.0 Discussion and Considerations

2.1 Background

In 2005, the City completed a Municipal Class Environmetal Assessment (EA) to determine the preferred alignment to extend Bradley Avenue between Bostwick Road and White Oak Road. This new Urban Thoroughfare/Civic Boulevard connection has long been envisioned in the City's Official Plan and surrounding developments have been coordinated with the connection. The preferred alternative in the 2005 EA recommended that the Bradley Avenue extension, between Wharncliffe Road South and White Oak Road, be constructed to a four-lane cross-section, with bicycle facilities, localized turning lanes and urbanized with curbs, sidewalks, and illumination. The section between Wonderland Road and Wharncliffe Road was constructed in 2017. The next phase planned for implementation is between Wharncliffe Road and White Oak Road and can be seen below in Figure 1, labelled as "Bradley Ave (Future)". The project, which includes continuity improvements on the east limit is currently in the detailed design stage.

In order to manage continued growth in the City's southwest and to provide corridor lane continuity between the future four lane configuration on Bradley Avenue west of White Oak Road, and the existing four lane configuration east of Jalna Boulevard (west leg), the current Transportation Master Plan identified the need for a four lane configuration for the short gap from White Oak Road to Jalna Boulevard. This section on the east side of White Oak Road was identified as part of the next phase of the Bradley Avenue projects in the Transportation Development Charges Background Study

and Growth Management Implementation Strategy. The City of London has completed an addendum to the Bradley Avenue Extension EA to extend the improvements through the “Study Area” shown in Figure 1.

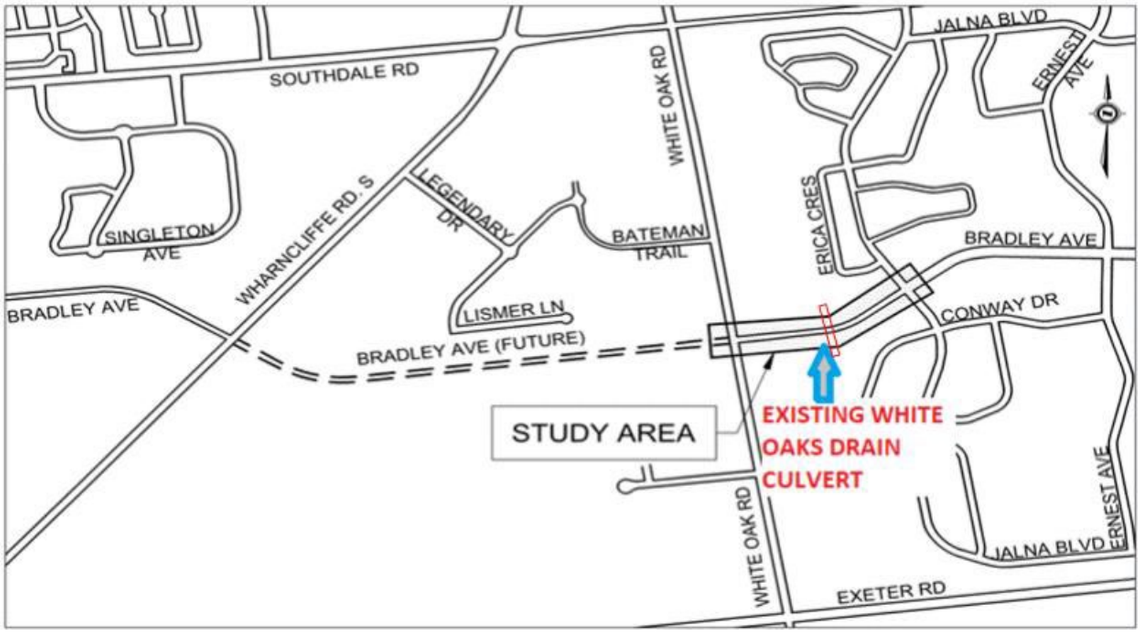


Figure 1: Study area of the EA Addendum for Bradley Avenue, between White Oak Road and Jalna Boulevard (west leg)

During consultation for the Bradley Avenue Extension EA Addendum, Upper Thames River Conservation Authority (UTRCA) identified flood hazards associated with the White Oaks Drain crossing of Bradley Ave. Modelling from the UTRCA and the on-going Dingman Creek Subwatershed Stage 2 Lands Muncipal Class EA confirmed the White Oaks Drain culvert crossing is undersized and does not meet regulatory flow conveyance standards for arterial roads.

The Bradley Avenue Extension EA Addendum recommended improvements to the White Oaks Drain culvert be established during detailed design to mitigate flood impacts and ensure compliance with the applicable hydraulic requirements of the City of London, Ministry of Transportation (MTO), and Ministry of Natural Resources and Forestry (MNRF). The EA Addendum study also recommended improvements to the White Oaks Drain channel by removing an existing concrete weir structure just upstream of the culvert to improve capacity and conveyance of the watercourse as requested by UTRCA.

