Cycling Advisory Committee

Report

The 10th Meeting of the Cycling Advisory Committee
October 16, 2019
Committee Room #4

Attendance

PRESENT: C. Linton (Chair), B. Cowie, C. DeGroot, R. Henderson, J. Jordan, C. Pollett, E. Raftis and J. Roberts and D. Turner (Secretary)

ABSENT: K. Brawn, B. Hill and O. Toth

ALSO PRESENT: A. Giesen, Sgt. S. Harding, T. MacDaniel, D. MacRae, L. Maitland, A. Miller, C. Saunders, J. Stanford and S. Wilson

The meeting was called to order at 4:00 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 Transportation Demand Management Cycling Activities – Introduction and Update

That it BE NOTED that the attached presentation from A. Miller, Transportation Demand Management Coordinator and J. Stanford, Director, Environment, Fleet and Solid Waste, with respect to an introduction and update on Transportation Demand Management Cycling Activities, was received.

2.2 Bicycle Parking By-laws and Regulations

That the Civic Administration BE REQUESTED to attend a future meeting of the Cycling Advisory Committee to bring forward information related to the quality of bicycle parking in the City of London as it relates to the planning process; it being noted that the attached presentation, from L. Maitland, Site Development Planner, with respect to this matter, was received.

2.3 Cycling Counts Webpage

That it BE NOTED that the attached presentation from A. Giesen, Senior Transportation Technologist, with respect to the Cycling Counts Webpage, was received.

3. Consent

3.1 9th Report of the Cycling Advisory Committee

That it BE NOTED that the 9th Report of the Cycling Advisory Committee, from its meeting held on September 18, 2019, was received.

3.2 Municipal Council Resolution - Area Speed Limit Program

That the following actions be taken with respect to the Municipal Council Resolution from its meeting held on October 1, 2019, with respect to the Area Speed Limit Program:

a) the Civic Administration BE REQUESTED to investigate methods and practices that could be undertaken to promote compliance with speed limits; and,

b) the Civic Administration BE REQUESTED to further review the potential implementation of 30 km/h speed limits on local and connecting streets and a suggested time frame for implementation;

it being noted that the above-noted Municipal Council resolution letter was received.

3.3 Notice of Planning Application - Zoning By-law Amendment - 21 Norlan Avenue

That it BE NOTED that the Notice of Planning Application, dated September 18, 2019, from C. Parker, Senior Planner, with respect to a Zoning By-law Amendment for the property located at 21 Norlan Avenue, was received.

3.4 Notice of Planning Application - Official Plan and Zoning By-law Amendments - 84-86 St. George Street and 175-197 Ann Street

That the following actions be taken with respect to the Notice of Planning Application, with respect to Official Plan and Zoning By-law Amendments for the properties located at 84-86 St. George Street and 175-197 Ann Street:

a) the Civic Administration BE REQUESTED to consider adding additional bicycle parking spots based on a .75 ratio per bedroom rather than per unit, and that these proposed additional bicycle parking spots be secure, indoor and located at ground-level; and,

b) the above-noted Notice of Application BE RECEIVED.

3.5 Notice of Planning Application - Official Plan and Zoning By-law Amendments - 332 Central Avenue and 601 Waterloo Street

That it BE NOTED that the Notice of Planning Application, dated October 2, 2019, from M. Vivian, Planner I, with respect to Official Plan and Zoning By-law Amendments for the properties located at 332 Central Avenue and 601 Waterloo Street, was received.

4. Sub-Committees and Working Groups

4.1 Sport and Leisure Cycling Sub-Committee Report

That it BE NOTED that the Sport/Leisure Cycling Working Group Report, as appended to the agenda, was received.

4.2 Cycling Master Plan Review Working Group Report

That the revised attached '8.0 - Recommendations' section of the Cycling Master Plan Review Working Group Report BE FORWARDED to the Municipal Council for their consideration; it being noted that the remainder

of the above-noted working group report was received; it being noted that the attached presentation from C. DeGroot with respect to this matter was received.

5. Items for Discussion

5.1 London Road Safety Strategy Review

That the City of London Road Safety Strategy 2014-2019 BE DEFERRED to the next meeting of the Cycling Advisory Committee.

5.2 2019 Work Plan

That the following actions be taken with respect to the 2019 Cycling Advisory Committee (CAC) Work Plan:

a) the following expenditure from the 2019 CAC budget BE APPROVED to promote community cycling engagement:

i) $500.00 for bicycle safety light kits; and,

ii) $300.00 for bicycle safety bells;

b) the 2019 CAC Work Plan BE DEFERRED to the next meeting of the CAC.

6. Adjournment

The meeting adjourned at 7:02 PM.

TDM CYCLING ACTIVITIES: INTRODUCTION & UPDATE

Cycling Advisory Committee
October 16, 2019

Jay Stanford, Director, Environment, Fleet & Solid Waste

Allison Miller
TDM Coordinator

WHAT IS TRANSPORTATION DEMAND MANAGEMENT?

- Strategies that result in more efficient use of a transportation system
- Encouraging Londoners to use options other than driving alone or . . . . *driving at all!*
- More than just weekday peak trips
- Part of an active lifestyle

Cycling is just one part of this. Over the last few years it has taken up a lot of time.

GOALS OF TDM

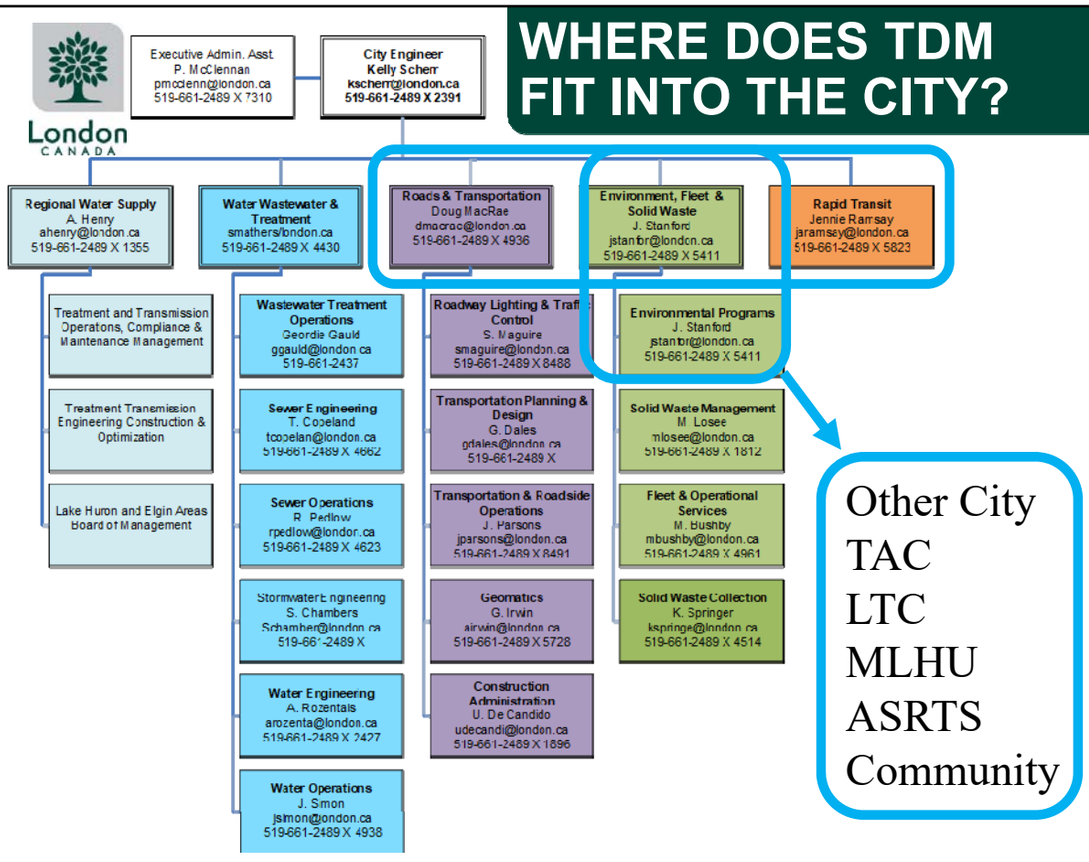
✓ Reduce

- Reliance on single occupancy vehicles (SOV)
- Vehicle kilometres travelled (VKT)
- Capital expenditures
- Maintenance costs
- Traffic congestion
- GHG emissions

✓ Improve

- Traffic safety
- Air quality
- Health

WHERE DOES TDM FIT INTO THE CITY?



WHERE DOES TDM FIT INTO CAC?

Mandate: The CAC will advise and support City Council in the implementation of . . . . the cycling component of Active Transportation and Transportation Demand Management by:

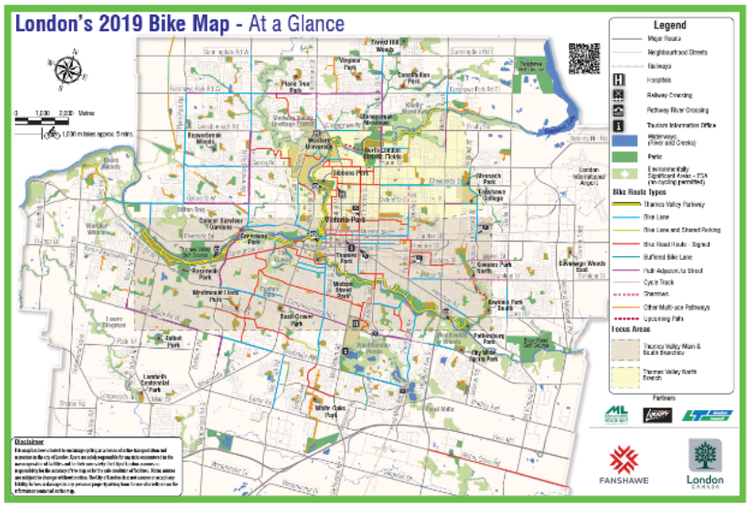
- publicizing the benefits and importance of the initiatives designed to achieve the objectives of the BMP, TMP and LRSS;
- assisting in the development of new cycling policies, strategies and programs;
- encouraging public participation in the initiatives. . . . . ;
- advising on measures required to implement the City's commitment to cycling;
- recommending and advising on new cycling initiatives in the context of available approved budgets and under future potential budget allocations; and
- assisting in monitoring the effectiveness of cycling facilities and support programs.

TDM PROJECTS – CYCLING FOCUS

- Updates on 7 of 14 Actions from 2016 Cycling Master Plan
- Feasibility Study for a Transportation Management Association & Commute Ontario
- Greenhouse gas emissions from burning fossil fuel

UPDATED BIKE MAP

CMP Action #3 - Identifying Touring Loop Routes

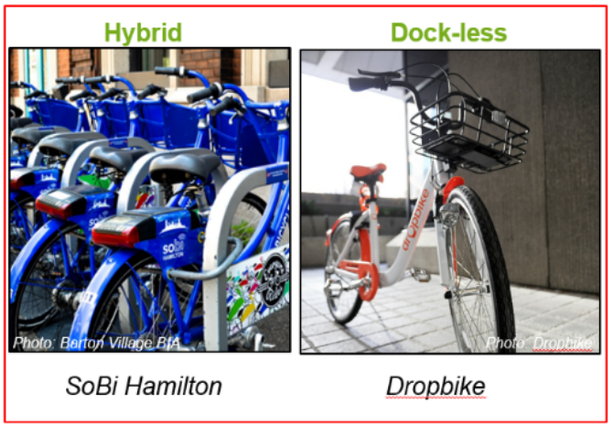


- In progress
- Focus has been TVP routes
- More routes identified for spring 2020

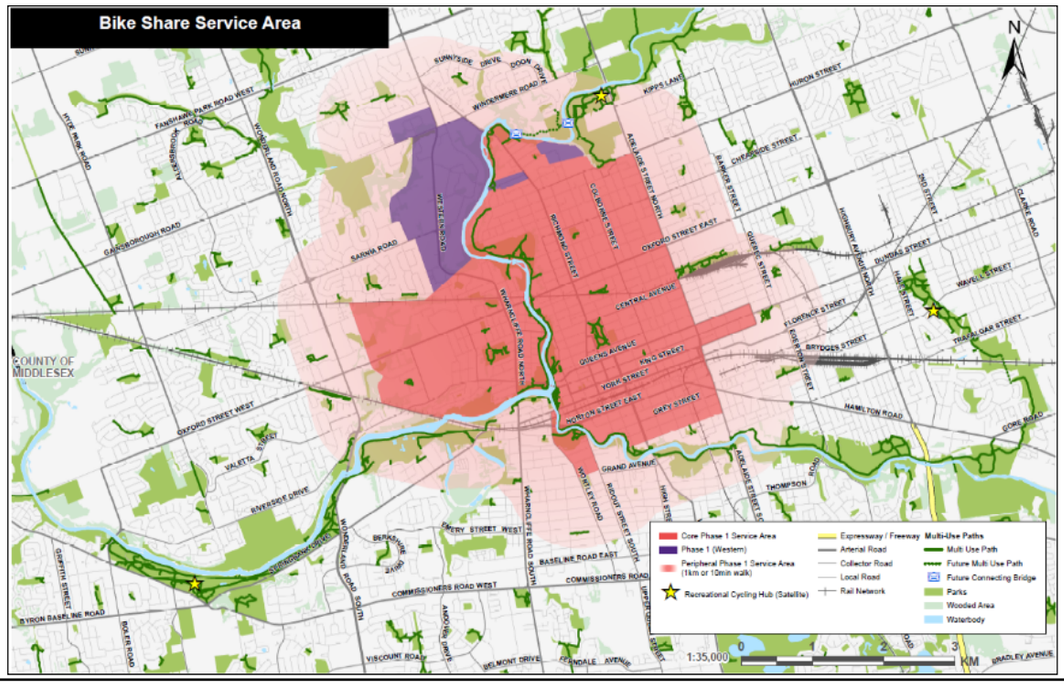
BIKE SHARE BUSINESS CASE

CMP Action #4 - Exploring a Bike Share System

- Background details and preliminary analysis completed
- Implementing a RFP to obtain pricing and a vendor
- Proposed launch Spring/Summer 2020



BIKE SHARE – SERVICE AREA



AWARENESS AND EDUCATION

CMP Action #6 - Creating a Cycling Specific Web Presence

- In progress
- Updated cycling information on City website
- Produced how-to/safety videos

https://www.youtube.com/watch?v=gA0J3IZ-iC8&feature=youtu.be

BICYCLE PARKING

CMP Action #8 - Enhancing Bicycle Parking

- Adding short-term bike racks in spring 2020
- Doubling number of bike corrals
- Festival bike parking system for events
- Developing Business Bike Rack Program

BICYCLE PARKING

- Secure Public Bike Parking Downtown Pilot
- Neighbourhood Bike Parking Concepts
- Listed in Strat Plan - Undertake background details and community engagement on bike parking challenges, opportunities, priorities and implementation plans.

City of Portland

City of Toronto

MEASURING

CMP Action #9 – Establishing Performance Measures

- **In progress.** Measures include:
  - Counts
  - Facility length
  - New measures (connectivity, safety, travel time, etc.)
- Listed in the Strategic Plan - Prepare background methodology, an approach to monitoring and implement

AWARENESS AND EDUCATION

CMP Action #11 Enhancing Enforcement

- In progress
- Working with LPS, Fanshawe, Western Police on promotions **(upcoming)**

SPECIAL EVENTS AND PARTNERS

CMP Action #12 - Establishing High Profile Events

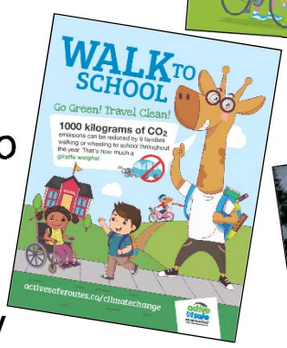
1. London Celebrates Cycling:

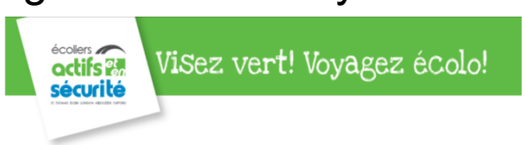
- Every June (last 3 years)
- Partnership event
- Goal to celebrate those who ride and reach new cycling audiences (to encourage to ride)
- Event is evolving and growing

SPECIAL EVENTS AND PARTNERS

2. Partner Event Support

- CAN Bike
- ELMO ASRTS: Climate Change campaign & Bike to School Week support
- Big Bike Giveaway





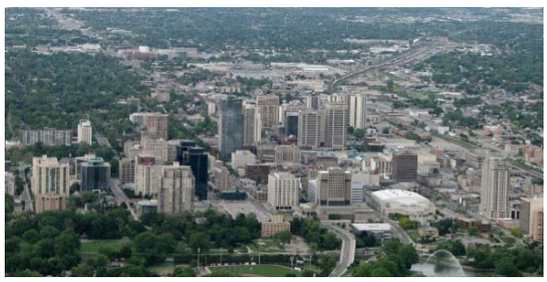
CYCLING IN LONDON SURVEY

Tied to all CMP actions and Promoting Sustainable Travel for All Time Periods

- Part of Western University Doctoral research
- First dedicated, comprehensive cycling survey in London
- Supported by EES
- Results on the facilitators and barriers to further uptake of cycling will be used when considering future infrastructure and programs

TRANSPORTATION MANAGEMENT ASSOCIATION

- TMA is usually a non-profit, member-controlled organization that provides transportation services in a particular area or areas
- Feasibility Study just started; based in part on past work in the Oxford East business area
- Define location(s), governance models, and current context and programming

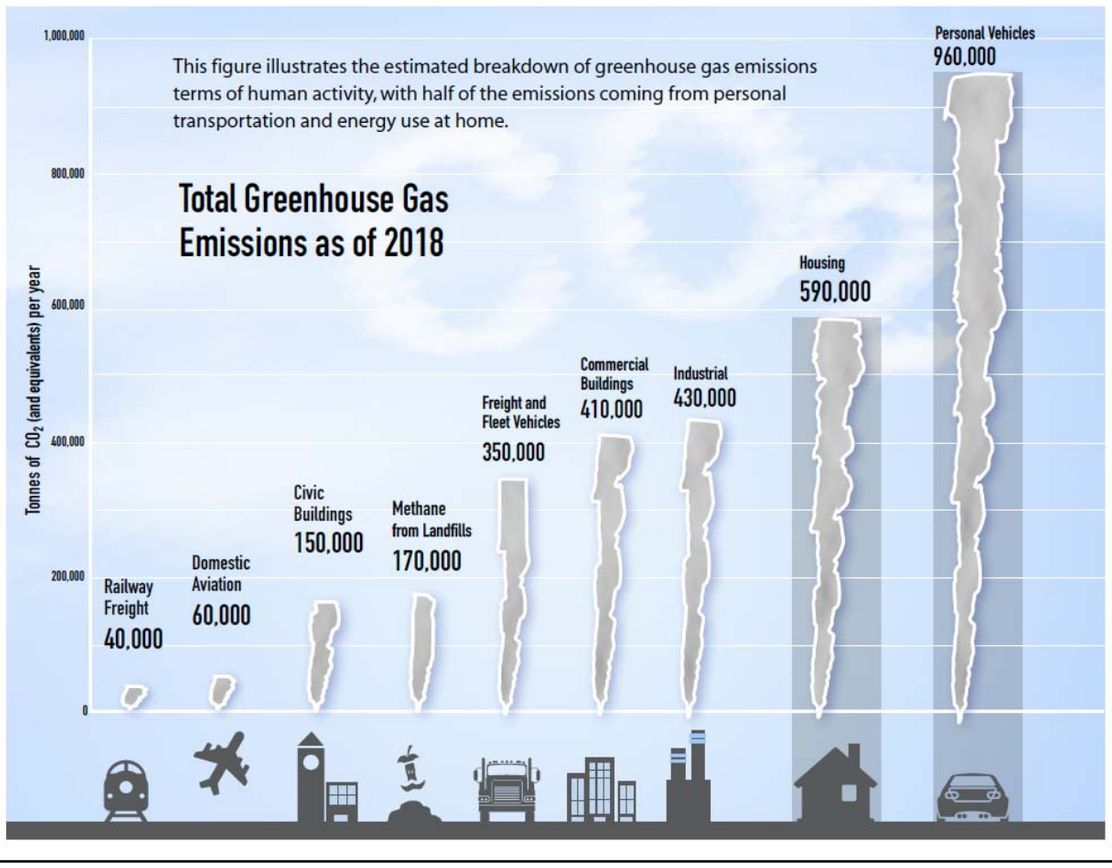


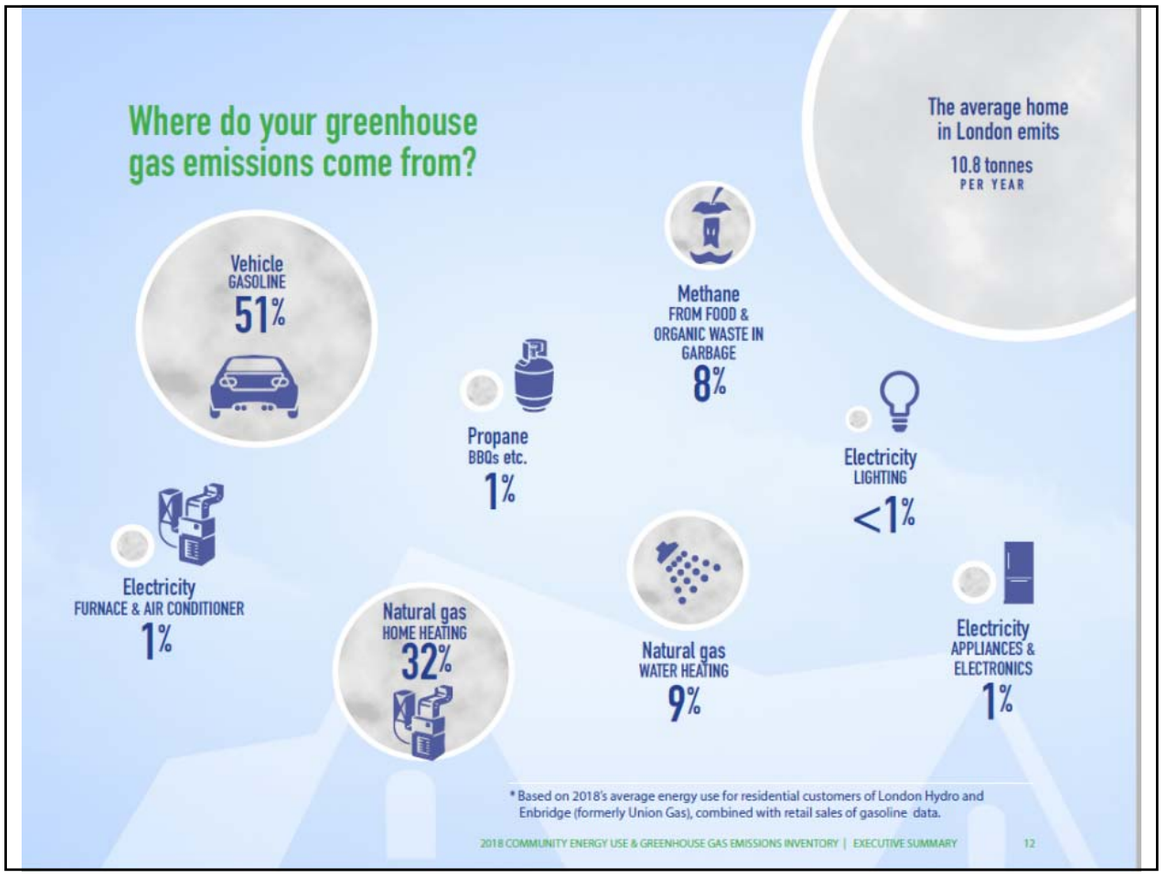
- Ontario Trillium Foundation-funded project
- Lead is SustainMobility – delivers TMA programs in GTA
- 6 other municipalities
- Commuter programs and supports to be Londonized
- Includes a Guaranteed Ride Home Program (stumbling block to more commuter cycling)

COMMUTE ONTARiO

BE PART OF THE SOLUTION

ONTARIO'S COMMUNITIES ARE COMING TOGETHER TO REDUCE 20,000,000 KM OF VEHICLE TRAVEL!





GHG REDUCTION ACTIONS - CLIMATE EMERGENCY

From 2018 Community Energy Use & GHG Inventory Report to CWC, October 22/19

What can Londoners do immediately?

- **Drive less (or not at all)** – make more trips by walking, **cycling**, transit, carpooling
- If you must own a vehicle, own an electric or hybrid vehicle, or a very fuel efficient one
- Make your home more energy efficient – and work towards net-zero energy
- Reduce food waste, especially for high-impact foods such as red meat and dairy
- Go local – for food, for products, for vacations

GHG REDUCTION ACTIONS - CLIMATE EMERGENCY

What can London's Businesses & Employers do immediately?

- Invest in energy efficiency measures for buildings and processes
- Apply green procurement strategies to the supply chain
- Invest in **green fleet measures**
- Reduce business travel, especially by air, through webinars and video conferences. If business travel is required, consider carbon offsetting
- Reduce employee commuting – **promote cycling**, transit, carpooling, telework

QUESTIONS

- Now
- Next CAC
- At a Sub-committee or Working Group meeting

Bicycle Parking Regulations (and Policies)

City of London

Cycling Advisory Committee – October 16, 2019

Policy Framework

- Official Plan – *The London Plan*
  - Zoning By-law – Z.-1 Zoning By-law
    - Site Plan Control By-law
- Complete Streets Design Manual
- Parks and Recreation Design Standards

London Plan Policies

- (City Design) 280_ Secure, covered and non-covered bicycle parking should be incorporated into multiple-unit residential, commercial, retail, institutional, and recreational developments.
- (Mobility) 353_ *The Cycling Master Plan* should identify cycling infrastructure such as secure bicycle parking, bike racks on buses and change rooms and shower facilities to support cycling and multi-modal forms of mobility.
- (Public Facilities) 434_ To support active forms of mobility, public facilities should provide for secure bicycle parking and adequate shower and locker facilities for employees.

London Plan Policies

- Downtown specific policies

  799_5 Prepare a parking strategy to coordinate municipal parking supply and provide for public parking at strategically advantageous locations. Plan for, and integrate, bicycle parking, bikesharing, and carsharing through this strategy.

  803_10 Shared car and bicycle parking facilities and carshare/bikeshare programs will be encouraged within the Downtown.

- Transit Village specific policies

  814_ 12 Shared car and bicycle parking facilities and carshare/bikeshare programs will be encouraged within Transit Villages. Public change rooms and bicycle facilities will be encouraged.

London Plan Policies

- Methadone Clinics

  1097_ The Zoning By-law will identify standards for new and expanded methadone clinics and methadone pharmacies to ensure all of the following:

  1. Adequate automobile parking.
  2. Adequate bicycle parking facilities.
  3. Adequate waiting room floor areas.

- Bonus Zoning

  1652_10. Large quantities of secure bicycle parking, and cycling infrastructure such as lockers and change rooms accessible to the general public.

London Plan Policies

- Site Plan policies requiring items to be shown and addressed.
  - 1678_e. The sustainable design elements on any adjoining street, including without limitation trees, shrubs, hedges, plantings or other ground cover, permeable paving materials, street furniture, curb ramps, waste and recycling containers and bicycle parking facilities.
  - 1681_15. The sustainable design elements on any adjoining street under the City's jurisdiction, including trees, shrubs, hedges, plantings or other ground cover, permeable paving materials, street furniture, curb ramps, waste and recycling containers, and bicycle parking facilities.

Zoning By-law Regulations

4.19 PARKING

16) NUMBER OF BICYCLE PARKING SPACES

1) Residential Development:

Apartment buildings and lodging houses (with five or more residential units) shall be required to provide 0.75 longterm bicycle parking space per residential unit.

Zoning By-law Regulations

2) Residential Care Facilities:

Short-term bicycle parking spaces shall be provided at a rate of 7% of the required number of automobile parking spaces, as specified in the Zoning By-law, for the following residential care facilities:

a) senior citizen apartment buildings;
b) nursing homes;
c) rest homes;
d) retirement lodges;
e) retirement homes;
f) handicapped persons apartment buildings;
g) continuum-of-care facility;
h) chronic care facility;
i) foster homes;
j) group home type 1 and type 2;
k) supervised residence;
l) correctional and detention centre;
m) emergency care establishment.

Zoning By-law Regulations

3) Residential Development Exemptions: bicycle parking shall not be required for:

a) Conversions of existing space to residential units;
b) Single detached dwellings;
c) semi-detached dwellings;
d) duplex dwellings;
e) triplex dwellings;
f) fourplex dwellings;
g) townhouse dwellings;
h) stacked townhouse dwellings;
i) street townhouses;
j) cluster townhouses;
k) farm dwellings.

Zoning By-law Regulations

4) Non-Residential Development:

Short-term bicycle parking spaces shall be provided at a rate of 7% of the required number of automobile parking spaces, as specified in the Zoning By-law, for all non-residential development except as specified below:

Zoning By-law Regulations

5) Non-Residential Development Exemptions:

a) where the required number of automobile parking spaces specified in the Zoning By-law is 9 or fewer spaces, no bicycle parking is required;

b) No bicycle parking requirement applies for the following uses specified in the Zoning By-law: Abattoir; aggregate reprocessing; aggregate storage area; agricultural service establishment; agricultural supply establishment; agricultural use; agricultural use, intensive; agricultural use, non-intensive; agriculturally related commercial use; agriculturally related industrial use; batching plant, asphalt; batching plant, concrete; channel composting facility; construction and demolition recycling facility; crushing plant; driving range; drive-through facility; farm; farm cluster; farm equipment sales and service; farm foods and products market; farm market; feedlot; forestry use; grain elevator; greenhouse, commercial; in-vessel composting facility; kennel; landing strip; livestock; livestock facilities; managed woodlot; manure storage facilities; pit; propane transfer facility; quarry; resource excavation; residential and other source recycling facility; resource extraction operation; salvage yard; specialized recycling facility; stockpiling; travel plaza/truck stop; truck stop; theatre, drive-in; wayside pit or wayside quarry; windrow composting facility.

c) No bicycle parking requirement will apply to the conversion of existing buildings for residential or non-residential uses in all Downtown Area 1 and 2 Zones. Major redevelopment involving property consolidation and new construction is required to provide for bicycle parking facilities at the mandated standard.

d) No bicycle parking requirement will apply to the conversion of existing buildings for residential or non-residential uses in all Business District Commercial 1 and 2 Zones. Major redevelopment involving property consolidation and new construction is required to provide for bicycle parking facilities at the mandated standard.

e) For CLINIC, METHADONE or PHARMACY, METHADONE uses, notwithstanding any provisions of this by-law, the number of bicycle parking spaces provided shall be no less than 5 spaces.

Zoning By-law Regulations

6) Municipally-owned Parking lots and structures:

Municipally-owned parking lots in the Downtown Area zones and defined Business District Commercial Area zones shall provide for short-term bicycle parking facilities equal to 7% of the total vehicular parking spaces provide.

Zoning By-law Regulations

7) Bicycle Parking Incentives:

Notwithstanding Section 4.19 of this By-law to the contrary, the required number of motor vehicle parking spaces for non-residential uses may be reduced to provide for additional short or long-term bicycle parking spaces beyond those mandated by this by-law provided, however, the reduction in motor vehicle parking spaces shall not exceed 10% of the required motor vehicle parking spaces. Individual vehicular parking stalls shall be required to provide for a minimum of five bicycle parking spaces. This incentive shall not apply to CLNIC, METHADONE or PHARMACY, METHADONE uses.

Site Plan Control By-law

14. BICYCLE PARKING FACILITIES

(a) Objectives:

- To encourage the use of bicycles as an alternative means of transportation, bicycle parking facilities shall be provided at the residential base and at destination locations such as the workplace, convenience and destination and commercial and institutional facilities. Bicycle parking shall be provided in facilities that are convenient, safe, secure and functional for the intended use.

(b) Number of Bicycle Parking Spaces:

- To be provided in accordance with the regulations set out in the current Zoning By-law.

(c) Design Characteristics

- When required in association with a development, bicycle parking spaces shall be provided in accordance with the design characteristics as set out in Table 6.10.

(d) Long and Short-term Bicycle Parking Facilities:

- Long-term bicycle parking is required for apartment buildings and lodging houses with five or more residential units to store bicycles for several hours or days at a time. The facility must be protected from the weather and should be enclosed within a secure space.
- Subject to the provisions of the Z.-1 Zoning By-law, short-term bicycle parking is required for all non-residential development requiring 10 or more vehicular parking spaces. Short-term bicycle parking spaces should be as accessible as possible and should be visible to discourage theft. Short-term bicycle parking facilities typically consist of a rack or a post where the frame and wheels of the bicycle can be secured by a user supplied lock.

(e) Change Room and Shower Facilities:

- Change room and shower facilities for cyclists are encouraged to enhance the use of bicycles for work based travel.

Site Plan Control By-law

1. Location

Long-Term Bicycle Parking:

Apartment buildings and lodging houses (with five or more residential units) shall be required to provide for long-term bicycle parking opportunities in an accessible, secure and weather protected area. Subject to the design characteristics set out below, long-term bicycle parking spaces may be provided in the following locations;

(a) in a bicycle room or bicycle compound located within a building or motor vehicle parking structure

(b) within an individual bicycle locker

(c) within an accessory building

For the purpose of this By-law, long-term bicycle parking shall not be provided within a dwelling unit or a balcony thereof.

Short-Term Bicycle Parking:

Short-term bicycle parking spaces may be provided within an exterior space (covered or uncovered) designated for the parking of bicycles.

Large scale developments may spatially disperse the required number of short-term bicycle parking spaces throughout the site in accordance with the locational considerations detailed under 4, 5, 6, and 7 noted below.

Site Plan Control By-law

2. Size of a Bicycle Parking Space

Minimum horizontal dimensions of 0.6 metres by 1.5 metres and a height of at least 1.9 metres

3. Aisle Width

Where more than one row of bicycle parking spaces is provided, a minimum aisle width of 1.5 metres shall be provided

Site Plan Control By-law

4. Location for Accessibility

Less than 15 metres from the entrance used by cyclists or if located within a building in a location easily accessible to bicycles

Should not be farther from the entrance than the closest motor vehicle parking space (excluding parking spaces for persons with disabilities)

In a separately designated area that does not impede the movement of pedestrians

In an easy to find location directly visible from the street and if not directly visible from the street directional information signs shall be installed to direct cyclists to the bicycle parking facility

Site Plan Control By-law

5. Location for Natural Surveillance

Located within constant visual range of persons within the adjacent building or within well traveled pedestrian areas

Within unobstructed view from the adjacent municipal roadway

6. Security Lighting

Night lighting shall be provided in a manner to ensure that the entire bicycle parking area is well lit

7. Covered Bicycle Parking

If covered motor vehicle parking is provided, the required bicycle parking shall also be covered.

Links

- *The London Plan*
- Zoning By-law
- Site Plan Control By-law

Cycling Counts Webpage “Bike Data”

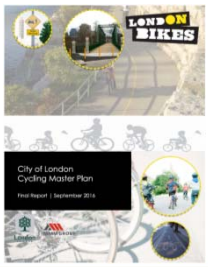
Cycling Advisory Committee – October 16, 2019

Meeting Topics

- Implementing the Cycling Master Plan
- Existing permanent cycling count infrastructure
- Future permanent cycling count infrastructure
- Cycling counts web page

Implementing the Cycling Master Plan

- Action item #6
  - "Creating a Cycling Specific Web Presence"
- Action item #9
  - "Establishing Performance Measures"



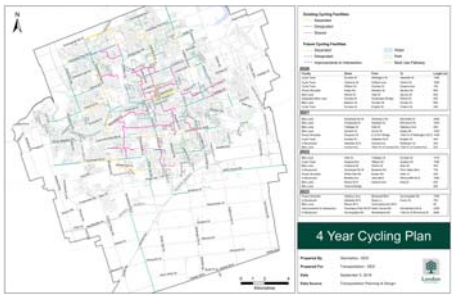
Existing Permanent Cycling Count Infrastructure

- 14 located within the parks pathway system
- 6 permanent counters located on roadways

4

Future Cycling Count Infrastructure

- Egerton Street -2020
- Dundas Street – 2020
- Southdale -2021
- Cheapside -2021
- Queens Ave -2022
- Bradley Ave- 2022
- Sunningdale Road -2023
- Adelaide Street North -2023



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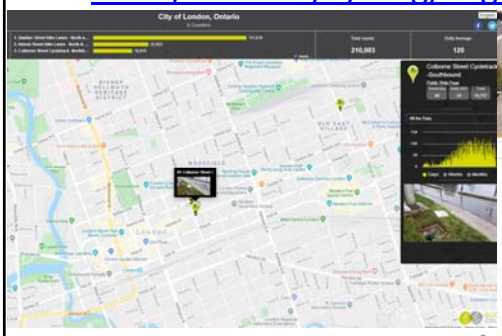
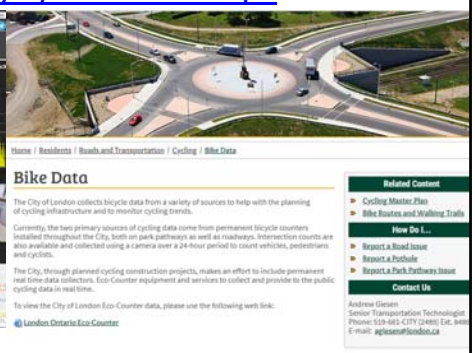
City Web Page

- Dedicated web page, with access to count data in real time
- https://www.london.ca/residents/Roads-Transportation/cycling/Pages/Bike-Data.aspx





6

Questions?

Cycling Advisory Committee

Report

The 9th Meeting of the Cycling Advisory Committee
September 18, 2019
Committee Room #4

Attendance

PRESENT: C. Linton (Chair), K. Brawn, B. Cowie, C. DeGroot, R. Henderson, B. Hill, J. Jordan, C. Pollett, E. Raftis, J. Roberts and O. Toth and H. Lysynski (Acting Secretary)

ALSO PRESENT: A. Giesen, P. Kavcic, Sergeant S. Harding, T. MacDaniel, D. MacRae, L. Maitland, A. Miller, M. Schulthess and S. Wilson

The meeting was called to order at 4:00 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 Cycling Infrastructure Plans and Cycling Master Plan Review

That a Working Group BE ESTABLISHED consisting of B. Cowie, C. DeGroot, R. Henderson, B. Hill, J. Jordan and J. Roberts, to review and to report back at the next Cycling Advisory Committee meeting with respect to Cycling Infrastructure Plans and the Cycling Master Plan; it being noted that the ~~attached~~ presentations and the ~~attached~~ maps from P. Kavcic, Transportation Design Engineering and A. Giesen, Senior Transportation Technologist, with respect to the above-noted matters, were received.

2.2 Adelaide Street North Environmental Assessment

That it BE NOTED that the ~~attached~~ presentation from M. Davenport, Engineer-In-Training, with respect to the Adelaide Street North Environmental Assessment, was received.

3. Consent

3.1 The 8th Report of the Cycling Advisory Committee

That it BE NOTED that the 8th Report of the Cycling Advisory Committee, from its meeting held on August 21, 2019, was received.

4. Sub-Committees and Working Groups

That it BE NOTED that a general discussion was held with respect to the Sport and Leisure Cycling Sub-Committee meeting.

5. Items for Discussion

5.1 Notice of Planning Application - Zoning By-law Amendment - 1395 Riverbend Road - Part of Block 1 Plan 33M-743

That, the following actions be taken with respect to the Notice of Planning Application, dated August 20, 2019, from L. Mottram, Senior Planner, with respect to a Zoning By-law Amendment for the property located at 1395 Riverbend Road:

a) the Civic Administration BE REQUESTED to ask the applicant to consider adding adequate bicycle parking including a secure indoor bicycle facility in a ratio of one car per one bicycle in the proposed development;

b) if the request is denied by the applicant, the applicant BE ASKED to provide a written response to the Cycling Advisory Committee advising of the reasons why this request cannot be undertaken; and,

c) the Civic Administration BE REQUESTED to attend the next Cycling Advisory Committee meeting to provide an overview of the Zoning By-law and site plan requirements for bicycle parking in the various forms of housing.

5.2 Notice of Planning Application - Zoning By-law Amendment - 943 Fanshawe Park Road West and 1800 Aldersbrook Gate

That it BE NOTED that the Notice of Planning Application, dated September 4, 2019, from C. Lowery, Planner II, with respect to a Zoning By-law Amendment for the properties located at 943 Fanshawe Park Road West and 1800 Aldersbrook Gate, was received.

5.3 Notice of Planning Application - Official Plan and Revised Zoning By-law Amendments - 1339-1347 Commissioners Road West

That it BE NOTED that the Notice of Planning Application, dated September 12, 2019, from B. Debbert, Senior Planner, with respect to Official Plan and Zoning By-law Amendments for the properties located at 1339 to 1347 Commissioners Road West, was received.

5.4 Notice of Planning Application - Zoning By-law Amendment - 1674 Hyde Park Road

That it BE NOTED that the Notice of Planning Application, dated September 5, 2019, from B. Debbert, Senior Planner, with respect to a Zoning By-law Amendment for the property located at 1674 Hyde Park Road, was received.

5.5 Education Campaign - Cycling Safety - Distance between Cyclist and Motor Vehicles

That, the following actions be taken with respect to a proposed education campaign relating to the distance between cyclists and motor vehicles:

a) the Civic Administration BE REQUESTED to advise the Cycling Advisory Committee at its next meeting of the current by-laws that are being enforced relating to parking, roadways and infrastructure;

b) London Police Services Board BE REQUESTED to ask a member of the Traffic Management Unit to attend the October Cycling Advisory Committee to provide an update on the September, 2019 blitz of

pedestrians, cyclists and motorists, including, but not limited to, the numbers of tickets issued, the successes and outcomes, the gender of the people who received tickets, the persons age, the location and available infrastructure (ie. bicycle lanes) where the tickets were issued; and,

c) the Committee Secretary BE REQUESTED to place the issue of a review of the London Road Safety Strategy on the next Cycling Advisory Committee Agenda;

it being noted that the Cycling Advisory Committee heard a verbal delegation from C. Dechand, with respect to these matters.

5.6 2019 Work Plan

That consideration of the 2019 Cycling Advisory Committee Work Plan BE POSTPONED to the next Cycling Advisory Committee meeting.

5.7 Glow Ride - Friday, September 27, 2019

That it BE NOTED that the pamphlet from London Cycle Link with respect to the Glow Ride to be held in Victoria Park on September 27, 2019, was received.

6. Adjournment

The meeting adjourned at 6:18 PM.