On September 27, 2022, Council accepted the Municipal Class Environmental Assessment Addendum for the Bradley Avenue Extension. The EA included a review with the Transportation Planning and Design Climate Emergency Screening Tool. The Addendum was available for public review from October 13, 2022 to November 14, 2022. The detailed design for the Study Area roadworks is in progress; however, improvements to the White Oaks Drain culvert crossing was not in the initial detailed design scope.

2.2 Discussion

Wood Environment & Infrastructure Solutions, now known as WSP E&I Canada Limited was appointed the consulting engineer for the design of the Bradley Avenue Extension in June 2018. The appointment followed a competitive process in accordance with Section 15.2 (e) of the Procurement of Goods and Services Policy. The need for culvert work was not known at the time of this appointment.

WSP E&I Canada Limited has prepared a proposal for the detailed design required for the improvements to the White Oaks Drain culvert to be included as part of the Phase 2 of the Bradley Avenue Extension from Wharncliffe Road South to Jalna Boulevard (west leg). Extending the current design assignment to include drainage improvements to the White Oaks Drain with WSP provides value because the design and construction will be integrated into the design and contract preparation underway. Cost efficiencies and value is achieved in this approach as there is significant background knowledge within the firm and many of the same staff working on the project.

The negotiated consultant fees for this scope change includes the following additional engineering services required to complete the detailed design, contract drawings, and tender package for the White Oak Drain culvert improvements:

1. Culvert Assessment and Channel Design: Options for the White Oaks Drain crossing under Bradley Aveune will be hydraulically assessed. Options to improve culvert capacity include construction of a supplemental culvert and culvert replacement. If the replacement option is selected, provisional items are included for additional culvert and drainage design. Channel design is included to tie the new culvert into the existing channel.

2. Fluvial Geomorphology Assessment: Watershed and watercourse characterization will be assessed to support the crossing and channel design.

3. Environmental: Desktop and field surveys will be completed to determine the existing natural environmental conditions within the study area. The findings will be documented in a natural heritage memo to support permitting and approvals for the project. A tree inventory, arborist report and tree protection and replacement plans will be completed. WSP will prepare and submit applications to regulatory agencies to obtain the required permits and/or approvals for the project.

4. Structural Engineering: A provisional item for structural engineering is included if the culvert replacement option is selected. Possible culvert replacement options include a larger span multi-cell box culvert, or an open footing precast concrete arch or three sided structure.

5. Geotechnical Engineering: Field investigations consist of boreholes to inform the structural engineering design. Provisional items are included for additional drilling and decommissioning of the monitoring well.

6. Roadway and Municipal Engineering: It is anticipated that the existing watermain which crosses the existing culvert is in conflict with the works and the design for lowering of the watermain to accommodate the proposed culvert is included. The staging design for Bradley Avenue will be modified to accommodate the deep excavation for the culvert replacement. It is anticipated that the current design of Bradley Avenue will not require alteration due to the proposed work. A provisional item is included if the new culvert sizing requires modifications to the roadway profile.

7. Public Update Meeting: Working with the Communications service area, a future public update meeting will be held prior to construction.

The fees include a 10% contingency in the event of unforeseen requirements. Subject to project performance, WSP E&I will be considered for the construction administration phase of the project.

3.0 Financial and Schedule Considerations

An additional $293,625.75 (excluding HST) is requested for the contract with WSP E&I Canada Limited to complete the design of the White Oaks Drain culvert improvements. Funds are available in Bradley Avenue Extension capital project account. The Source of Financing Report is appended to this report as Appendix A.

A two phased construction schedule is proposed to accommodate the additional culvert work and minimize traffic impacts in the area. The new Bradley Avenue Extension from Wharncliffe Road South to White Oak Road is scheduled for start in mid-2023 and continue through 2024. The adjacent improvements from White Oak Road to Jalna Boulevard (west leg) including the culvert works is now planned to start in 2024 and will progress in parallel with the roadworks west of White Oak Road.

Conclusion

WSP E&I Canada Limited has demonstrated an understanding of the requirements for this project, has completed the Bradley Avenue Extension EA Addendum for the improvements between White Oak Road and Jalna Boulevard (west leg), and is currently completing the detailed design of the Bradley Avenue Extension from Wharncliffe Road South to Jalna Boulevard (west leg). The original contract value was $508,009.00. It is recommended WSP E&I Canada Limited's contract be increased by $293,625.75 to $801,634.75 to allow the consultant to complete the additional work associated with the detailed design of the White Oaks Drain culvert improvements to mitigate flood impacts. This approach will result in cost efficiencies and provides good value for the city.