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

October 2, 2019

K. Scherr
Managing Director, Environmental and Engineering Services and City Engineer

I hereby certify that the Municipal Council, at its meeting held on October 1, 2019 resolved:

That the following actions be taken with respect to area speed limit:

a) the Civic Administration BE DIRECTED to implement the Area Speed Limit program or 40 km/h default speed limit will be established on local streets and Area Speed Limit zones will also be designated Community Safety Zones; and

b) the following additional considerations BE REFERRED back to the Civic Administration in order to allow for consultation with the London Transit Commission:

i) consideration of the implementation of the 40 km/h speed limit on collector roads;
ii) consideration of the implementation of the 40 km/h speed limit also be applied to the following arterial roads, and the area they encompass, within the downtown area to reflect the high level of pedestrian and cyclist activity:

A. King Street from Thames Street to Colborne Street;
B. Pall Mall Street from Richmond Street to Wellington Street;
C. Queens Avenue from Colborne Street to Ridout Street North;
D. Richmond Street from Horton Street East to Oxford Street East; and
E. Wellington Street from Horton Street East to Pall Mall Street;

iii) reduction of the School zone speed limits from 40 km/hr, to 30 km/hr on local streets.
(2019-T07) (AS AMENDED) (3.2/13/CWC)

C. Saunders
City Clerk
/lm

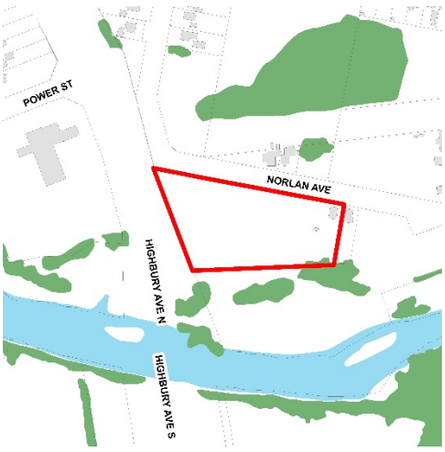
cc. London Police Services
D. MacRae, Director, Roads and Transportation
S. Maguire, Division Manager, Roadway Lighting and Traffic Control
Chair and Members, Transportation Advisory Committee
Chair and Members, Community Safety and Crime Prevention
Chair and Members, Cycling Advisory Committee
K. Lee, Administrative Assistant ll
P. McClennan, Executive Administration Assistant, Managing Director and City Engineer
External cc list in the City Clerk's Office

The Corporation of the City of London
Office 519.661.2500 x5417
Fax 519.661.4892
daturner@london.ca
www.london.ca

NOTICE OF PLANNING APPLICATION

Zoning By-Law Amendment

21 Norlan Avenue



File: Z-9111
Applicant: City of London

What is Proposed?

Zoning amendment to:

- add “Farm Gate Sales” to the list of permitted uses on a site specific basis through a special provision. A definition of “Farm Gate Sales” was added to Zoning By-law Z-1 recently as part of the implementation of the Urban Agriculture Strategy adopted by Council in November 2017.

- Possible change to Zoning By-law Z.-1 **FROM** an Open Space (OS1) **TO** an Open Space Special Provision (OS1(__)) Zone to also allow “Farm Gate Sales”.

LEARN MORE & PROVIDE INPUT

Please provide any comments by **October 17, 2019**

Chuck Parker
cparker@london.ca
519-661-CITY (2489) ext.4648
City Planning, City of London, 206 Dundas St., London ON N6A 1G7
File: Z-9111
www.london.ca

You may also forward any concerns you have with:

Committee Secretary-PEC (Heather Lysynski – 519-661-2489 Ext.4856 or hlysynsk@london.ca) or call the Councillors office at 519-661-5095

If you are a landlord, please post a copy of this notice where your tenants can see it. We want to make sure they have a chance to take part.

Date of Notice: September 18, 2019

Application Details

Commonly Used Planning Terms are available at london.ca.

Requested Zoning By-law Amendment

To change the zoning from an Open Space (OS1) Zone to an Open Space Special Provision (OS1(_)). Changes to the currently permitted land uses and development regulations are summarized below. The complete Zoning By-law is available at london.ca/planapps.

Current Zoning
Zone: Open Space (OS1)
Permitted Uses: conservation lands, conservation works, cultivation of land for agricultural/horticultural purposes, golf courses, private parks, public parks, recreational golf courses, recreational buildings associated with conservation lands and public parks, campground and managed forests.

Requested Zoning
Zone: Open Space Special Provision (OS1(_))
Special Provision: add "Farmgate Sales" as a permitted use Click here to enter text.

Planning Policies

Any change to the Zoning By-law must conform to the policies of the Official Plan, London's long-range planning document. These lands are currently designated as Open Space in the Official Plan.

The subject lands are in the Green Space Place Type in *The London Plan*.

How Can You Participate in the Planning Process?

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See More Information

You can review additional information and material about this application by:

- visiting City Planning at 206 Dundas Street, Monday to Friday between 8:30am and 4:30pm;
- contacting the City's Planner listed on the first page of this Notice.

Reply to this Notice of Application

We are inviting your comments on the requested changes at this time so that we can consider them as we review the application and prepare a report that will include City Planning staff's recommendation to the City's Planning and Environment Committee. Planning considerations usually include such matters as land use, development intensity, and form of development.

Attend a Future Public Participation Meeting

The Planning and Environment Committee will consider the requested zoning changes on a date that has not yet been scheduled. The City will send you another notice inviting you to attend this meeting, which is required by the *Planning Act. Y*ou will also be invited to provide your comments at this public participation meeting. The Planning and Environment Committee will make a recommendation to Council, which will make its decision at a future Council meeting.

What Are Your Legal Rights?

Notification of Council Decision

If you wish to be notified of the decision of the City of London on the proposed zoning by-law amendment, you must make a written request to the City Clerk, 300 Dufferin Ave., P.O. Box 5035, London, ON, N6A 4L9, or at docservices@london.ca. You will also be notified if you speak to the Planning and Environment Committee at the public meeting about this application and leave your name and address with the Secretary of the Committee.

Right to Appeal to the Local Planning Appeal Tribunal

If a person or public body would otherwise have an ability to appeal the decision of the Council of the Corporation of the City of London to the Local Planning Appeal Tribunal but the person or public body does not make oral submissions at a public meeting or make written submissions to the City of London before the by-law is passed, the person or public body is not entitled to appeal the decision.

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For more information go to http://elto.gov.on.ca/tribunals/lpat/about-lpat/.

Notice of Collection of Personal Information

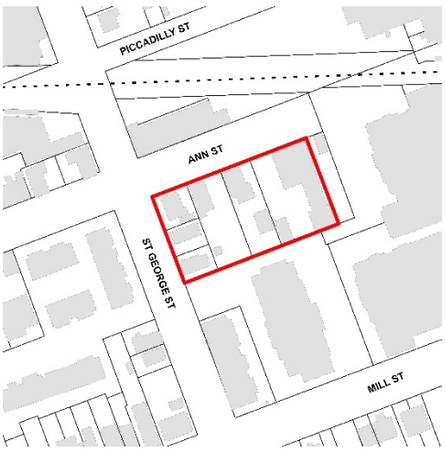
Personal information collected and recorded at the Public Participation Meeting, or through written submissions on this subject, is collected under the authority of the *Municipal Act*, 2001, as amended, and the *Planning Act*, 1990 R.S.O. 1990, c.P.13 and will be used by Members of Council and City of London staff in their consideration of this matter. The written submissions, including names and contact information and the associated reports arising from the public participation process, will be made available to the public, including publishing on the City's website. Video recordings of the Public Participation Meeting may also be posted to the City of London's website. Questions about this collection should be referred to Cathy Saunders, City Clerk, 519-661-CITY (2489) ext. 4937.

Accessibility – Alternative accessible formats or communication supports are available upon request. Please contact accessibility@london.ca or 519-661-CITY(2489) extension 2425 for more information.

NOTICE OF PLANNING APPLICATION

Official Plan and Zoning By-law Amendments

84 – 86 St. George Street and 175 – 197 Ann Street



File: OZ-9127
Applicant: St. George and Ann Block Limited

What is Proposed?

Official Plan and Zoning amendments to allow:

- 28 storey apartment building with 274 residential units, commercial uses on the main floor, and underground parking
- Building height steps down toward St. George Street to 26 and 12 storeys
- Includes such commercial uses as retail, personal service, administration offices and restaurants
- Special zoning provisions are requested for reduced yard depths, reduced landscaped open space, reduced parking, and increased lot coverage

LEARN MORE & PROVIDE INPUT

Please provide any comments by **October 31, 2019**
Barb Debbert
bdebbert@london.ca
519-661-CITY (2489) ext. 5345
Development Services, City of London, 300 Dufferin Avenue, 6th Floor,
London ON PO BOX 5035 N6A 4L9
File: OZ-9127
london.ca/planapps

You may also discuss any concerns you have with your Ward Councillor:
Arielle Kayabaga
akayabaga@london.ca
519-661-CITY (2489) ext. 4013

If you are a landlord, please post a copy of this notice where your tenants can see it. We want to make sure they have a chance to take part.

Date of Notice: October 10, 2019

Application Details

Commonly Used Planning Terms are available at london.ca/planapps.

Requested Amendment to the Current Official Plan

To change the designation of the western part of the property from Multi-family, Medium Density Residential to Multi-family, High Density Residential, to identify the site as a permitted location for convenience commercial uses, and to add Specific Area Policy to permit a maximum residential density of 764 units per hectare within the Multi-family, High Density Residential designation for this site.

Requested Amendment to The London Plan (New Official Plan)

To add a Special Area Policy in the Neighbourhoods Place Type for this site to permit a maximum building height of 28 storeys, and to permit a maximum overall floor area of 1,000 square metres for retail, service and office uses within the podium base.

Requested Zoning By-law Amendment

To change the zoning from a Residential R9 (R9-3*H12) Zone to a Residential R10 Special Provision/Convenience Commercial Special Provision (R10-5(_)*D764*H93/CC4(_)) Zone. Zone. Changes to the currently permitted land uses and development regulations are summarized below. The complete Zoning By-law is available at london.ca/planapps.

Current Zoning

Zone: Residential R9 (R9-3*H12)
Permitted Uses: Apartment buildings, lodging house class 2, senior citizens apartment buildings, handicapped persons apartment buildings, continuum-of-care facilities.
Special Provision(s): n/a
Residential Density: 100 units per hectare
Height: 12 metres
Bonus Zone: n/a

Requested Zoning

Zone: Residential R10 Special Provision/Convenience Commercial Special Provision (R10-5(_)*D764*H93/CC4(_))
Permitted Uses: Apartment buildings, lodging house class 2, senior citizens apartment buildings, handicapped persons apartment buildings, continuum-of-care facilities, convenience service establishments, convenience stores, financial institutions and personal service establishments, all without drive through facilities, and restricted to a location within an apartment building.
Special Provision(s): For the Residential R10 Special Provision (R10-5) Zone, permit a maximum height of 93 metres (28 storeys) where the height is to be determined on the zone map, a maximum density of 764 units per hectare in place of 350 units per hectare, reduced 0 metre yard depths to all property lines, reduced minimum landscaped open space of 0 percent where 20 percent is required, increased maximum lot coverage of 97 percent where 50 percent is permitted, and reduced parking of 209 spaces where 310 spaces are required. For the Commercial (CC4) Zone, add food stores and take-out and eat-in restaurants without drive-through facilities and brewing on premises establishments as permitted uses, restricted to a location within an apartment building, and allowing one commercial use to be limited to a maximum commercial gross floor area of 1,000 square metres where food stores are limited to a maximum of 500 square metres, take-out restaurants are limited to a maximum of 150 square metres and all other permitted uses are limited to a maximum of 300 square metres, and the maximum total commercial gross floor area is 1,000 square metres.
Residential Density: 764 units per hectare (274 units)
Height: 93 metres (28 storeys)
Bonus Zone: none requested (see below)

The City may also consider special provisions in Zoning By-law Z.-1 regulating the height transition of the proposed building, and the use of a less intensive based zone with bonus provisions to allow the requested height and density in return for certain facilities, services or matters.

Planning Policies

Any change to the Zoning By-law must conform to the policies of the Official Plan, London's long-range planning document. These lands are currently designated as Multi-family, Medium Density Residential and Multi-family High Density Residential in the Official Plan. The Multi-family, Medium Density Residential designation permits multiple-attached dwellings such as row houses or cluster houses, high-rise apartment buildings, rooming and boarding houses, emergency care facilities, converted dwellings and small scale nursing homes, rest homes and

homes for the aged as the main uses. The Multi-family, High Density Residential designation permits low-rise and high-rise apartment buildings, apartment hotels, multiple-attached dwellings, emergency care facilities, nursing homes, rest homes, homes for the aged and rooming and boarding houses as the main uses.

The subject lands are in the Neighbourhoods Place Type in *The London Plan*, permitting a range of single detached, semi-detached, duplex, and converted dwellings, townhouses, secondary suites, home occupations and group homes.

How Can You Participate in the Planning Process?

You have received this Notice because someone has applied to change the Official Plan designation and the zoning of land located within 120 metres of a property you own, or your landlord has posted the notice of application in your building. The City reviews and makes decisions on such planning applications in accordance with the requirements of the *Planning Act*. The ways you can participate in the City's planning review and decision making process are summarized below. For more detailed information about the public process, go to the Participating in the Planning Process page at london.ca.

See More Information

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Reply to this Notice of Application

We are inviting your comments on the requested changes at this time so that we can consider them as we review the application and prepare a report that will include Development Services staff's recommendation to the City's Planning and Environment Committee. Planning considerations usually include such matters as land use, development intensity, and form of development.

This request represents residential intensification as defined in the policies of the Official Plan. Under these policies, Development Services staff and the Planning and Environment Committee will also consider detailed site plan matters such as fencing, landscaping, lighting, driveway locations, building scale and design, and the location of the proposed building on the site. We would like to hear your comments on these matters.

Attend a Future Public Participation Meeting

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What Are Your Legal Rights?

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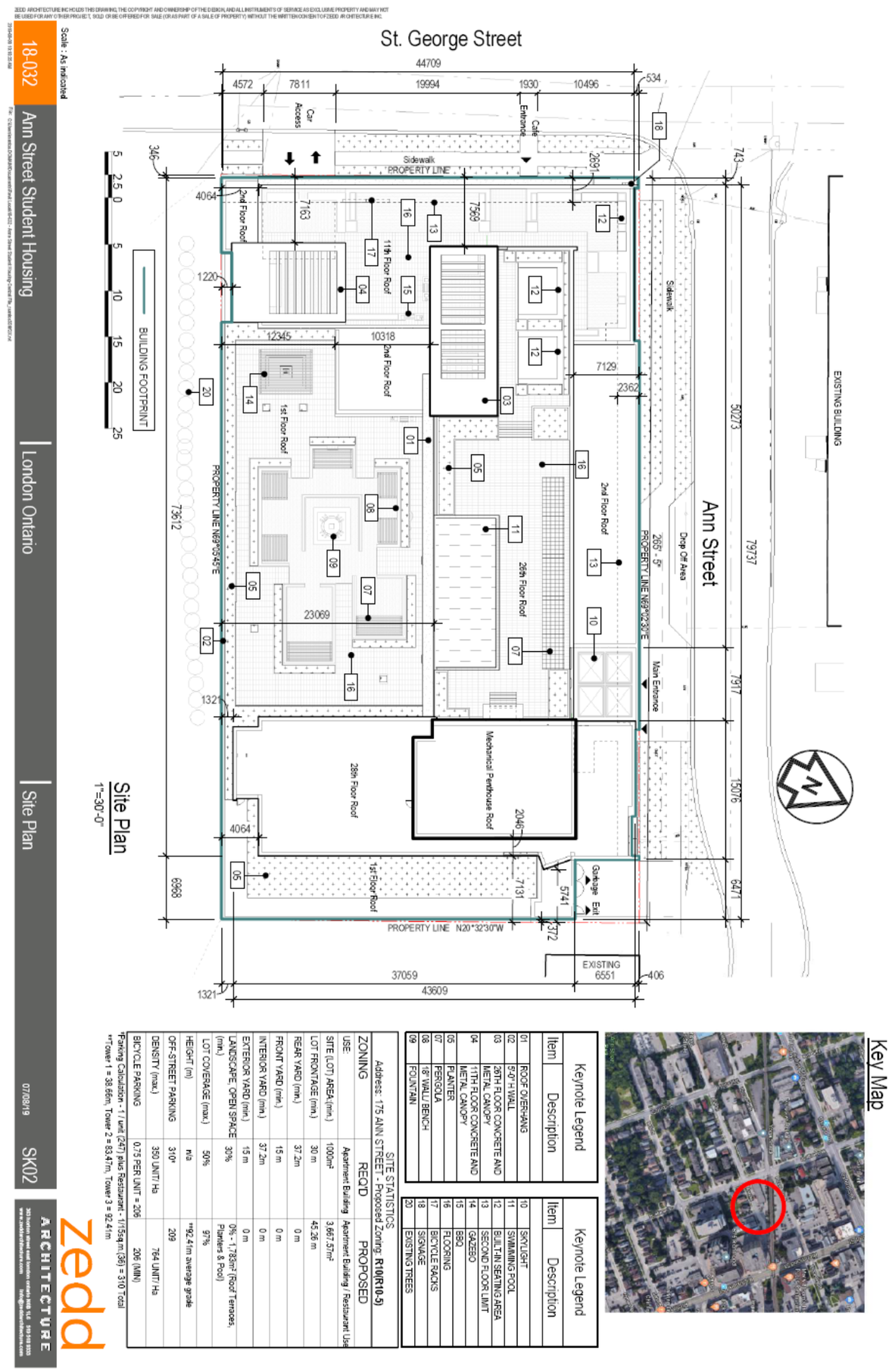
Site Concept



The above image represents the applicant's proposal as submitted and may change.

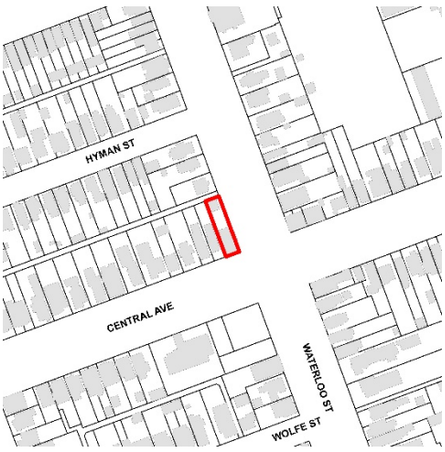
Building Renderings

The above images represent the applicant's proposal as submitted and may change.

NOTICE OF PLANNING APPLICATION

Official Plan and Zoning By-law Amendments

332 Central Ave/601 Waterloo St



File: O-9120 & Z-9121
Applicant: City of London & Tao Tran

What is Proposed?

Official Plan and Zoning amendments to allow:

- Hair studio and spa use together with at least one dwelling unit
- A reduction in parking to five (5) on-site parking spaces

LEARN MORE & PROVIDE INPUT

Please provide any comments by **October 22, 2019**
Melanie Vivian
mvivian@london.ca
519-661-CITY (2489) ext. 7547
Development Services, City of London, 300 Dufferin Avenue, 6th Floor,
London ON PO BOX 5035 N6A 4L9
File: **O-9120 & Z-9121**
london.ca/planapps

You may also discuss any concerns you have with your Ward Councillor:
Arielle Kayabaga
akayabaga@london.ca
519-661-CITY (2489) ext. 4013

If you are a landlord, please post a copy of this notice where your tenants can see it. We want to make sure they have a chance to take part.

Date of Notice: October 2, 2019

Application Details

Commonly Used Planning Terms are available at london.ca/planapps.

Requested Amendment to the Current Official Plan

The City has initiated an Official Plan Amendment to add a Specific Policy Area to permit the Personal Service Establishment use within the Low Density Residential designation. The intent is to align the 1989 Official Plan as it applies to these lands, with the policies of The London Plan, the new Official Plan for the City of London.

Requested Zoning By-law Amendment

To change the zoning from a Residential R3 Special Provision/Office Conversion (R3-2(6)/OC2) Zone to a Residential R3 Special Provision/Office Conversion Special Provision (R3-2(6)/OC2(__)) Zone to add a Personal Service Establishment together with at least one dwelling unit as a permitted use as well as a site specific regulation for a reduction in parking to permit five (5) on-site parking spaces. Changes to the currently permitted land uses and development regulations are summarized below. The complete Zoning By-law is available at london.ca/planapps.

Current Zoning

Zone: Residential R3 Special Provision/Office Conversion (R3-2(6)/OC2) Zone
Permitted Uses: The Residential R3 Special Provision (R3-2(6)) Zone permits single detached dwellings; semi-detached dwellings; duplex dwellings; triplex dwellings; converted dwellings; fourplex dwellings. The Office Conversion (OC2) Zone permits offices, professional in existing buildings together with at least one dwelling unit and offices, service in existing buildings together with at least one dwelling unit.
Special Provision(s): The Residential R3 Special Provision (R3-2(6)) Zone regulates the floor area ratio/maximum floor area gross residential based on lot sizes; a rear yard depth of thirty percent (30%) of the actual lot depth or as indicated on Table 7.3, whichever is greater; yards where parking where parking in rear yards is restricted to the required rear depth were access is obtained from a lane and where there is no garage or carport located in the rear or side yard; and a parking standard of one space per 100 sq. m. (1,076 sq. ft) of Floor Area, Gross Residential or as indicated in Section 4.19.10 of this by-law, whichever is greater.
Residential Density: The Residential R3 Special Provision (R3-2(6)) Zone, in no case shall a converted dwelling have a lot area of less than 180.0 sq. m. per unit in the R3-1 and R3-2 Zone. The Office Conversion (OC2) Zone requires at least one dwelling unit with the Permitted Uses mentioned above.

Requested Zoning

Zone: Residential R3 Special Provision/Office Conversion Special Provision (R3-2(6)/OC(__))
Permitted Uses: The Residential R3 Special Provision (R3-2(6)) Zone permitted uses are outlined above under Permitted Uses. The Office Conversion Special Provision (OC(__)) Zone permits offices, professional in existing buildings together with at least one dwelling unit; offices, service in existing buildings together with at least one dwelling unit.
Special Provision(s): The Residential R3 Special Provision (R3-2(6)) Zone's special provisions will remain, as outlined above in Special Provision(s). The Office Conversion Special Provision (OC2(__)) Zone will permit a Personal Service Establishment together with at least one dwelling unit and, to permit five (5) on-site parking spaces.
Residential Density: No change requested.

The City may also consider additional special provisions for landscape open space and other site specific regulations.

Planning Policies

Any change to the Zoning By-law must conform to the policies of the Official Plan, London's long-range planning document. These lands are currently designated as Low Density Residential in the 1989 Official Plan, which permits single detached; semi-detached; and duplex dwellings as the main uses.

The subject lands are in the Neighbourhoods Place Type in *The London Plan*, permitting a range of housing types including mixed-use buildings at the intersection of two Neighbourhood Connectors.

How Can You Participate in the Planning Process?

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[delete this paragraph if not applicable]

Attend a Future Public Participation Meeting

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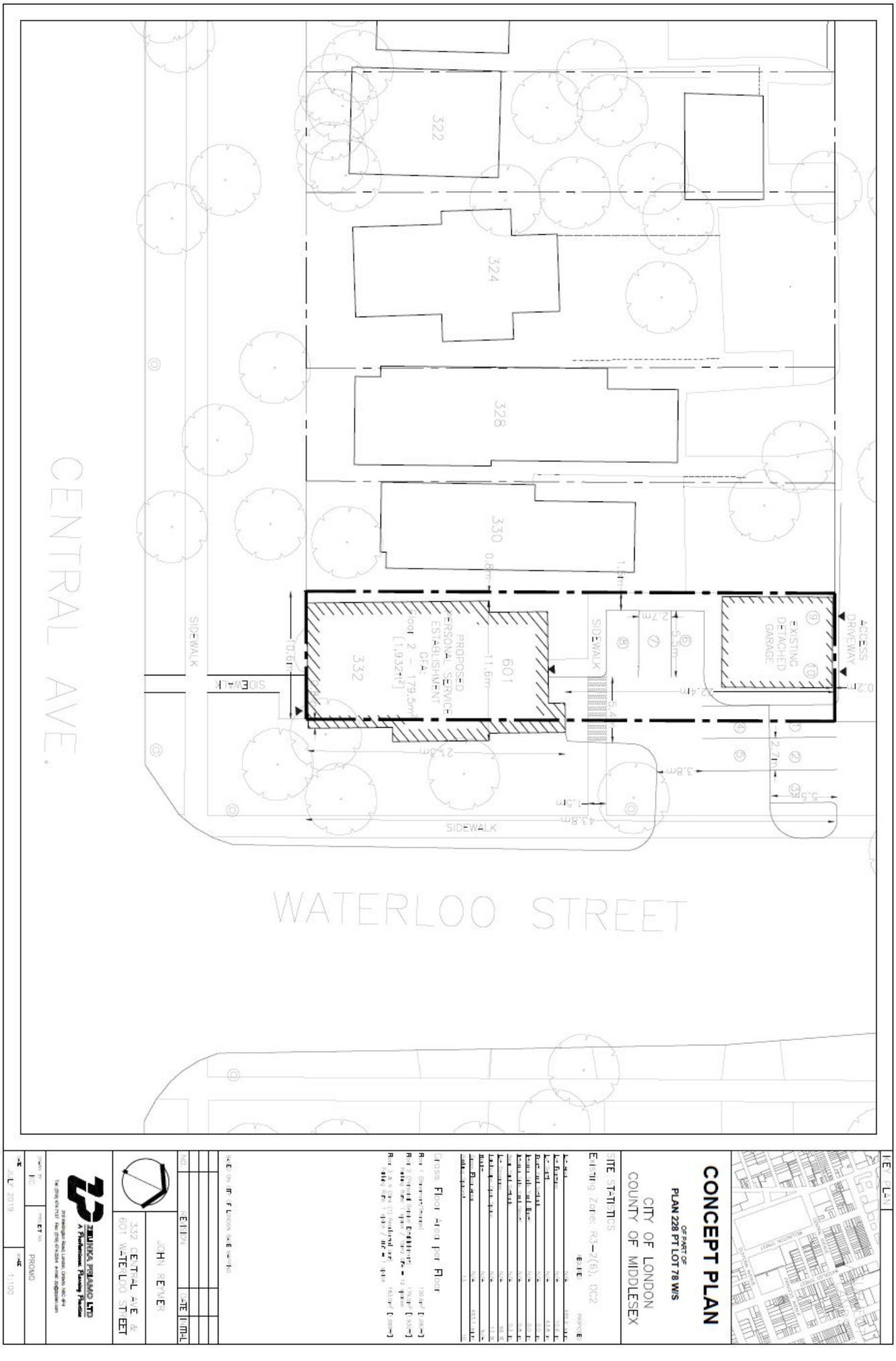
For more information go to http://elto.gov.on.ca/tribunals/lpat/about-lpat/.

Notice of Collection of Personal Information

Personal information collected and recorded at the Public Participation Meeting, or through written submissions on this subject, is collected under the authority of the *Municipal Act*, 2001, as amended, and the *Planning Act*, 1990 R.S.O. 1990, c.P.13 and will be used by Members of Council and City of London staff in their consideration of this matter. The written submissions, including names and contact information and the associated reports arising from the public participation process, will be made available to the public, including publishing on the City's website. Video recordings of the Public Participation Meeting may also be posted to the City of London's website. Questions about this collection should be referred to Cathy Saunders, City Clerk, 519-661-CITY(2489) ext. 4937.

Accessibility – Alternative accessible formats or communication supports are available upon request. Please contact accessibility@london.ca or 519-661-CITY(2489) extension 2425 for more information.

Site Concept



Existing Site Concept Plan.

The above image represents the applicant's proposal as submitted and may change.

Sport/Leisure Cycling Working Group - Minutes

Agenda:

- Introductions and why we committed to the sub-committee
    - New to London and wanted to know more and get involved
    - Improve the current state of the sport in London
    - Learn of what is available in recreational groups and facilities
        - What they have to offer
    - Support/promote recreational cycling
    - Increase opportunities for competition in Cycling in London
        - Facilitate and support competition opportunities
        - Legitimize racing as a sport in London
        - Tourism component
- Learned about
    - Warm showers – website and supports travelling cyclists as they pass through cities (bed, food, etc.)
- Ideas
    - Masterplan – Maps
        - Determine and layout egress routes out of the city
        - Feedback on existing connections
    - Website
        - Cycling listed under Roads and Transportation
            - Add a tile (duplicate) under recreation or add duplicate of the Groups and recreation under there
        - Cycling Groups and Recreational Riding tile:
            - Rentals – Bike Café added
            - Riding groups – ask for a descriptor from the club (what their focus is)
                - Missing a couple – Should include neighbouring cities clubs?
                - Add Attack Racing
            - Develop destination rides in partnership with connecting communities
            - Routes that are bicycle friendly from N/S/E/W with a couple options (25/50/100)
- Next steps:
    - Determine areas of focus

City of London
Cycling Master Plan Review

Master Plan Review Working Group

October 16, 2019

Authors (alphabetical):

Ben Cowie
Chris DeGroot
Rebecca Henderson
Benjamin Hill
Jamieson Roberts

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Table of Contents

1.0 City of London Cycling Master Plan Review Summary

"There is no historical precedent for the scale of the necessary (decarbonization) transitions, in particular in a socially and economically sustainable way."

- UN Special Report on Global Warming of 1.5 °C (SR15)[1]

On September 18, 2019, City of London Staff presented an update to the city's *Cycling Master Plan*[2] (CMP) to the Cycling Advisory Committee (CAC). At this meeting, the CAC passed a motion to strike a Working Group to examine the *Cycling Master Plan* in light of two recently approved City policies:

1) Declaration of Climate Emergency
2) Vision Zero

This report contains the results of the review. During the review, it was necessary to extend our analysis to a preliminary examination of the City of London *Transportation Master Plan* through the lens of the climate emergency to evaluate sources of carbon emissions from various modes of transportation. This summary includes the itemized key findings and recommendations to the City of London Council of the working group and cycling advisory committee on the following pages.

[1] "UN Special Report on Global Warming of 1.5 °C" - Website: https://www.ipcc.ch/sr15/

[2] "London On Bikes - Our Cycling Master Plan" - Website: https://www.london.ca/residents/Environment/EAs/Pages/London-on-Bikes.aspx

1.1 Key Findings

- Successful implementation of the City of London *Transportation Master Plan* will result in London exceeding its 2030 Greenhouse Gas emissions budget by a minimum of 45%. Implementation of Scenario A in the *Transportation Master Plan* will result in a 4% net decrease in carbon emissions, and Scenario B will result in a 10% net increase in carbon emissions by 2030.
- The City of London's Greenhouse Gas emissions budget can only be met by mode shift from automobile to zero-carbon transportation (electric transit, cycling, and walking). The carbon budget **cannot** be met by electrification of automobiles alone.
- The City of London *Cycling Master Plan* explicitly prioritizes other factors above road user safety when considering street design, and does not contain higher order hazard reduction initiatives. Thus, the current *Cycling Master Plan* is inconsistent with Vision Zero objective of zero deaths or serious injuries on our roads.
- The City of London *Cycling Master Plan* is crafted to be exclusionary in its infrastructure design approach: 96% of projects planned for the next four years exclude >90% of the population from using the proposed infrastructure.
- Metrics to assess the current City of London *Cycling Master Plan* are out of sync with both comparable Canadian cities and leading global cycling jurisdictions (e.g. Copenhagen, Vancouver). There are critical gaps in understanding of both current and potential cycling rates, demographics, and behaviour in London.
- The City of London can harvest maximum economic benefit by acting quickly and decisively on climate change mitigation by investing in cycling infrastructure designed for All Ages and Abilities.
- It is virtually certain that examining other climate-relevant City policies, specifically those related to transportation and land use, through a climate lens will yield similar urgent actions to help us decarbonize as rapidly as possible.

1.2 Working Group Recommendations

We RECOMMEND that council:

- request a detailed evaluation of the greenhouse gas emissions implications of the City of London *Transportation Master Plan* in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the greenhouse gas emissions implications of the City of London *Transit Master Plan* in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the greenhouse gas emissions implications of the City of London Official Plan or *The London Plan* in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the greenhouse gas emissions implications of the City of London *Parking Strategy* in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the greenhouse gas emissions implications of the City of London *Accessibility Strategy* in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the City of London *Road Safety Strategy* in accordance with the City of London's Adoption of Vision Zero
- direct staff to undertake major revisions to the City of London's *Cycling Master Plan* infrastructure implementation in accordance with the Declaration of Climate Emergency. The revised plan should be singularly focused on building All-Ages-and-Abilities infrastructure to achieve climate-informed modal split targets, while achieving cost allocation and social equity for basic affordable transportation by 2030.
- direct staff to design and construct an emergency city-wide minimum grid of protected bike lanes designed for All-Ages-and-Abilities to be completed by July 1, 2021.
- enact a moratorium on all currently planned and future road widening. Presently budgeted funds for road widening ($75M/year) should be reallocated to transit and cycling for maximum mitigation of climate disruption.
- fund continued investment in active transportation (including walking, accessibility, and micro mobility) at a rate of $50/person/year, or ~$20M/year, comparable to the scale of investments in major cycling cities.

- decrease speed limits on all residential streets to 30 km/h.

2.0 - Benefits of Urban Cycling

Why is a cycling city a great city?
Why should London encourage everyday cycling?

Averting Climate Disruption - Cycling provides zero carbon transportation for individuals and families[3]. Cycling for logistics and freight movement[4] is a rapidly developing industry.

Safer Streets for All - Car crashes are the leading cause of death for young people in Canada[5]. Nearly 3000 people die in vehicle crashes each year in Canada. Urban streets designed to prioritize walking, cycling, and transit, are more efficient and safer for drivers, too[6]. The happiest drivers in the world are in bike paradise, The Netherlands[7].

Public Health - People who cycle every day are healthier, more productive, and have significantly lower risks of heart disease, cancer, and premature death[8].

Personal Economics - cycling in the city is cost-effective for individuals. Everyday cycling can save individuals and families thousands of dollars per year[9].

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[3] "Want to Fight Climate Change? Swap Out Your Car for a Bike" - Website: https://www.bicycling.com/news/a23707702/climate-change-cycling/

[4] "Cyclelogistics - Opportunities for moving goods by bicycle in Toronto" - PDF: https://www.pembina.org/reports/cyclogistics-final.pdf

[5] "Desjardins Insurance - Safety Awareness" - Website: https://www.desjardinsagents.com/about-us/community/safety-awareness/parachute

[6] "Protected Bike Lanes Are Safer for Drivers, Too" - Website: https://www.citylab.com/transportation/2019/06/protected-bike-lanes-safe-street-design-bicycle-road-safety/590722/

[7] "This is the best country to drive in" - Website: https://fortune.com/2015/09/30/best-country-drive-waze/

[8] "Forget all the other reasons you should be riding a bike. This is the one that matters" - Website: http://shifter.info/forget-all-the-other-reasons-you-should-be-riding-a-bike-this-is-the-one-that-matters/

[9] "Get Rich With… Bikes" - Website: https://www.mrmoneymustache.com/2011/04/18/get-rich-with-bikes/

Public Economics - Full cost accounting of infrastructure investments show that motor vehicles and transit are heavily subsidized, whereas cycling and walking infrastructure provide net benefit[10] to the public purse. With high rates of cycling and healthier population, The Netherlands saves billions of dollars of health-related costs every year[11]. The Dutch government now pays its citizens in cash to cycle[12] because of the enormous benefits to society.

Business Economics - Cities with multiple transportation options attract top talent and corporations[13]. Retail districts with protected bike lanes do better than those without[14].

Air Quality - Replacing motor vehicle trips with cycling decreases air pollution in cities. Air pollution from car traffic impacts the cognitive development of children and teenagers[15].

Noise Pollution - Evidence is building that noise pollution can greatly affect health[16]. Bikes are silent transportation, creating a quieter urban environment[17] than streets dedicated to car travel.

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[10] "What is the full cost of your commute?" - Website: http://spacing.ca/vancouver/2015/04/06/full-cost-commute/

[11] "Dutch Cycling: Quantifying the Health and Related Economic Benefits" - Website: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4504332/

[12] "The Netherlands is paying people to cycle to work" - Website: https://www.weforum.org/agenda/2019/02/the-netherlands-is-giving-tax-breaks-to-cycling-commuters-and-they-re-not-the-only-ones/

[13] "Amazon HQ2 RFP" - PDF: https://images-na.ssl-images-amazon.com/images/G/01/Anything/test/images/usa/RFP_3._V516043504_.pdf

[14] "Measuring the Local Economic Impacts of Replacing On-Street Parking With Bike Lanes" - Website: https://doi.org/10.1080/01944363.2019.1638816

[15] "Air pollution in global megacities linked to children's cognitive decline, Alzheimer's and death" - Website: http://theconversation.com/air-pollution-in-global-megacities-linked-to-childrens-cognitive-decline-alzheimers-and-death-105722

[16] "City Noise Might Be Making You Sick" - Website: https://www.theatlantic.com/technology/archive/2018/02/city-noise-might-be-making-you-sick/553385/

[17] "How Groningen invented a cycling template for cities all over the world" - Website: https://www.theguardian.com/cities/2015/jul/29/how-groningen-invented-a-cycling-template-for-cities-all-over-the-world

Space-Efficient Mobility - The conversion of one motor vehicle lane to protected bike lanes can move seven times as many people using the same amount of space[18]. Bicycles are the fastest mode of transport in most dense urban areas.

Equity - Given safe infrastructure, transportation cycling is an attractive option for individuals from 8 to 80 years[19] old, families with young children[20], and persons with disabilities[21].

Children's Development - Children and young adults need to develop independence through mobility in their community. Providing safe infrastructure for cycling to school, part time jobs, activities, and play helps children be happier, healthier, and more independent[22].

Community - Bicycles facilitate interaction among neighbours. When was the last time you stopped to chat on the street with someone you passed while driving your car?

[18] "Efficiency Master – a Comparison of Different Modes of Transportation" - Website: https://www.bikecitizens.net/efficiency-master-for-modes-of-transportation/

[19] "What is an 8 80 city?" - Video: https://www.youtube.com/watch?v=9Ni32qPrGmM

[20] "Travel with your kids in style on one of these cargo bikes" - Website: https://www.theglobeandmail.com/life/health-and-fitness/fitness/travel-with-your-kids-in-style-on-one-of-these-cargo-bikes/article29374076/

[21] "'A rolling walking stick': why do so many disabled people cycle in Cambridge?" - Website: https://www.theguardian.com/cities/2018/jan/02/cambridge-disabled-people-cycling-rolling-walking-stick

[22] "What Makes Dutch Kids the Happiest in the World? Cities That Allow Them to Roam" - Website: http://www.modacitylife.com/blog/dutch-kids-happiest-in-the-world

3.0 - Current State of the *Cycling Master Plan*

The City of London adopted “London ON Bikes” as its *Cycling Master Plan* (CMP) in September 2016. It is intended to serve as a guide for all further planning, design, development, and programming related to cycling. The business case supporting the CMP is based on benefits to six main areas, namely:

- Health
- Environment
- Tourism
- Safety
- Social
- Economic

The CMP acknowledges that each litre of gasoline that is burned emits about 2.3 kg of carbon dioxide and that these emissions are contributing to climate disruption. It acknowledges that the transportation sector accounts for approximately one third of Ontario’s greenhouse gas emissions. While increasing the number of people cycling for transportation is suggested as a means to reduce carbon emissions, the magnitude of the emissions that would be reduced by this shift in mode share is not quantified. In fact, beyond a passing mention in the overview of the business case, emissions reductions are not discussed any further in the CMP. Given the recent Declaration of Climate Emergency by London City Council, the CMP should be re-evaluated to determine the degree to which it helps reach London’s goals for emissions reduction.

The CMP provides a categorization of cycling facilities based on the level of separation from motor vehicle traffic:

- **Shared Facilities:** where the cyclist is asked to share the roadway with motorists.
- **Designated Facilities:** where cyclists are provided their own“designated” space delineated by a painted line.
- **Separated Facilities:** where cyclists are provided either physical or spatial separation from motorists and other road users.

Despite the fact that greater separation from traffic clearly corresponds with greater safety and comfort for cyclists, the CMP does not distinguish between these when measuring its progress; it is simply lane kilometres of facilities that is mentioned as a metric of success. In light of the adoption of “Vision Zero” by London City Council, the CMP should be re-evaluated to determine how well it aligns with the principles of Vision Zero.

The cycling mode share in the CMP was estimated at 1%, with a mode share target of 5% by 2030. The CMP does not provide details about how the cycling mode share will be measured and evaluated in the future, nor does it provide any analysis that would indicate that the proposed plan is actually sufficient to attain the stated target.

One of the core objectives of the CMP is to “provide facilities that are considered comfortable for people of all ages and abilities including youth and seniors”. Therefore it is primarily the plans to build **separated facilities** (Figure 3-1 below) that should be used to measure the potential to increase cycling mode share, since most new riders require very safe infrastructure to change their mobility habits.

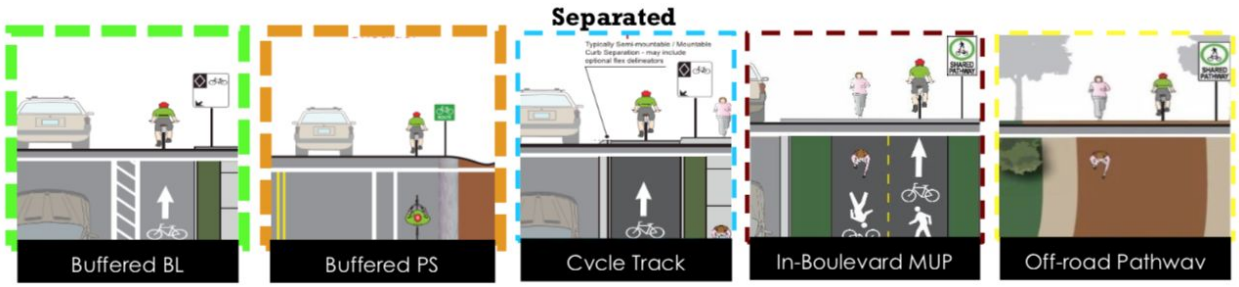

Figure 3-1: Types of cycling facilities described in the CMP. [23]

The CMP includes a number of different types of facilities that are categorized as “separated”, which can be further categorized as those with buffers and those with physical separation. A buffer is defined as a separation between a vehicular lane and a bicycle lane that is denoted using painted lines and hash marks. Physically separated lanes include those with a physical barrier (such as a curb) when a bicycle lane is adjacent to a vehicle lane. Physically separated lanes also include pathways that are separate from roadways. Buffered and physically

[23] “London On Bikes - Our Cycling Master Plan” - Website: https://www.london.ca/residents/Environment/EAs/Pages/London-on-Bikes.aspx

separated lanes provide very different comfort levels for users, warranting a separate assessment of each type of facility. A summary of the existing and proposed facilities, identified as being separated, are summarized below for both buffered and physically separated facilities.

Table 3-1: Summary of the existing and proposed facilities that are separated by a buffer.

	Existing in 2016 (km)	Proposed in CMP (km)	Total (km)
Buffered Bike Lane	0	31.9	**31.9**
Buffered Paved Shoulder	0	10.7	**10.7**
Total	**0**	**42.6**	**42.6**

Table 3-2: Summary of the existing and proposed facilities that are separated by a physical barrier.

	Existing in 2016 (km)	Proposed in CMP (km)	Total (km)
Cycle Track (Protected Bike Lane)	0	7.5	**7.5**
In-Boulevard Multi-use Pathway	42	28.2	**70.2**
Multi-use Pathway	166	78.7	**244.7**
Total	**208**	**114.4**	**322.4**

The CMP states that the cost of building the next 15 years of cycling infrastructure that is planned will cost approximately $53 million ($3.5M/year), including all types of facilities both within the road right of way and outside of it. As of the publishing of the CMP, $34.5 million of the total $53 million was funded; the remainder will require additional considerations to fund. That said, **of the 799 km of cycling facilities that are proposed in the CMP, only 7.5 km (less than 1%) are cycle tracks**. **From the perspective of increasing ridership, cycle tracks (protected bike lanes) are considered to be the most effective since they provide the best physical separation and are typically located along routes that have many destinations.** While the value of multi-use pathways is acknowledged for recreational cycling, this type of infrastructure is less effective for shifting mode share towards bicycles and away from motor

vehicles because they do not directly access key destinations (schools, shops, workplaces, residences).