Prepared by:	**Garfield Dales, P. Eng. Division Manager Transportation Planning & Design**
Submitted by:	**Doug MacRae, P. Eng., MPA Director Transportation & Mobility**
Recommended by:	**Kelly Scherr, P. Eng., MBA, FEC Deputy City Manager, Environment & Infrastructure**
Schedule A:	Source of Financing
c:	Steve Mollon, Senior Manager, Procurement & Supply Jiten Patel, CET, Technologist II Andrew Denomme, P.Eng., Transportation Design Engineer Adrienne Sones, P.Eng., Environmental Services Engineer

Appendix "A"

#23023
February 22, 2023
(Contract Award Increase)

Chair and Members
Civic Works Committee

RE: Contract Amendment: Detailed Design for Bradley Avenue Extension - Wharncliffe Road South to Jalna Boulevard
(Subledger RD180003)
Capital Project TS1523-2 - Bradley Ave Extension Jalna to Wharncliffe
WSP E&I Canada Limited - $801,634.75 (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 recommendation of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

Estimated Expenditures	Approved Budget	Committed To Date	This Submission	Balance for Future Work
Engineering	825,553	526,760	298,793	0
Land Acquisition	1,688,555	1,103,117	0	585,438
Construction	50,165	50,165	0	0
Utilities	644,000	0	0	644,000
City Related Expenses	2,833	2,833	0	0
Total Expenditures	$3,211,106	$1,682,875	$298,793	$1,229,438
Sources of Financing				
Drawdown from City Services - Roads Reserve Fund (Development Charges) (Note 1)	3,211,106	1,682,875	298,793	1,229,438
Total Financing	$3,211,106	$1,682,875	$298,793	$1,229,438

Financial Note:

Contract Price	$801,635
Less amount previously approved	508,009
Contract Price	293,626
Add: HST @13%	38,171
Less: HST Rebate	-33,004
Net Contract Price	$298,793

Note 1: Development charges have been utilized in accordance with the underlying legislation and the approved 2019 Development Charges Background Study and the 2021 Development Charges Background Study Update.

Jason Davies
Manager of Financial Planning & Policy

jg

Integrated Transportation Community Advisory Committee Report

The 3rd Meeting of the Integrated Transportation Community Advisory Committee
February 15, 2023

Attendance

PRESENT: T. Khan (Chair), R. Buchal, E. Eady, D. Foster, A. Husain, T. Kerr, S. Leitch, V. Lubrano, D. Luthra, M. Malekzadeh, A. Santiago, J. Vareka and K. Mason (Committee Clerk)

ABSENT: J. Collie

ALSO PRESENT: J. Ackworth, P. Adams, J. Bos, S. Corman, J. Dann, A. Dennome, J. Fullick, J. Gardiner, D. Hall, J. Michaud, A. Miller, J. Pucchio, A. Rosebrugh, K. Scherr, J. Stanford, R. Wilcox

The meeting was called at 3:00 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 Developing the 2023-2027 Strategic Plan

That it BE NOTED that the presentation, as appended to the Added Agenda, from R. Wilcox, Director, Strategy and Innovation, with respect to the Development of the 2023-2027 Strategic Plan, was received.

2.2 Kensington Bridge Municipal Class Environmental Assessment Presentation

That it BE NOTED that the presentation, as appended to the Added Agenda, from P. Adams, AECOM and J. Pucchio, AECOM, with respect to the Kensington Bridge Municipal Class Environmental Assessment, was received.

2.3 New Sidewalk Program

That it BE NOTED that the presentation, as appended to the Agenda, from J. Bos, Senior Technologist, Transportation Planning and Design Division, with respect to the New Sidewalk Program, was received.

2.4 Central Avenue Bike Lanes

That it BE NOTED that the presentation, as appended to the Agenda, from D. Hall, Program Manager, Active Transportation, Transportation Planning and Design, with respect to the Central Avenue Bike Lanes, was received.

2.5 Cheapside Street Bike Lanes

That it BE NOTED that the presentation, as appended to the Agenda, from J. Gardiner, Transportation Technologist, Environment and Infrastructure, with respect to the Cheapside Street Bike Lanes, was received.

3. Consent

3.1 2nd Report of the Integrated Transportation Community Advisory Committee

That it BE NOTED that the 2nd Report of the Integrated Transportation Community Advisory Committee, from the meeting held on January 18, 2023, was received.

3.2 Notice of Planning Application - London plan and Zoning By-law Amendments - City-Wide/Additional Residential Unit Review in Response to Bill 23 (More Homes Built Faster Act)

That it BE NOTED that the Notice of Planning Application, dated February 1, 2023, from C. Parker, Senior Planner, related to the London Plan and Zoning By-law Amendments, City-Wide/ Additional Residential Unit Review in Response to Bill 23 (More Homes Build Faster Act), was received.

3.3 Notice of Planning Application - Official Plan and Zoning By-law Amendments - Street Width Policy Review

That it BE NOTED that the Notice of Planning Application, dated February 1, 2023, from I. de Ceuster, Planner I, related to the Official Plan and Zoning By-Law Amendments for the Street Width Policy Review, was received.

3.4 Notice of Planning Application - Zoning By-law Amendment - 129-131 Base Line Road West

That it BE NOTED that the Notice of Planning Application, dated January 25, 2023, from N. Pasato, Senior Planner, related to the Zoning By-Law Amendment for the properties located at 129-131 Base Line Road West, was received.

3.5 Notice of Planning Application - Zoning By-law Amendment - h-5 Holding Zone

That it BE NOTED that the Notice of Planning Application, dated February 1, 2023, from S. Filson, Site Development Planner, related to the Zoning By-Law Amendment for h-5 Holding Zone, was received.

4. Sub-Committees and Working Groups

None.

5. Items for Discussion

None.

6. Adjournment

The meeting adjourned at 4:58 PM.