With regards to safety, the CMP lists a number of strategies including education, enforcement programs, improved signage, and the installation of additional cycling lanes. **However, the only metric of evaluation appears to be the number of lane kilometres of cycling lanes, regardless of their type, or whether anybody rides in them**. When evaluating safety, the quality of the cycling lanes needs to be taken into account, not simply their quantity. Furthermore, continuous connectivity (network effect) needs to be evaluated, since each transition between disconnected lanes represents a serious safety hazard, and a barrier to new ridership.

Notably absent from the CMP is any discussion about providing connections between destinations within the city. For example, major destinations such as downtown, Western University, and Fanshawe College should receive additional consideration for providing safe cycling connections. Cycling lanes have the potential to provide excellent connections between these locations, since the distances between them are within a comfortable cycling distance.

To summarize, the CMP is considers a number of crucial issues such as safety, environment, health, and economy. While it is clear that improving cycling infrastructure can indeed contribute towards all of these goals, it is lacking detail in several key areas. It appears that total lane kilometres is the primary metric by which the success of the CMP is being evaluated, which does not emphasize the need for All-Ages-and-Abilities infrastructure, nor the need to achieve gender equity among urban cyclists. Greater emphasis needs to be placed on measuring the progress in building cycling infrastructure, including improvements in safety, reductions in carbon emissions, demographics of ridership, as well as economic benefits.

This report aims to investigate these aspects of the CMP in greater detail and provide recommendations about how it can be updated to reflect the recent Climate Emergency and Vision Zero declarations, while also implementing better metrics to gauge its successful implementation.

4.0 - Climate Emergency and The Cycling Master Plan

4.1 - Climate Emergency

In 2018, The United Nations released the **Special Report on Global Warming of 1.5 °C (SR15)**[24]. According to the report, with global warming of 1.5 °C there would be increased risks to "health, livelihoods, food security, water supply, human security, and economic growth. "Limiting global warming to 1.5°C, compared with 2°C, could reduce the number of people both exposed to climate-related risks and susceptible to poverty by up to several hundred million by 2050."[22]

The key finding of SR15 is that meeting a 1.5°C (2.7°F) target is possible but would require "deep emissions reductions," and "rapid, far-reaching and unprecedented changes in all aspects of society." Furthermore, the report finds that "limiting global warming to 1.5°C compared with 2°C would reduce challenging impacts on ecosystems, human health and well-being." SR15 also has modelling that shows that, for global warming to be limited to 1.5 °C, **"Global net human-caused emissions of carbon dioxide (CO2) would need to fall by about 45 percent from 2010 levels by 2030, reaching 'net zero' around 2050."**[22]

Canada's Changing Climate Report 2019[25] concludes "both past and future warming in Canada is, on average, about double the magnitude of global warming," increasing the urgency by which Canadians need to be concerned about the impacts of climate disruption. The report defines different emission scenarios, which show that the profound effects of the climate emergency are not inevitable, if drastic changes are made. The report shows that limited warming is only possible if **"Canada and the rest of the world reduce carbon emissions to near zero early in the second half of the century and reduce emissions of other greenhouse gases substantially."**[23]

[24] "Special Report on Global Warming of 1.5 °C (SR15)" - Website: https://www.ipcc.ch/sr15/

[25] "Canada's Changing Climate Report" - Website: https://changingclimate.ca/CCCR2019/

These reports are clear that **immediate, substantial action must be taken at the local level to curb emissions to decrease the risks to our civilization from which no citizen of our planet is immune.**

Our understanding of the Climate Emergency is developing so rapidly that keeping up with new information requires one's full attention. The newest UN Report[26] was published during our review of the CMP (Sept 22, 2019), post-dating the City's declaration of Climate Emergency. Highlights of the new report stress the urgency of immediate action:

- Past five years were the warmest five-year period on record
- Continued decrease of sea ice and ice mass
- Sea-level rise is accelerating, sea water is becoming more acidic
- Record greenhouse gas concentrations in the atmosphere

"Only immediate and all-inclusive action encompassing: deep decarbonization complemented by ambitious policy measures, protection and enhancement of carbon sinks and biodiversity, and efforts to remove CO2 from the atmosphere, will enable us to meet the Paris Agreement."

- UN Climate Action Summit Report Release[24]

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[26] "Landmark 'United in Science' Report Informs Climate Action Summit" - Website: https://unfccc.int/news/landmark-united-in-science-report-informs-climate-action-summit

4.2 - City of London Statement on Climate Emergency

Recognizing the urgency of SR15, on April 23, 2019 the City of London declared a Climate Emergency[27] using the following language:

> *"Whereas climate change is currently contributing to billions of dollars in property and infrastructure damage worldwide, stressing local and international economies; Whereas climate change is currently jeopardizing the health and survival of many species and other natural environments worldwide, stressing local and international eco systems; Whereas climate change is currently harming human populations through rising sea levels and other extraordinary phenomena like intense wildfires worldwide, stressing local and international communities; Whereas recent international research has indicated a need for massive reduction in carbon emissions in the next 11 years to avoid further and devastating economic, ecological, and societal loss; Whereas the climate in Canada is warming at twice the rate of the rest of the world, as per Canada's Changing Climate report;* ***Whereas current initiatives such as the green of the city's fleet and energy reduction initiatives are not sufficient to meet the targets as defined by the IPCC scientists****, Whereas an emergency can be defined as "an often dangerous situation requiring immediate action"; Whereas municipalities such as Kingston, Vancouver and Hamilton have already declared climate emergencies; 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."*

> **Essential in this declaration is the recognition by council that many city policies contain insufficient measures to decrease GHG emissions to levels that are scientifically required to avoid catastrophe.**

[27] Council Minutes April 23, 2019 - Website: https://pub-london.escribemeetings.com/Meeting.aspx?Id=03a43442-6a8b-4a0b-88ce-23191066c4ca&Agenda=PostMinutes&lang=English

4.3 - City of London Carbon Budget

Understanding London's present-day carbon budget is essential to planning our GHG reduction strategy. The City of London maintains an up-to-date inventory of energy consumption and greenhouse gas emissions, most recently reported as the 2017 Community Energy and Greenhouse Gas Report[28]. London's total carbon emissions in 2017 was 2870 kilotonnes (kt) CO2 equivalent (CO2e), and in 2010 (SR15 reference year) it was 3500 kt. The decrease from 2010-2017 is due primarily to decarbonization of Ontario's electrical grid, with secondary contributions from improved home energy efficiency, reduced energy use in the business sector, and improvement in the City of London landfill gas collection.

Transportation is by far the sector with the largest emissions of GHG. Our 2017 transport emissions are 1390 kt CO2e (of which ~70% of emissions are from personal vehicles), representing 49% of total emissions today, and has been relatively unchanged since 2007. Residential output (mainly home heating) is 510 kt CO2e. Industrial, commercial, and institutional output was 830 kt CO2e and landfill emissions and sewer incineration output was 140 kt CO2e. Due to the long life-cycles of buildings, businesses, and landfill operations, these values are unlikely to change substantially before 2030.

[28] "2017 Community Energy & Greenhouse Gas Emissions Inventory" - PDF: https://www.london.ca/residents/Environment/Energy/Documents/2017%20Inventory%20Report.pdf

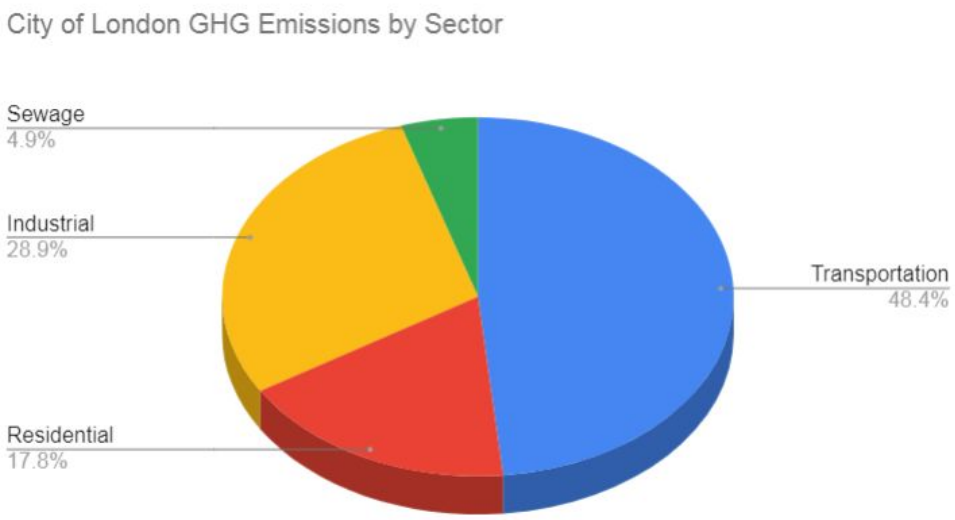

Figure 4-1: Greenhouse Gas Emissions by sector in London, ON. Source: 2017 Community Energy & Greenhouse Gas Emissions Inventory, City of London.[29]

Given the substantial emissions cuts mandated by the scientific requirements of SR15, **London's total carbon budget for 2030 is set at 1925 kt CO2e** (a 45% decrease from 2010: 3500kt CO2e x [1 - 0.45]). The 2030 emissions target corresponds roughly with present-day Sweden, on a per capita basis, and is therefore believed to be reasonable and attainable while maintaining high quality of life.

[29] "2017 Community Energy & Greenhouse Gas Emissions Inventory" - PDF: https://www.london.ca/residents/Environment/Energy/Documents/2017%20Inventory%20Report.pdf

4.4 - Transportation Targets for Climate Action

The City of London Transportation Master Plan[30] (TMP) identifies year 2030 targets for different modes of transportation. Its targets are as follows:

Table 4-1: City of London Transportation Master Plan current mode share and 2030 targets.

Mode	2009 Mode Share	2030 Target
Automobile	76%	60%
Transit	11%	20%
Active Transportation - Cycling - Walking	**9%** ~1% ~8%	**15%** 5% 10%
Other	5%	5%

The TMP considers scenarios with two different growth patterns. Scenario A presents a minimum population growth of 73,800 people to a total population of ~430,000 by 2030. This represents a 21% increase from 355,000 total residents in 2007. Scenario B envisions growth of 140,000 people to 493,000 total residents, a 39% increase from 2007.

We examined the carbon implications of both scenarios in a simple modeling exercise that accounted for variable electrification in the automotive sector, and complete electrification in the transit sector. Using this model, we are able to assess whether the 2030 TMP will achieve the deep emissions reductions required by the scientific consensus to help preserve our civilization. Details of the model's construction including original values are available here: https://docs.google.com/spreadsheets/d/1hEp9AOULDzFEZNXCMTV84jQ6YnRyV9S65x5o-Wnu2Ko

To test various aspects of the City's carbon budget, we made reasonable simplifying assumptions. The modeled results assume zero change in emissions from residential, industrial,

[30] "Smart Moves 2030 Transportation Plan" - Website: https://www.london.ca/residents/Roads-Transportation/Transportation-Planning/Pages/Smart-Moves-2030-Transportation-Plan.aspx

or sewage sources, because the rate of change for new building construction and retrofits will be small on a ten year time scale. While it is essential to decrease emissions from building sources by 2050, (we must begin working on building design and land use immediately) the GHG benefits of building retrofits will likely not be felt for at least a decade because of the long lifespan of buildings, and the sheer number of building retrofits required. Furthermore, most of the electricity emissions gains that can be achieved in other jurisdictions cannot be achieved here, because our electricity supply is already nearly fully decarbonized in Ontario, leaving buildings with less room to decrease in the immediate future.

4.4.1 Modeled Results: Transportation Master Plan, Business As Usual

Table 4-2 illustrates the implications of meeting the TMP targets for transportation mode split by 2030 in terms of carbon emissions. Assuming no changes in trip length, vehicle fuel standards (technology), or human behaviour, attaining the goals set out within the TMP results in a 4% decrease of GHG emissions from transportation by 2030 for Scenario A, and a 10% increase in GHG emissions for Scenario B.

Table 4-2: Modeled carbon emissions implication of adopting TMP targets for mode split by 2030. TMP identifies 60% automobile, 20% transit, 15% active transportation, and 5% other as targets.

	Scenario A (pop 430,000)	Scenario B (pop 493,000)
Change in GHG Emissions (kt CO2e)	-61	+133
% Change in GHG Emissions relative to 2010	-4%	+10%
Total 2030 Carbon Budget kt CO2e	1925	1925
Residential kt CO2e	510	510
Industrial kt CO2e	830	830
Sewage kt CO2e	140	140
Transportation as % of allowable GHG in 2030	68%	78%
Total Emissions (% of 2030 Target)	**145%**	**155%**

> **What these data indicates is that implementing the Transportation Master Plan will not decrease Greenhouse Gas emissions to the scientifically required targets for 2030, if the status quo is maintained for vehicle technology and land use**

4.4.2 - Modeled Results: Transportation Master Plan with Vehicle Electrification

Electric Vehicles (EV's) have been touted as a climate saviour that are "just a few years away from mass deployment." However the current uptake of EV's is slow, even with massive ($5000/vehicle) government incentives. Current EV sales in Canada are ~2% of total sales, which has been estimated by the International Energy Agency[31] to increase to 30% market share of new vehicles by 2030. While EV's are considerably cleaner than internal combustion engine counterparts (especially in Ontario with a low-carbon electricity supply), the overall life cycle emissions from EV's only result in an overall emissions decrease averaging 50% of internal combustion engine (ICE) vehicles[32]. In Ontario, the total emissions of a built-in-Ontario EV could be as low as 30% compared to a similar ICE vehicle, however we use the 50% decrease as a conservative estimate.

There are several major challenges with EV Adoption[33]:

- Long fleet turnover time (~15 years)
- Slow adoption (25% new vehicles by 2030 according to IEA)
- It takes roughly double the energy to construct EV vs internal combustion cars
- Limits, emissions, and ethics of Rare Earth metal mining required for battery construction

The results of the TMP + EV calculations are presented in Table 4-3. It is clear from these results that even with 100% electrification of all vehicles (public and private), the TMP mode split goals are insufficient to reach deep emissions reductions required by the scientific consensus to preserve our civilization.

[31] "Global EV Outlook 2019" - Website: https://www.iea.org/publications/reports/globalevoutlook2019/
[32] "EEA report confirms: electric cars are better for climate and air quality" - Website: https://www.eea.europa.eu/highlights/eea-report-confirms-electric-cars
[33] "The Problem With Switching to Electric Cars" - Website: https://www.citylab.com/transportation/2019/09/electric-vehicle-climate-carbon-emissions-impact-solution/598453/

Table 4-3: Modeled Carbon Emissions from implementing the Transportation Master Plan goals with variable levels of electrification by 2030. Modal split: 60% automobile, 20% transit, 15% active transportation, and 5% other. The rightmost column, 25% adoption, is the most-likely scenario according to International Energy Agency.

	100% EV's (pop 430,000)	**50% EV's (pop 430,000)**	**25% EV's (pop 430,000)**
Change in Transport GHG Emissions (kt CO2e)	-716	-388	-225
% Change in Transport GHG Emissions relative to 2010	-52%	-28%	-16%
Total 2030 Carbon Budget kt CO2e	1925	1925	1925
Residential kt CO2e	510	510	510
Industrial kt CO2e	830	830	830
Sewage kt CO2e	140	140	140
Transportation as % of allowable GHG in 2030	34%	51%	59%
Total Emissions (% of 2030 Target)	111%	128%	136%

> **What these data indicate is that implementing the Transportation Master Plan will not decrease Greenhouse Gas emissions to the scientifically required targets for 2030, even if 100% electrification of vehicles is achieved.**

4.4.3 - Modeled Results: Toward Climate-Informed Transportation Mode Split Targets

Recognizing that the TMP objectives are insufficient to reach our 2030 decarbonization goals, the only remaining lever for GHG reduction in the transportation sector is to change the mode-split targets in the TMP. In this section, we provide estimates on mode-split targets that reach the deep emissions reductions required by the scientific consensus. For simplicity, we only present “Scenario A” which considers population of 430,000, however the results are of similar magnitude and direction for Scenario B (population 493,000).

Table 4-4: Modeled carbon budget considering different mode split targets from the Transportation Master Plan.

Parameter	Mode Split 5	Mode Split 15	Mode Split 30	Mode Split 45	Mode Split 60
Automobile Mode Share (%)	5	15	30	45	60
Transit Mode Share (%)	45	40	30	25	20
Active Transport Mode Share (%)	45	40	30	25	15
Other Transport Mode Share (%)	5	5	10	5	5
Transportation GHG (kt CO2e)	109	327	654	982	1309
GHG Non-Transport (kt CO2e)	1480	1480	1480	1480	1480
GHG-All (kt CO2e)	1589	1807	2134	2462	2462
Change in GHG from 2009	-92%	-76%	-52%	-28%	-4%
2030 Emissions Budget (kt CO2e)	1925	1925	1925	1925	1925
Transport Fraction of 2030 C Target	6%	17%	34%	51%	68%
Total GHG Relative to Target (kt CO2e)	**-336**	**-118**	**209**	**537**	**864**
Total Emissions (% of 2030 Target)	**83%**	**94%**	**111%**	**128%**	**145%**

> **These data indicate that changing mode split targets can decrease Greenhouse Gas emissions to the scientifically required targets for 2030. With 0% vehicle electrification, the automobile mode split required to meet GHG reductions is <20%.**

4.4.4 - Modeled Results: Combining Mode Split with Electrification

“All of the above” approaches create the deepest decreases in emissions. Table 4-5 illustrates the mode split scenarios discussed above, plus a combined electrification and mode-split options for Scenario A. There are diminishing returns on GHG reduction for vehicle electrification as automobile mode share declines. Put differently, electrification has less overall effect with fewer cars on the road.

Table 4-5: Modeled carbon budget considering different mode split targets AND variable electrification for Scenario A (population 430,000)

Parameter	TMP (Mode Split 60)	Mode Split 30 0% EV	Mode Split 30 25% EV	Mode Split 30 100% EV	Mode Split 45 25% EV
Automobile Mode Share (%)	60	30	30	30	45
Transit Mode Share (%)	20	35	35	35	25
Active Transport Mode Share (%)	15	30	30	30	25
Other Transport Mode Share (%)	5	5	5	5	5
Transportation GHG (kt CO2e)	1309	654	573	327	859
GHG Non-Transport (kt CO2e)	1480	1480	1480	1480	1480
GHG-All (kt CO2e)	2462	2134	2053	1807	2339
Change in GHG from 2009	-4%	-52%	-58%	-76%	-37%
2030 Emissions Budget (kt CO2e)	1925	1925	1925	1925	1925
Transport Fraction of 2030 C Target	68%	34%	30%	17%	45%
Total GHG Relative to Target (kt CO2e)	**864**	**209**	**128**	**-118**	**414**
Total Emissions (% of 2030 Target)	**145%**	**111%**	**107%**	**94%**	**121%**

> **These data indicate that changing both mode split targets and adopting electric vehicles can decrease Greenhouse Gas emissions to the scientifically required targets for 2030. While there are multiple solutions**

for decarbonization in this model, a target of ~26% automobile mode split with 25% EV's yields sufficient GHG reductions.

4.4.5 - Modeling Summary

What is made clear by these data is that deep emissions reductions required by the scientific consensus to preserve our civilization require major efforts to cut motor vehicle use compared to the existing TMP, plus considerable electrification of remaining vehicles. **It is clear that we must urgently revise our Transportation Master Plan if we are serious about our commitment to the climate emergency.**

Recommendation: While it is absolutely clear that the existing TMP mode split targets are insufficient, we can rapidly address some of these needs through the Cycling Master Plan. **To achieve GHG reduction goals, the current Cycling Master Plan requires an increase in planned cycling mode split from 5% to ~25% or greater.** This goal can be achieved using well-understood, established infrastructure design principles, but requires a completely different approach than what is laid out in the current CMP. We discuss the key differences in infrastructure requirements to get from 5% from 5% to 25% in Section 6.0.

4.5 - Cost/Benefit of Future Emissions Abatement

The cost of doing nothing is substantial, the benefit of immediate action is large. With a rising price on emitting carbon in Canada, London will benefit economically from acting sooner rather than later on climate emergency. The Parliamentary Budget Officer of Canada[34] recommends a carbon price of $102/tonne by 2030 in order to achieve the necessary emissions cuts. The current price on carbon is $20/tonne, rising by $10/tonne/year until 2022 when the price will reach $50/tonne. Canada's price on carbon is not a tax, but a fee and dividend system, which charges excessive polluters and reward those who cut emissions faster and deeper. This means that as individuals and as a city we can collect dividend payments by lowering our overall carbon footprint. Therefore, if London acts earlier than other cities on decreasing emissions, it will represent a significant wealth injection into the city on the order of tens of millions of dollars per year. While the actual dividend paid out depends on the actions of other cities and industries, it is nearly unthinkable that these financial gains would not be realized in the short- and medium-term future, as the oil and gas industry (Canada's largest polluter[35]) is unlikely to wind down its major operations in the next ten years, and thus will continue to be the main source of carbon dividend funds.

The calculation below(Table 4-6) illustrates the immediate, direct benefit to Londoners from decarbonizing our transportation network. The calculation shows the difference (increase) in carbon dividends paid to Londoners for implementation of a more aggressive plan (Mode Split 30 + 25% EV adoption), versus the existing TMP. The total annual payout in carbon dividend would far exceed the cost of implementing an aggressive transit and cycling expansion, up to an estimated seventy five million dollars per year by 2030 in carbon fee alone (e.g. not counting personal savings to individuals for switching trips from driving to transit and cycling, that have an entirely separate set of economic benefits).

[34] "Closing the gap: carbon pricing for the Paris target (Revised June 20, 2019)" - Website: https://www.pbo-dpb.gc.ca/en/blog/news/closing-gap-carbon-pricing-paris-target

[35] "Greenhouse gas emissions" - Website: https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html

Table 4-6: The immediate, direct financial benefit to Londoners from decarbonizing our transportation network

Price of 1t CO2e emitted in 2022:	$50
Price of 1t CO2e emitted in 2030 (PBO estimate):	$102
Current emissions (tonnes CO2e):	2,870,000
TMP emissions (tonnes CO2e):	2,789,000
Mode Split 30 emissions + 25% EV (tonnes CO2e):	2,053,000
Difference [MS30-ev25 - TMP] (tonnes CO2e):	736,000
2022 [MS30-ev25 - TMP] Difference x Carbon Dividend (annual):	$36,800,000
2030 [MS30-ev25 - TMP] Difference x Carbon Dividend (annual):	$75,072,000

4.6 - Summary of Climate Emergency and City Transportation Policies

At its core, the goals laid out in the Transportation Master Plan are insufficient to reach our international obligations to decrease our carbon emissions, and inadequate to cope with our declaration of a Climate Emergency. Thus we must quickly and decisively change course, with the aim of rapidly decarbonizing our City's transportation system by 2030.

The main findings of this section are as follows:

- The Climate Emergency represents a grave threat to citizens of London and to life on Earth as we know it.
- We must decrease our Greenhouse Gas Emissions by 45% before 2030, and stay within a fixed carbon budget of 1925 kt CO2e.
- Transportation is by far the largest contributor to GHG emissions in London, currently 1378 kt CO2e.
- Buildings, businesses, and sewage contribute the balance of GHG (1480 kt CO2e), however these emissions sources take far longer to decline than transportation.
- Implementing the existing Transportation Master Plan does not achieve required emissions reductions targets even with (nearly impossible) 100% vehicle electrification.
- Only aggressive changes in mode split from automobile to zero carbon transportation (walking, cycling, electric transit) can achieve climate emergency goals. These goals are reasonable, and align with cities in other highly developed countries today (e.g. Sweden, Germany)
- Acting quickly will yield the greatest financial benefits: an **increase** of more than $75M in annual carbon dividend paid to our citizens is possible by 2030 by increasing transit and active transportation mode split in the City.

Climate-Informed Transportation Mode Targets by 2030:

- 100% Electrification of London Transit Vehicles
- 25% Electrification of Private Cars and City Vehicles
- Modal Split:
    - 25% Automobile
    - 35% Transit
    - 35% Active Transportation (walking 10%, cycling 25%)
    - 5% Other

Net GHG Emissions for this outcome: 1957 kt CO2e, ~102% of permitted emissions.

5.0 - Vision Zero and the Cycling Master Plan

"To err is human. To forgive, design.
When humans fail, the transportation system should not.
That's Vision Zero boiled down to its most basic concept."
- Kostelec Planning[36].

5.1 - Vision Zero Principles

Vision Zero is an approach to road safety based on the ethical vision that serious and fatal injuries on our roads are unacceptable and preventable. There can be no compromise between safety of users, and other factors (such as vehicle speed or vehicle throughput). The City of London adopted this policy in May 2017, joining cities across Canada and around the globe. The distinguishing feature focuses on a system design framework that **holds transportation systems designers and policy-makers accountable and responsible for road safety, rather than individual road users**. Whereas traffic collisions disproportionately affects the most vulnerable in our society, including minorities, seniors, and children, the onus must be on the street's designer to ensure the safety of all road users.

The main tenets of Vision Zero are: *traffic deaths are preventable, and the loss of life is not negotiable.* In a 2012 report[37], the Ontario Coroner stated that 100% of 129 cyclist deaths on Ontario's streets from 2004-2010 were preventable.The *London Road Safety Strategy 2014-2019*[38] falls short of a Zero goal, and focuses on *programs* that will reduce injury and death on roads by 10% within five years.

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[36] "To err is human; to forgive, design" - Website: https://www.kostelecplanning.com/to-err-is-human-to-forgive-design/
[37] "Office of the Chief Coroner for Ontario - Cycling Death Review" - PDF: http://www.mcscs.jus.gov.on.ca/sites/default/files/content/mcscs/docs/ec159773.pdf
[38] "City London Road Safety Strategy 2014-2019" - PDF: https://www.london.ca/residents/Roads-Transportation/Road-Safety/Documents/city-of-london-road-safety-web.pdf

This goal accepts,

1) More than 1000 injuries and deaths on our roads are inevitable,
2) Programs (i.e. not safe systems) will reduce injury and death.

Neither premise is compliant with the Vision Zero approach.

Vision Zero requires focus on **system failure.** Safe system design focuses on building better roads, improving vehicle safety technologies, and managing kinetic energy (speed reduction) to reduce the physical forces on humans when motor vehicle crashes inevitably occur. The Safe System approach strives to create road system designs that anticipate human error, and that are forgiving when errors are made.

5.2 - City of London Statement on Vision Zero

On May 16, 2017, Municipal Council adopted the following principles as its Vision Zero declaration[39]:

- No loss of life is acceptable
- Traffic fatalities and serious injuries are preventable
- We all make mistakes
- We are all physically vulnerable when involved in motor vehicle collisions
- Eliminating fatalities and serious injuries is a shared responsibility between road users and those who design and maintain our roadways

Safe System Components

1) **Safe Road Users -** Reduce unsafe behaviours including: drinking and driving, drug use and driving, distracted driving, speeding, and failing to use occupant restraints; targeting high-risk drivers and chronic offenders; and protecting vulnerable road users such as pedestrians and cyclists.
2) **Safe Vehicles** - Requires working with partners, identifying safety technologies and monitoring safety concerns.

[39] "Vision Zero" - Website: https://www.london.ca/residents/Roads-Transportation/Road-Safety/Pages/London-Road-Safety-Strategy.aspx

3) **Safe Roadways -** Focuses on the role of road project development, and on land use and neighbourhood planning. This **component encourages the explicit consideration of safety for innovations in road design**. Areas for work include identification and improvement of high-risk locations, and better road designs that benefit vulnerable road users.
4) **Safe Speeds -** Promotes setting safe speed limits, greater compliance with speed limits, vehicle-speed management technologies, and educating road users. Beyond certain speeds, safe road users, safe vehicles and safe roadways will fail. **Vision Zero recommends 30km/h in residential neighbourhoods where people mix with automobiles**.

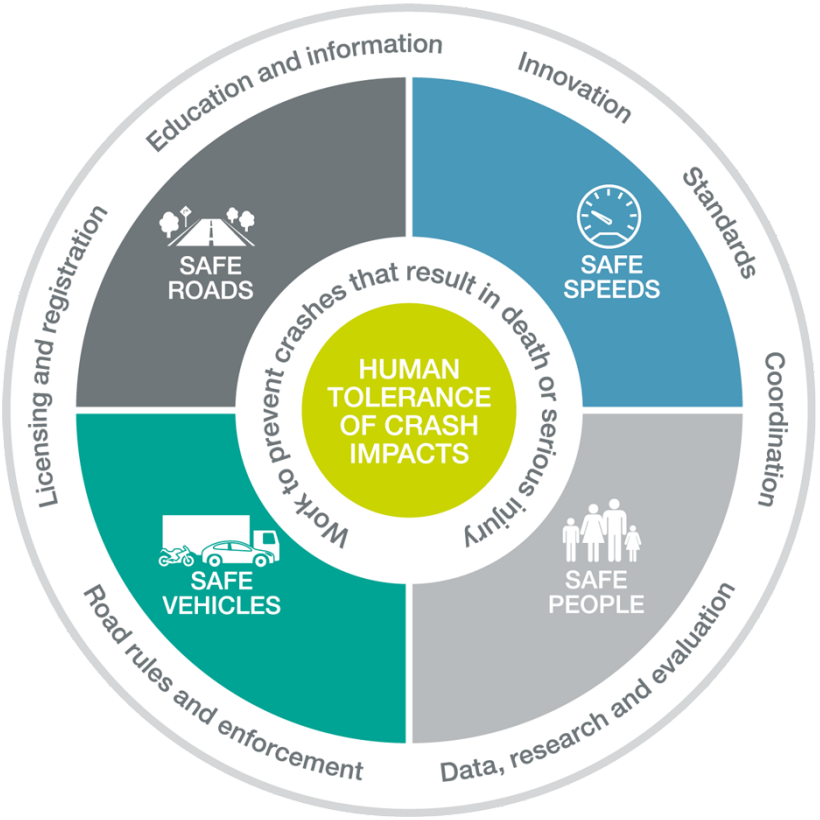

Figure 5-1: Safe system diagram, Safer Roads, Safer Queensland: Queensland's Road Safety Strategy 2015–21[40].

[40] "Safer Roads, Safer Queensland: Queensland's Road Safety Strategy 2015-21" - Website: https://www.tmr.qld.gov.au/Safety/Road-safety/Strategy-and-action-plans.aspx

5.2 - Representative Examples of Non-Compliant Street Design

"When cyclists mix with traffic at 60km/h or more, the risk of a collision causing catastrophic injury or death in London is 27% - or 1 in 4"

- Rebecca Henderson - Report at the Civic Works Committee meeting[41]

Moving toward Vision Zero requires innovative efforts that go beyond the traditional road safety approach. Recently introduced road designs from within the CMP that have not been proven to reduce the risk of crashes, fatalities, and serious injuries include, but are certainly not limited to, the following examples:

Figure 5-2: Painted and bollard bike lanes on Highbury Ave between Killarney Rd and Edgevalley Rd. installed in 2018. Posted speed limit 70km/h, 4 traffic lanes. When cyclists mix with traffic at 60km/h or more, the risk of a collision causing catastrophic injury or death in London is 27% - or 1 in 4[38]. Left plate shows broken bollards from collisions with vehicles. The bollards are completely removed in the winter when the bike lane is used for snow storage. Middle plate shows cyclists share the road with large trucks and buses at high speeds. Right plate shows planned bus stop in

[41] "The 8th Meeting of the Cycling Advisory Committee August 21, 2019 at 4:00 PM" - Website: https://pub-london.escribemeetings.com/Meeting.aspx?Id=7c329f6d-0d9d-48c6-af75-f9e041180d69&Agenda=Agenda&lang=English

bike lanes. A high-risk but important route for roughly 900 Montcalm Secondary School students and staff, and commercial district at Huron St and Fanshawe Park Rd.

Figure 5-3: Windermere Road is an important connector from Northeast London to Western University for its 30,000 students and more than 4,000 staff. Additionally, University Hospital employs more than 13,000 staff, students and volunteers. Discontinuous painted bike lanes were implemented on Windermere Road (60 km/h speed limit) between Adelaide Street and Richmond Street. Painted lanes start and end abruptly to prioritize left turning motor vehicle traffic. This is perhaps the clearest example of what is NOT Vision Zero in the city. Motor vehicle speed and throughput has been explicitly prioritized ahead of the safety of vulnerable road users. Safe systems design would separate cyclists from high speed vehicles with concrete planters, curbs, or bollards, and the cycling infrastructure would be continuous from end-to-end of the street.

5.3 - Hierarchy of Hazard Controls

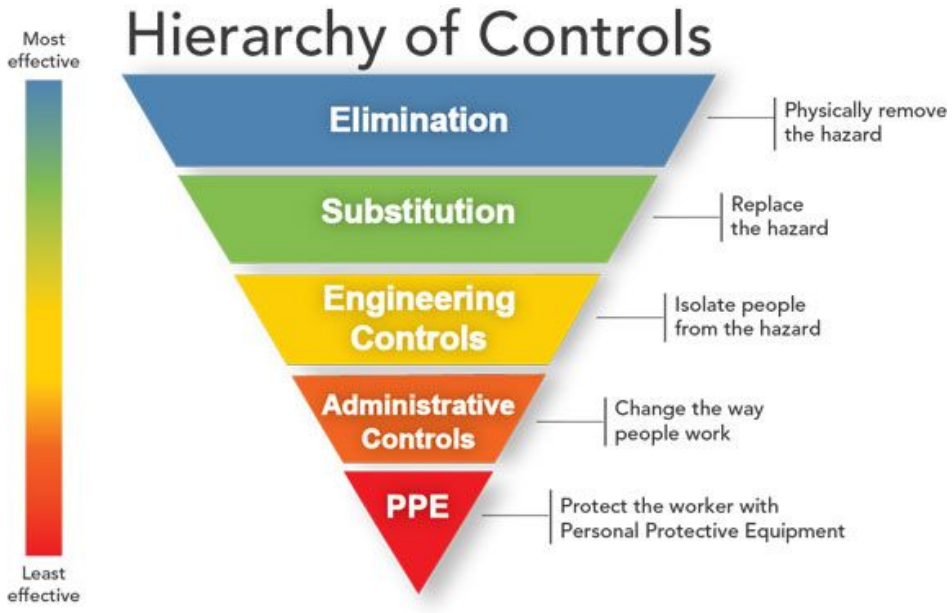

Figure 5-4: Hierarchy of Controls illustrating the effectiveness of various hazard avoidance efforts [42].

A fundamental concept in safe systems research is the Hierarchy of Controls[39]. On our streets, the hazard that causes 99% of deaths and serious injuries are high speed motor vehicles. Thus steps must be taken to control the risk the drivers of these cars impose on other users. The hierarchy of controls places in rank order of most effective to least effective methods of decreasing risk. Vision Zero focuses on the higher order controls: elimination, substitution, and engineering.

5.3.1 - Elimination (most effective control)

Elimination of hazards means the removal of dangerous automobiles from public space. Ten years ago this would have been unthinkable, yet today many cities are choosing to go car-free in their city centers and beyond. There are no deaths due to motor vehicles where they are eliminated. Expanding car-free areas is the most effective way of improving safety for cyclists (and pedestrians). Restricting cars from a 1 km radius around schools would help get more children walking and cycling to school.

[42] "Hierarchy of Controls" - Website: https://www.cdc.gov/niosh/topics/hierarchy/default.html

5.3.2 - Substitution

More use of walking, cycling and public transport substitutes for car use. By making these modes more attractive than driving a car, risk to vulnerable road users is decreased.

5.3.3 - Engineering

Engineering approaches that create safe streets include separation by concrete curbs, bollards, or planters. Bicycle bridges, underpasses, or overpasses that allow users to avoid interaction with motor vehicles are also included in this category. Most Engineering controls can be considered “infrastructure” in nature.

5.3.4 - Administrative

Painted lines and sharrows, all rules such as the 1m passing law, and signage to “share the road”.

5.3.5 - Behaviour

Advertising and education campaigns.

5.3.6 - Personal Protective Equipment (least effective control)

Helmets.

5.4 - Research on the Relationship between Safety and Infrastructure

Foundational research by Kay Tesckhe[43] published in 2012 illustrated the relationship between cyclist preference and cyclist safety on various types of street designs. Separating people riding bicycles from both automobiles and pedestrians (Engineering controls) yielded the safest results short of eliminating cars altogether. Protected Bike Lanes (cycle tracks), dedicated bike paths (separated from pedestrians), and quiet local streets neighbourhood streets were identified as both comfortable for the user, and were statistically safer options. **Protected bike lanes are not only much safer, they are strongly preferred by users, which make them ideal infrastructure for a Vision Zero approach.**

[43] “Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study” - Website: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3519333/

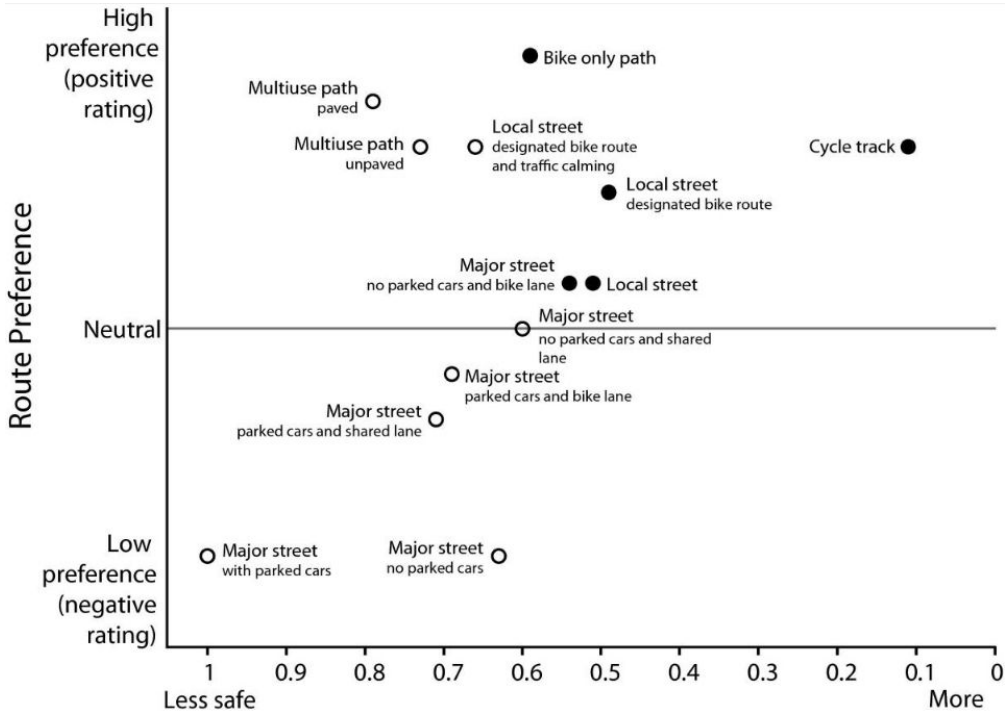

Figure 5-4: Safety vs route preference for cyclists in Vancouver and Toronto (Teschke, 2012). Closed circles represent route types with positive preference rating and adjusted injury Odds Ratio < 0.6 (safest route types). Open circles represent route types with negative or neutral preference rating or adjusted injury Odds Ratio ≥ 0.6. Odds Ratios for injury risk are plotted in reverse order. Note: cycle track = protected bike lane.[44]

5.4 - Cycling Master Plan Compliance with Vision Zero

Compliance of the CMP with Vision Zero safe design principles is effectively nil. Of the major initiatives in the CMP, the majority of planned initiatives are considered to be Administrative or Behavioural Controls. Less than 1% of planned interventions (protected bike lanes, 7.5 km out of 799 km of "facilities") could be considered Engineering controls, and 0% of the CMP could be considered Substitution or Elimination. Substitution could be achieved by making cycling more appealing to Interested But Concerned group, whereas Elimination would require elimination of motor vehicles from congested areas of the City such as the City of Oslo, Norway has done with their Downtown.

[44] "Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study" - Website: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3519333/

The assessment metrics found in the 2016 CMP do not set targets to eliminate (or even to decrease) collisions, deaths, and serious injuries to cyclists. Without measurements, targets or goals, how does the City anticipate reaching Vision Zero objectives?

Prioritizing convenience of motorists ahead of the safety of vulnerable road users including cyclists is not a trade-off that the City of London can choose under a Vision Zero framework. Implementation of the current Cycling Master Plan will not make substantial progress toward Vision Zero goals of eliminating deaths and serious injuries on our roads.

6.0 - Transportation Cycling Infrastructure Assessment

Achieving the required Greenhouse Gas reductions, and achieving Vision Zero through improved design of our transportation system does not require the impossible. Other cities of similar size have *already* achieved greater than the required GHG reduction without sacrificing quality of life, or economic prosperity. However, changing mode split requires more, faster, and higher-quality infrastructure development than is currently planned in London today. In the following section we discuss the scale, quality, and design characteristics of required infrastructure to attain the required **cycling** mode share.

6.1 - A Nod to Great Transit

"Public Transit is most effective for moderate- and long-distance trips on busy corridors, while cycling is effective for shorter-distance trips with multiple stops. Combining transit and cycling can provide a high level of mobility comparable to automobile travel."

- Victoria Transport Policy Institute.

While fundamentally an essential support to the cycling network, improvements in transit required to reach 35% mode share is beyond the scope of this committee. It is essential to consider both transit AND cycling, however, as both offer distinct benefits stated above.

6.2 - Better Land Use Serves Transit and Cycling

"The best transportation plan is a great land-use plan."

- Brent Toderian, and others.

Also outside the scope of this committee is a review of land use through a climate lens. It is essential to reconsider:

1) parking requirements (eliminate)
2) sprawl (virtually all growth must occur in existing developed areas)
3) easing zoning restrictions on infill density, among other factors.

All of these changes create a better environment for the requisite change in modal split. The London Plan must be inspected through the lens of Climate Emergency to assess whether it goes far enough to achieve essential climate targets.

6.3 - Cycling Infrastructure for a High Cycling Mode Share City

Using the modeled carbon emissions presented earlier, we selected a likely mode-split solution that reaches the GHG goals, and reaps large carbon dividends for Londoners.

Climate-Informed Transportation Mode Targets by 2030:

- 100% Electrification of London Transit Vehicles
- 25% Electrification of Private Cars and City Vehicles
- Modal Split:
    - 25% Automobile
    - 35% Transit
    - 35% Active Transportation (walking 10%, cycling 25%)
    - 5% Other

It is instructive to examine other cities that have achieved these mode split targets. Bremen, Germany, is not usually heralded as a "great cycling city" yet it maintains very high transit and active transportation mode share, with a population slightly greater than London's, and a comparable land area. Bremen's winters are not nearly as snowy as London's, but the wind and rain from the North Sea are fierce and nearly as inhospitable to cycling as a Great Lakes squall. Why does Bremen have such outstanding mode splits? It has an extensive network of protected bike lanes, and reliable, effective transit that meets targets for frequency and convenience. Copenhagen has approximately half as many snowy days as London, and a **winter mode share for cycling above 40%** because they efficiently and predictably clear snow from their ubiquitous protected bike lanes. **What every single one of the cities with high bike mode split has in common is a network of protected bike lanes throughout the city.**

It is essential to recognize that zero North American cities have achieved European levels of cycling because of an historical lack of cycling infrastructure investment. However, cities like Vancouver are approaching their European counterparts due to key cycling infrastructure investments such as the Burrard Bridge bike lane, and its All-Ages-and-Abilities protected bike lane network. Virtually all of Calgary's inner city neighbourhoods boast >5% bike mode share[45] following their implementation of their downtown protected bike lane network in 2014, with bike mode share growing every year. Montreal has been North America's premiere bike city since the 1980s when they eschewed Vehicular Cycling and built a network of protected bike lanes instead. Infrastructure investment dictates mode share, everywhere. How infrastructure is built in the next five years will dictate mode share in London too.

Examining data from other cities in Table 6-1, it is clear that:

1) attaining high modal splits for cycling and transit is possible in winter cities,
2) attaining high modal split in relatively lower density cities is also possible (Bremen, Munster), and
3) High transit usage and high cycling mode share are not necessarily coincident (e.g. Boston/Munster) - both require different infrastructure investments that are complementary when done well.

[45] "Mode Split to Work - Bicycle - Calgary" - PDF: https://www.calgary.ca/_layouts/cocis/DirectDownload.aspx?target=http%3a%2f%2fwww.calgary.ca%2fTransportation%2fTP%2fDocuments%2fdata%2fmode-split%2fmodesplit-bike-2016.pdf

Table 6-1: Mode Share Trip Distribution of Major Winter Cities (estimates from 2009 - 2019). Note that walking is not included in these metrics, and would contribute to required Active Transportation mode share targets. Data compiled from various sources including cityclock.org, and wikipedia[46]

City	Population	Area (km^2)	Bike Share (%)	Transit Share (%)
London, CAN	***355,000***	***232 sub/urban 402 incl. south rural***	***~1%***	***11%***
Montreal, CAN	1,780,000	431	3%	19%
Toronto, CAN	2,930,000	630	1%	24%
Vancouver, CAN	675,000	115	12%	17%
Greater Victoria, CAN	85,000	20	7%	11%
Boston, USA	685,000	232	2%	36%
Copenhagen, DEN	602,000	88	62%	27%
Utrecht, NL	1,285,000	99	33%	28%
Uppsala, SWE	168,000	49	28%	20%
Munster, GER	**310,000**	**302**	**39%**	**11%**
Freiburg, GER	227,000	153	13%	12%
Bremen, GER	**557,000**	**326**	**25%**	**24%**

[46] "Modal Share" - Website: https://en.wikipedia.org/wiki/Modal_share

6.4 - It's Not About Culture, It's About Infrastructure.

When people from The Netherlands visit London, they usually don't choose to cycle, whereas they cycle daily at home. Why not?

To a Dutch person, cycling on London's streets looks just as dangerous as it appears to the average Londoner. Sharing the road with high speed cars and trucks is a non-starter for the Dutch, and it must be the same if we expect large numbers of people to choose cycling for transportation every day. **We must change our approach to public street infrastructure if we are to achieve mode split on a scale required to decrease our carbon emissions.**

The Portland Bike Survey[47] (first published in 2005) was the first to characterize the "type" of person willing to cycle on a given street, given its design principles. Surveying people in the fifty largest metros in the United States, Roger Geller found that people choose to cycle based on the **quality** of infrastructure on the street. Some people will cycle without infrastructure, most people need a connected network that is completely separated from cars in order to choose their bike regularly.

From Alta Planning in Portland, Oregon[48]:

> *Originally developed by Roger Geller at the City of Portland, OR, the "Four Types of Bicyclists" are meant to guide efforts in assessing — in broad terms — what certain segments of a population require or want in a bikeway facility. Geller suggested that Portland's population could be categorized into the following four groups:*

[47] "Portal Bike Survey - Four Types of Cyclists" - PDF: https://www.portlandoregon.gov/transportation/article/264746
[48] "Understanding the "Four Types of Cyclists" - Website: https://blog.altaplanning.com/understanding-the-four-types-of-cyclists-112e1d2e9a1b

1) Strong and Fearless: People willing to bicycle with limited or no bicycle-specific infrastructure

2) Enthused and Confident: People willing to bicycle if some bicycle-specific infrastructure is in place

3) Interested but Concerned: People willing to bicycle if high-quality bicycle infrastructure is in place

4) No Way, No How: People unwilling to bicycle even if high-quality bicycle infrastructure is in place

Figure 6-1: Portland Bike Survey: Four Types of Cyclists as hypothesized by the creator of the survey, and as surveyed in Portland, OR and the average of Fifty (50) American Cities. It is unlikely that the population of London, ON deviates from the Survey of Largest Metros by more than 10% in any single category. [49]

[49] "Understanding the "Four Types of Cyclists" - Website: https://blog.altaplanning.com/understanding-the-four-types-of-cyclists-112e1d2e9a1b

One of the greatest challenges with the current Cycling Master Plan is the assumption on which it is founded. The City of London TMP did not adopt Geller's approach to assess cycling potential, and as a result, has grossly mischaracterized its population's willingness to cycle. The Conclusion from the Transportation Master Plan 1-15 (sample size 353 people)[50]:

"The market for commuter based cycling infrastructure is approximately 9% of the overall population."

- City of London Transportation Master Plan.

The above statement contains large and erroneous assumptions regarding the type of infrastructure presented to citizens who claim they are willing to cycle. The 9% value reported is suspiciously similar to the "*Strong and Fearless"* and "*Enthused and Confident"* groups above, suggesting London has not offered "*Interested but Concerned"* types any confidence that they could choose cycling for transportation. Because it has been demonstrated time and again, in city after city, that given safe, connected infrastructure, up to 70% of people will choose to cycle at least some of the time for transportation, **it is with virtually certainty that we conclude that London's potential cycling market-share is not a measly 9%, but given proper infrastructure, greater than 60% of the total population would choose cycling for many trips. The climate emergency mitigation implications that stem from this error are enormous.**

6.5 - Infrastructure Requirement for All Ages and Abilities (AAA)

To achieve high mode share of cycling (>10% mode share, engaging Interested But Concerned riders), high-quality, connected, maintained infrastructure must be in place **throughout the city**. There are only three major factors that create comfortable conditions for everyday cycling:

[50] "Smart Moves 2030 Transportation Plan" - Website: https://www.london.ca/residents/Roads-Transportation/Transportation-Planning/Pages/Smart-Moves-2030-Transportation-Plan.aspx

1) Slow vehicle speeds to 30 km/h or less in residential areas. Use filtered permeability to prevent through traffic in neighbourhoods, which has the positive side-effect of decreasing neighbourhood traffic volumes.
2) Build protected bike lanes and protected intersections[51] (protected intersections are not mentioned once in the 2016 CMP) on high-speed (greater than 30 km/h design speed) and high-traffic (generally busy) roads. Provide high-priority winter maintenance on these routes.
3) Provide secure bike parking facilities throughout the city to protect personal property.

The City of Vancouver is the Canadian leader in retrofitting a North American city for citizen cycling. To achieve their goal of having two thirds of all trips by walking, cycling, and transit, Vanvcouver created comprehensive rules for designing suitable AAA infrastructure[52]. We recommend that the City of London copy Vancouver's approach verbatim. What is evident from Vancouver's guidelines is that **only 4% of London's planned bike routes over the next four years meet AAA quality standards**. Stated differently, London's approach builds 96% of its cycling infrastructure to serve existing cyclists (Strong and Fearless, Enthused and Confident) marginally better, rather than planning streets for a wider rider-ship demographic, which represents more than 90% of the population. This approach is exclusionary, as only a small group of cyclists with high risk tolerance will share street space with high speed cars separated by a strip of paint. While some of these ideas about user types and protected infrastructure are discussed in technical appendices of the CMP, the planned build-out of the plan does not reflect the needs of the vast majority of users.

In the next four years, 96% of new bike lane kilometers built in the City of London are systematically designed to exclude 90% of our population.

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[51] "Protected Intersections for Bicyclists" - Website: http://www.protectedintersection.com
[52] "Transportation Design Guidelines: All Ages and Abilities Cycling Routes" - PDF: https://vancouver.ca/files/cov/design-guidelines-for-all-ages-and-abilities-cycling-routes.pdf

Re-allocating City resources to projects that are designed to serve All Ages and Abilities would have a far greater outcome in terms of ridership, equity, and cost-benefit to the City. By building exclusively All-Ages-and-Abilities facilities, we maintain our commitment to equity in transportation, decrease our carbon footprint, and help meet our Vision Zero objectives.

Figure 6-2: City of Vancouver guidelines for All Ages and Abilities Cycling Network Design. Off-street pathways must be brightly lit, and maintained through four seasons to be considered effective.[53]

6.6 - Secure Bike Parking: An Under-Appreciated Barrier to Cycling

Facilities that provide protection of personal bikes from theft and exposure to the elements is an essential part of a AAA cycling network. The City has considerable land holdings that could provide secure public storage facilities at minimal cost. The detailed design of such facilities are context specific, and well beyond the scope of this report.

[53] "Transportation Design Guidelines: All Ages and Abilities Cycling Routes" - PDF: https://vancouver.ca/files/cov/design-guidelines-for-all-ages-and-abilities-cycling-routes.pdf

Recommendations:

- Provide secure, covered bike parking at major City of London properties (parks, arenas, libraries, City Hall, parking lots)
- Develop guidelines for secure bike parking for new buildings and incorporate through zoning.
- Provide incentives for secure bike parking on existing private property to accelerate adoption (e.g. Town of Canmore will pay for ~80% of cost of new publicly accessible bike parking on private land that meets Town guidelines).

6.7 - Comparison of CMP to Requirements for High Bike Modal Share

The CMP calls for 7.5 km of protected bike lanes by 2030, or <1% of the arterial road network. Simply put, there is zero probability that 1% street conversion to All-Ages-and-Abilities facilities would achieve the 5% modal share required by TMP, let alone 25% that is required by the Climate-Informed Transportation Mode Split Targets. By comparison, Vancouver has constructed more than 125 km of All-Ages-and-Abilities facilities[54], which has achieved a doubling of their bike mode share from 6% in 2013 to 12% in 2019. To attain significant bike modal share, there must be safe, comfortable access to every area of the city, with quality connections to important destinations (schools, commerce, workplaces) for citizens.

Continuing with the TMP-based 5% modal share goal, the City may be able to optimize the built environment for “Fearless” and “Enthused and Confident” groups. However, it will never be able to grow mode share beyond 5-10% by primarily deploying painted bike lanes on high speed roads. For example, brand new bike lanes on Commissioners Rd, Oxford St W, and Southdale Rd, all “share the road” with a 60 km/h speed limit, and design speeds of 70 km/h, separated by nothing more than a stripe of paint. Each of these lanes are a complete waste of money with ridership approaching nil, as only people who are *already* riding confidently would use these facilities, and most people who are already riding would choose to avoid these high speed roads whenever possible.The demographics of those using the currently planned infrastructure will be similar to today: white, male, adults will be vastly overrepresented, whereas women, children, seniors, and non-white cyclists will be underrepresented compared to the overall population.

[54] “Vancouver Builds a Better Bike Lane” - Website: https://usa.streetsblog.org/2019/06/10/vancouver-builds-a-better-bike-lane/

We must recognize that in a climate emergency, we must do what is necessary, not what is politically convenient or popular. We need to provide zero carbon options for transportation and we need to provide them as soon as humanly possible. Most people don't consider cycling as an option for their family because they have never seen, let alone used, quality AAA bike infrastructure. Once people see it, and try it, and they (finally) feel comfortable on our streets, they will choose a bike for many trips. Until that point, citizens will never ask for it, because they don't know that it is even possible. **Building a City-Wide Network of All Ages and Abilities bike facilities is a necessary part of achieving our GHG reduction targets. We cannot achieve our GHG targets without this investment, and stand to greatly benefit as a city by building the network as soon as possible.**

6.8 - Funding for Bicycle Infrastructure

A conservatively high cost estimate for building quality protected bike lanes is $1M / km (both sides of a street, costs consistent among
municipalities across Canada). This cost of bike infrastructure is miniscule compared to transportation projects designed exclusively for cars (compare with Wonderland Road widening "early estimate" of $55M for 8 km = $7M/km if on-budget). To complete a minimum grid across the City, London needs approximately 150 km of protected bike lanes (<5% of total lane km conversion) on primary/secondary streets. Simple math shows the capital cost of this network to be no greater than $150M in total.

London currently has a budget of **$75M per year** allocated to miscellaneous road widening projects from 2020-2025. Because there is no Climate-Informed Transportation Mode Split solution that results in an increased number of driving trips, there is no justification to continue spending money widening roads for automobile trips that can *never increase*. Widening roads has been clearly demonstrated to increase vehicle trips, total kilometers driven, congestion, and greenhouse gas emissions by the Fundamental Law of Road Congestion[55]. Put simply, we should take Vancouver's lead, and never widen another road ever again (they haven't built a

[55] "Fundamental law of road congestion: Evidence from U.S. cities" - Website: https://journalistsresource.org/studies/environment/transportation/fundamental-law-road-congestion-evidence-u-s-cities/

new road, or widened an existing road since the 1970s). Re-allocating half of the road widening budget would fund the entire city-wide cycling network's capital cost by 2025, and leave the other half of the money to improve transit, insulate buildings, or do *literally anything else that would not exacerbate the climate emergency.*

"Building great cities isn't always about what you do, it's what you stop doing."

- Paraphrasing Brent Toderian, from Place Matters Conference in London, Ontario September 2019

The Netherlands has developed its extensive system of bikeways by investing $50/year/person in cycling infrastructure. This dollar value is of the same magnitude as the value of the carbon dividend discussed in Section 4. However the return on investment of this spending far exceeds the cost. Recent estimates show that The Netherlands investment in cycling has generated annual health benefits on the order of 3% of GDP[56] (for London, 3% of GDP is $630 million dollars per year). The enormous return on investment should be sufficient to convince any fiscally responsible government to invest in transportation cycling in their city or town. Building AAA cycling infrastructure is an investment in the city's long term budget, population health[57], childrens independence and social development[58], transportation equity / mobility for all ages and abilities[59], personal wealth[60], street safety[61], and preventing climate disruption[62]. **There may**

[56] "Dutch Cycling: Quantifying the Health and Related Economic Benefits" - Website: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4504332/

[57] "What is the full cost of your commute?" - Website: http://spacing.ca/vancouver/2015/04/06/full-cost-commute/

[58] "What Makes Dutch Kids the Happiest in the World? Cities That Allow Them to Roam" - Website: http://www.modacitylife.com/blog/dutch-kids-happiest-in-the-world

[59] "Cycling and Mobility: The Great Equalizer" - Website: http://www.modacitylife.com/blog/2014/8/20/cycling-and-mobility-the-great-equalizer

[60] "Get Rich With… Bikes" - Website: https://www.mrmoneymustache.com/2011/04/18/get-rich-with-bikes/

[61] "Protected Bike Lanes Are Safer for Drivers, Too" - Website: https://www.citylab.com/transportation/2019/06/protected-bike-lanes-safe-street-design-bicycle-road-safety/590722/

[62] "For cities, bike networks are a free-wheeling climate solution" - Website: https://www.climatesolutions.org/article/1557871842-cities-bike-networks-are-free-wheeling-climate-solution

be no other single investment that both combats the climate catastrophe while simultaneously provides enormous financial, health, and social benefits to our citizens.

7.0 - Inter-City Comparison

London's Cycling Master Plan[63] (CMP) was compared with the plans from similar cities around Canada: Halifax (2014)[64], Waterloo Region (2014)[65], Ottawa (2013)[66], Waterloo (2011)[67], Victoria Capital Regional District (2011)[68], and Kitchener (2010)[69]. London's 2016 CMP is missing crucial elements that the others contain, which is impacting the effectiveness of London's approach and the organization of its actions. These missing elements affect the alignment of London's actions with its vision and goals for its cycling plan and largely stem from a lack of clarity and vision regarding the Evaluation of London's cycling policies and actions.

7.1 - Addressing "Interested but Concerned" Cyclists

Each of the other cities recognize that focus and the key constituent of cycling infrastructure projects are the 60% of the population who are "interested but concerned." The concerns of this 60% of the community regard their personal safety while riding among traffic on urban streets. "What people fundamentally want when they talk about active transportation safety is to feel that they are not taking undue risks by choosing to walk or bike,"[34] Every other city identifies the

[63] "London On Bikes" - PDF: https://www.london.ca/residents/Environment/EAs/Documents/London%20ON%20Bikes%20-%20Full%20Report%20-%20Final%20September%202016.pdf

[64] "Making Connections: 2014-19 Halifax Active Transportation Priorities Plan" - PDF: https://www.halifax.ca/sites/default/files/documents/transportation/transportation-projects/AT_Plan_Final_July222014_000.pdf

[65] "Walk Cycle Waterloo Region February 2014" - PDF: https://www.regionofwaterloo.ca/en/regional-government/resources/Reports-Plans--Data/Moving-Forward/Active-Transportation-Master-Plan.pdf

[66] "Ottawa Cycling Plan" - PDF: https://documents.ottawa.ca/sites/documents/files/documents/ocp2013_report_en.pdf

[67] "The City of Waterloo Transportation Master Plan" - PDF: https://www.waterloo.ca/en/government/resources/Documents/Cityadministration/TransportationMasterPlan/Transportation-Master-Plan---PDF-Version.pdf

[68] "Capital Regional District Regional Pedestrian & Cycling Masterplan" - PDF: https://www.crd.bc.ca/docs/default-source/regional-planning-pdf/pedestrian-amp-cycling-master-plan.pdf?sfvrsn=2028fc9_0

[69] "City of Kitchener - Cycling Master Plan for the 21st Century" - PDF: https://www.kitchener.ca/en/resourcesGeneral/Documents/DSD_TRANSPORT_CyclingMasterPlan.pdf

need to address and substantially assuage the concerns of that large group as the key to significantly improving the cycling mode share and making cycling a mainstream and widespread transportation option. According to data presented in these other CMPs, approximately 50% of the daily trips are within an easy cycling distance of 5 km, which means that assuaging the concerns of the "interested but concerned" demographic could result in an increase of cycling mode share by 30% or more.

7.2 - Identifying Goals and Expected Outcomes

Each of the other cities have clear statements regarding multiple goals and expected outcomes for their cycling policies and actions. In all cases, a user-based metric (rather than a geographic-based metric) is the primary goal or outcome. **Every city other than London identifies significantly increasing the cycling mode share and reducing cycling collisions as a metric for evaluating the cycling policies and actions.** Most are aiming to double or triple their cycling mode share with some heading toward a cycling mode share >12%, especially in city cores and key destination areas such as around universities, colleges, and neighborhood destinations. Furthermore, some cities include as additional outcomes increasing the budget share dedicated to cycling projects and reducing GHG emissions. Each of these goals provides different means for measuring and determining the success of the policies and actions. London's CMP is the only one to focus exclusively on increasing the kilometers of cycling routes and pathways as the principal outcome of their policies and actions.

7.3 - Criteria for Evaluating the Success of Projects

With increasing cycling mode share percentages as a goal and expected outcome, the better CMP's consider methods for evaluating the success and gauging the potential for routes and infrastructure project to increase mode share by assuaging the fears of the "interested but concerned" 60% of potential riders. Notable here is Ottawa's Level of Travel Stress methodology (Appendix A)[70]. Ottawa has developed a criteria based on automobile traffic volume, flow, and speed, space for bikes, and frequency of cycle lane blockage to rank the stress cyclists feel while riding along routes and through intersections (1 least stressful, >4 most stressful). It utilizes the "weakest link principle" in establishing a ranking, meaning that the

[70] "Ottawa Cycling Plan" - PDF: https://documents.ottawa.ca/sites/documents/files/documents/ocp2013_report_en.pdf

ranking is determined by the most stressful feature or segment within the whole route. It can be used to guide the type of cycling infrastructure required for a given project as well as for evaluating the success of the project in mitigating the fears of the “interested but concerned” 60%.

7.4 - Data and Demographics Collection

Each of these elements connect and determine the type of data the cities require in order to properly evaluate their cycling policies and actions. Passive counts of bikes crossing a single location and single day usage counts are small parts of the data city planners and evaluators need. Unlike London’s CMP, the other cities’ CMPs address the need for and the means for collecting the data that their planning and evaluative processes require in order to facilitate data-driven decision-making.

7.5 - Conclusion

London's CMP states its vision of "providing infrastructure which is considered comfortable, safe, and convenient...for all Londoners,". **Kilometers of routes and pathways by themselves do not provide that. Only routes and pathways that service the needs of their users in the right way align with, and further, that vision.** By neglecting to develop measures and means for evaluating how their efforts to grow and improve their cycling network, London's CMP has, in comparison to other cities', fallen short.

Table 7-1: Comparison of London's CMP to other municipalities

	Cycling Mode Share Target	**Cycling Collisions Rate**
London 2016	not specified	138 (annual average)
Halifax 2014	double by 2026	32 including scooters & skateboards (Jan-Jul 2019)
Waterloo Region 2014	3% by 2031	98 (2017)
Ottawa 2013	12% inner area by 2031 8% within greenbelt by 2031	263 (2018) 225 injuries (2018) 1 fatality (2018)
Victoria 2011	25% in densely populated areas by 2038 15% across the region	63 (2016)

8.0 - Recommendations

Based on our assessment of new policies London ON Bikes **does not** meet City of London policy goals of:

1. Declaration of Climate Emergency
2. Vision Zero

Additionally, the Cycling Master Plan falls short in many areas compared to other cities in terms of its infrastructure design, and evaluation metrics. We therefore make the following recommendations:

1. We recommend that council request that staff conduct a detailed assessment of climate emergency implications of the Transportation Master Plan, and The London Plan. Transportation and Land Use are the two largest contributing factors to climate emergency within the city, and examining these through the lens of Climate Emergency may reveal essential changes in outcome. We believe this report is the first assessment of ANY City of London policy through this lens, and given our findings, believe it prudent to examine all relevant documents from a climate perspective.
2. We recommend that council direct staff to overhaul the existing London ON Bikes plan, with major revisions to meet climate informed modal splits by 2030. The new plan should aim for transportation equity by only using modern Vision-Zero compliant design approaches and by building exclusively All Ages and Abilities infrastructure.
3. We recommend funding the creation of an Active Transportation Strategy at a funding rate of $50/person/year, or ~$20M annually. This is consistent with funding in high mode-share cities throughout the world.
4. We recommend that council direct construction of a temporary city-wide bike grid to be constructed by July 1, 2021. This emergency network should rapidly deploy inexpensive materials, while retaining All Ages and Abilities design principles. Full implementation of permanent AAA infrastructure should be completed during regular life cycle renewal of these streets to minimize ongoing costs.
5. We request that staff initiate consultation with Vision Zero Canada for a frank assessment of our Vision Zero progress. We request Vision Zero Canada’s continued

involvement in our trajectory toward zero deaths or serious injuries on our road system for cyclists, pedestrians, and motorists alike.

6. We recommend a moratorium on all planned and future road widening, due to there being no climate informed transportation mode split scenario that permits for anything less than 50% decrease in total driving. Funding currently allocated to road widening ($75M per year) should be used to fund transit and cycling infrastructure for maximum climate emergency mitigation effect.
7. We recommend that the City of London decrease all residential speed limits to 30 km/h commensurate with safe practices as defined by NACTO. This will immediately facilitate safe cycling in all neighbourhoods, including school routes, city-wide. While we acknowledge that design, not speed limit, is the essential factor in decreasing speeds on roads, neighbourhood streets should be re-designed for 30 km/h design speeds during life cycle renewal.

"We have presented governments with pretty hard choices. We have pointed out the enormous benefits of keeping to 1.5C, and also the unprecedented shift in energy systems and transport that would be needed to achieve that. We show it can be done within laws of physics and chemistry. Then the final tick box is political will. We cannot answer that. Only our audience can – and that is the governments that receive it."

- Jim Skea, Professor of Sustainable Energy at Imperial College London, co-chair of the United Nations Intergovernmental Panel on Climate Change working group on mitigation.

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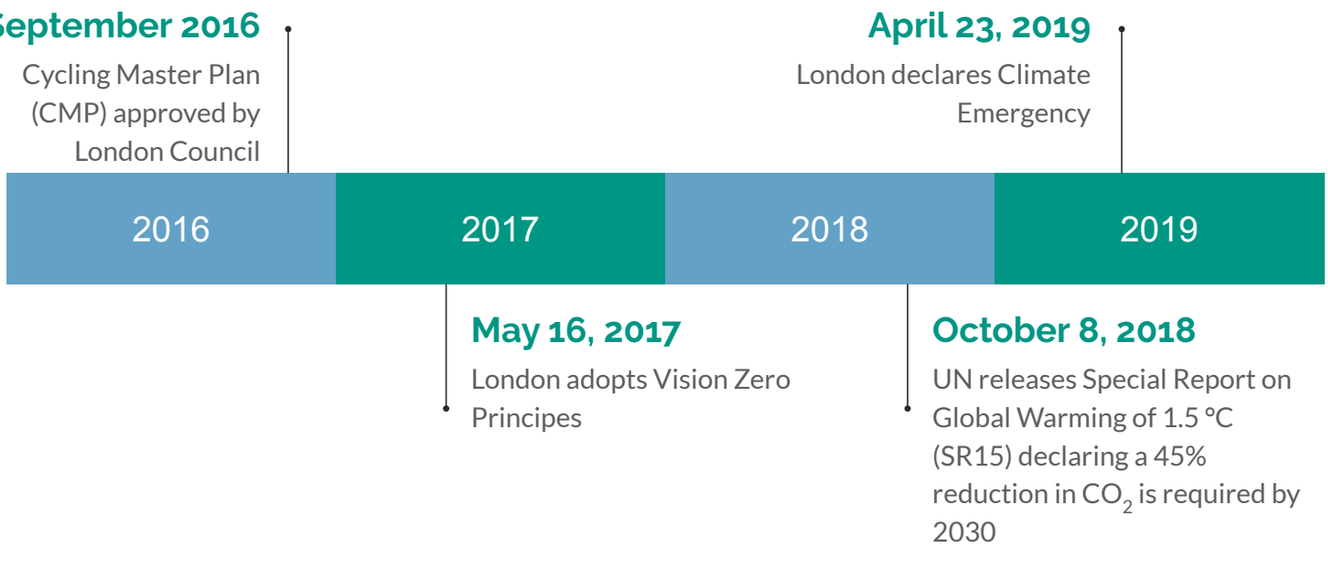
City of London
Cycling Master Plan Review

Master Plan Review Working Group

Timeline of Key Events



The Need to Review the CMP

Based on the timeline of events since the CMP was adopted, the CMP requires a detailed review based on:

➔ **Climate Emergency**

Are the mode share targets upon which the CMP is based consistent with the need for 45% reduction in CO2 emissions? If not, what mode split targets are required? Is the CMP consistent with achieving these targets?

➔ **Vision Zero**

Is the CMP consistent with the Vision Zero principles that no loss of life is acceptable, that we all make mistakes, and that traffic fatalities and serious injuries are preventable and that eliminating them is a shared responsibility between road users and those that design/maintain them?

Climate Emergency

UN Special Report on Global Warming of 1.5°C (SR15)

- *Global net human-caused emissions of carbon dioxide (CO2) would need to fall by about 45 percent from 2010 levels by 2030, reaching 'net zero' around 2050*

Canada's Changing Climate Report 2019

- *Both past and future warming in Canada is, on average, about double the magnitude of global warming*
- *Canada and the rest of the world reduce carbon emissions to near zero early in the second half of the century and reduce emissions of other greenhouse gases substantially*

City of London Statement on Climate Emergency

1. Acknowledgement of the Situation

Whereas climate change is currently contributing to billions of dollars in **property and infrastructure damage** worldwide, **stressing local and international economies**; Whereas climate change is currently **jeopardizing the health and survival** of many species and other natural environments worldwide, **stressing local and international eco systems**; Whereas climate change is currently harming human populations through **rising sea levels** and other extraordinary phenomena like **intense wildfires** worldwide, stressing local and international communities;

City of London Statement on Climate Emergency

2. The Need for Action

Whereas recent **international research** has indicated a need for **massive reduction in carbon emissions in the next 11 years** to avoid further and **devastating economic, ecological, and societal loss**; Whereas the climate in **Canada is warming at twice the rate of the rest of the world**, as per Canada's Changing Climate report; **Whereas current initiatives such as the green of the city's fleet and energy reduction initiatives are not sufficient to meet the targets as defined by the IPCC scientists**

City of London Statement on Climate Emergency

3. The Declaration of Climate Emergency

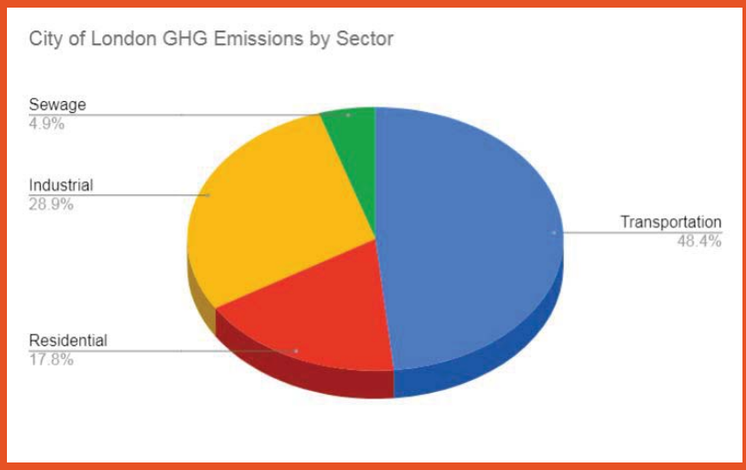
Whereas an emergency can be defined as "an often dangerous situation requiring immediate action"; Whereas municipalities such as Kingston, Vancouver and Hamilton have already declared climate emergencies; Therefore, **a climate emergency BE DECLARED by the City of London for the purposes of naming, framing, and deepening our commitment to protecting our economy, our eco systems, and our community from climate change**.

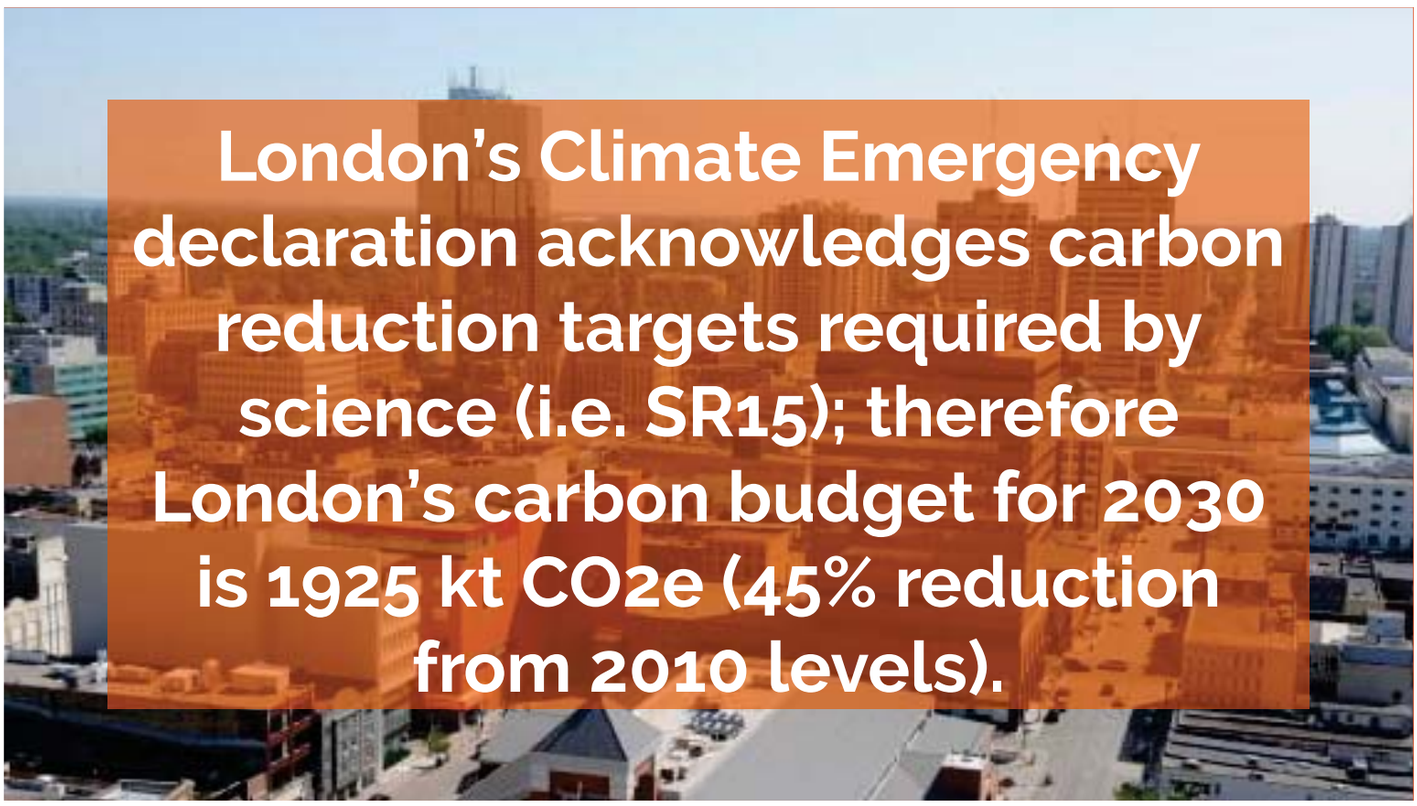
2017 Community Energy and Greenhouse Gas Report

London's total carbon emissions in 2017 were 2870 kilotonnes (kt) CO_2 equivalent (CO_2e)

Largest source of emissions is transportation sector

Around 70% of transportation sector emissions is from personal vehicles





London's Climate Emergency declaration acknowledges carbon reduction targets required by science (i.e. SR15); therefore London's carbon budget for 2030 is 1925 kt CO_2e (45% reduction from 2010 levels).

Scenario Analysis of Carbon Emissions

Methodology

Different scenarios are analyzed, considering:

- Variable electrification of the automotive sector
- Complete electrification of the transit sector
- Variable mode split scenarios
- No changes in residential, industrial, and sewage emissions are assumed due to longer lifecycles of equipment, which is unlikely to be significantly changed by 2030 (also outside our scope as a committee)

Scenario Analysis of Carbon Emissions

TMP-Based Mode Split

TMP considers scenarios with two different growth patterns:

- **Scenario A:** population growth of 73,800 to a total population of ~430,000 by 2030 (21% increase from 2007)
- **Scenario B:** population growth of 140,000 to a total population of ~493,000 by 2030 (39% increase from 2007)
- No change in vehicle electrification assumed

Transportation Master Plan (TMP) Mode Split Targets

Mode	2009 Mode Split	2030 Target
Automobile	76%	60%
Transit	11%	20%
Active Transportation - Cycling - Walking	**9%** ~1% ~8%	**15%** 5% 10%
Other	5%	5%

TMP-Based Mode Split Analysis

	Scenario A (pop 430,000)	Scenario B (pop 493,000)
Change in transportation emissions (kt CO_2e)	-61	+133
% Change in transportation emissions relative to 2010	-4%	+10%
Total 2030 Carbon Budget kt CO_2e	1925	1925
Residential kt CO_2e	510	510
Industrial kt CO_2e	830	830
Sewage kt CO_2e	140	140
Transportation as % of allowable GHG in 2030	68%	78%
Total Emissions (% of 2030 Target)	**145%**	**155%**

Scenario Analysis of Carbon Emissions

TMP-Based Mode Split with Electrification

The effects of electrification are examined:

- Full electrification of transit fleet assumed
- Variable electrification of vehicles considered
- International Energy Agency estimates ~30% electrification of personal vehicles by 2030
- Lifecycle emissions of EVs are on average 50% of conventional vehicles (potentially as low as 30% for carbon-free energy supply)

TMP-Based Analysis with Electrification

	100% EVs (pop 430,000)	50% EVs (pop 430,000)	25% EVs (pop 430,000)
Change in transport emissions (kt CO2e)	-716	-388	-225
% Change in transport emissions relative to 2010	-52%	-28%	-16%
Total 2030 Carbon Budget kt CO2e	1925	1925	1925
Residential kt CO2e	510	510	510
Industrial kt CO2e	830	830	830
Sewage kt CO2e	140	140	140
Transportation as % of allowable GHG in 2030	34%	51%	59%
Total Emissions (% of 2030 Target)	111%	128%	136%

Scenario Analysis of Carbon Emissions

Variable Mode Split without Electrification

The effects of mode split are examined:

- Reduce vehicle mode split
- Assume 5% “other” mode split
- Assume remaining share is equally split between active transportation and transit
- Assume Scenario A for population growth
- No change in vehicle electrification assumed

Variable Mode Split Analysis without Electrification

Parameter	Mode Split 5	Mode Split 15	Mode Split 30	Mode Split 45	Mode Split 60
Automobile Mode Share (%)	5	15	30	45	60
Transit Mode Share (%)	45	40	30	25	20
Active Transport Mode Share (%)	45	40	30	25	15
Other Transport Mode Share (%)	5	5	10	5	5
Transportation GHG (kt CO2e)	109	327	654	982	1309
GHG Non-Transport (kt CO2e)	1480	1480	1480	1480	1480
GHG-All (kt CO2e)	1589	1807	2134	2462	2462
Change in GHG from 2009	-92%	-76%	-52%	-28%	-4%
2030 Emissions Budget (kt CO2e)	1925	1925	1925	1925	1925
Transport Fraction of 2030 C Target	6%	17%	34%	51%	68%
Total GHG Relative to Target (kt CO2e)	**-336**	**-118**	**209**	**537**	**864**
Total Emissions (% of 2030 Target)	**83%**	**94%**	**111%**	**128%**	**145%**

Scenario Analysis of Carbon Emissions

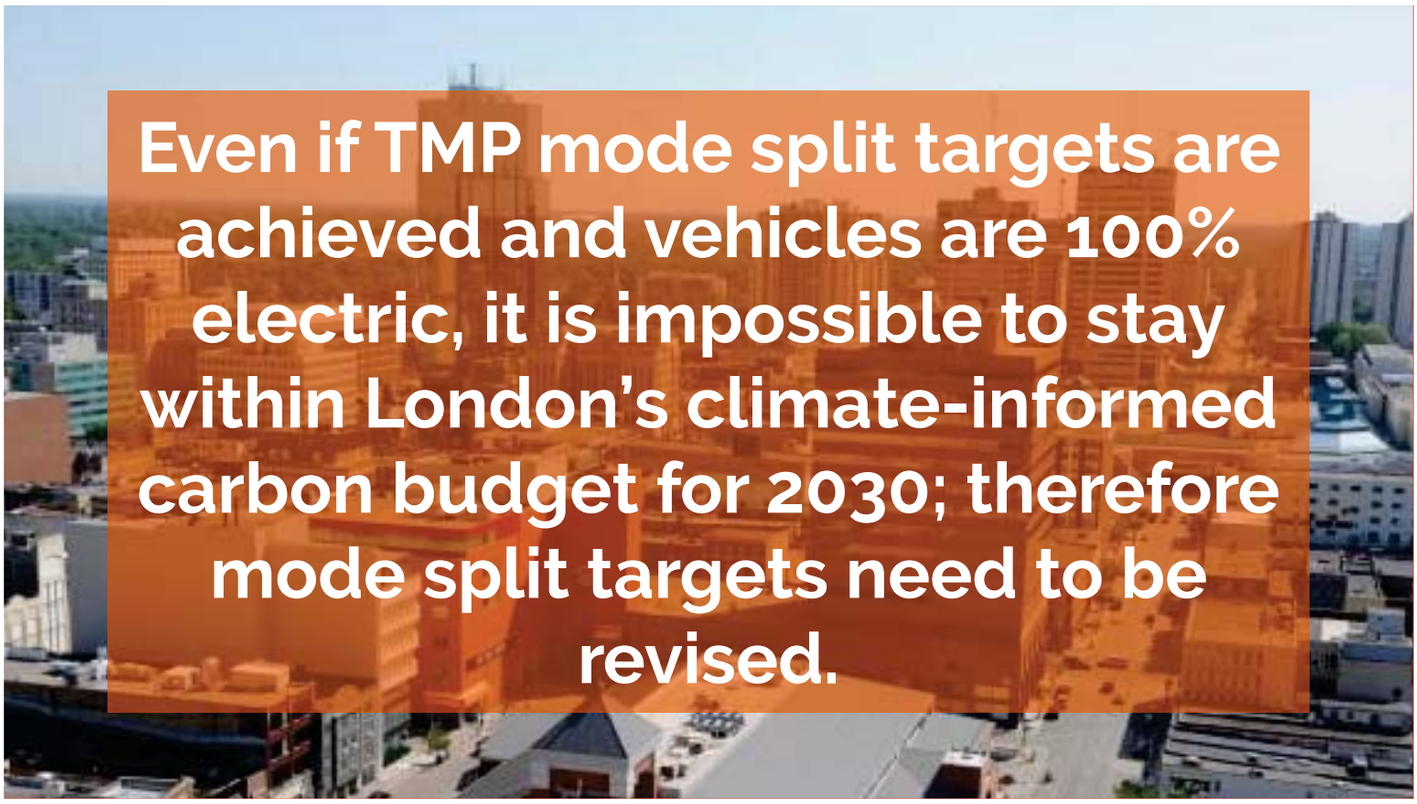
Variable Mode Split with Electrification

The effects of mode split are examined:

- This analysis represents “best of both worlds”; significant mode split changes with variable electrification
- Considers Scenario A for population growth

Variable Mode Split Analysis with Electrification

Parameter	TMP (Mode Split 60)	Mode Split 30 0% EV	Mode Split 30 25% EV	Mode Split 30 100% EV	Mode Split 45 25% EV
Automobile Mode Share (%)	60	30	30	30	45
Transit Mode Share (%)	20	35	35	35	25
Active Transport Mode Share (%)	15	30	30	30	25
Other Transport Mode Share (%)	5	5	5	5	5
Transportation GHG (kt CO2e)	1309	654	573	327	859
GHG Non-Transport (kt CO2e)	1480	1480	1480	1480	1480
GHG-All (kt CO2e)	2462	2134	2053	1807	2339
Change in GHG from 2009	-4%	-52%	-58%	-76%	-37%
2030 Emissions Budget (kt CO2e)	1925	1925	1925	1925	1925
Transport Fraction of 2030 C Target	68%	34%	30%	17%	45%
Total GHG Relative to Target (kt CO2e)	**864**	**209**	**128**	**-118**	**414**
Total Emissions (% of 2030 Target)	**145%**	**111%**	**107%**	**94%**	**121%**


Even if TMP mode split targets are achieved and vehicles are 100% electric, it is impossible to stay within London's climate-informed carbon budget for 2030; therefore mode split targets need to be revised.


While it is absolutely clear that the existing TMP mode split targets are insufficient, we can rapidly address some of these needs through the Cycling Master Plan. To achieve GHG reduction goals, the current Cycling Master Plan requires an increase in planned cycling mode split from 5% to ~25% or greater.

Climate-Informed Mode Split Target

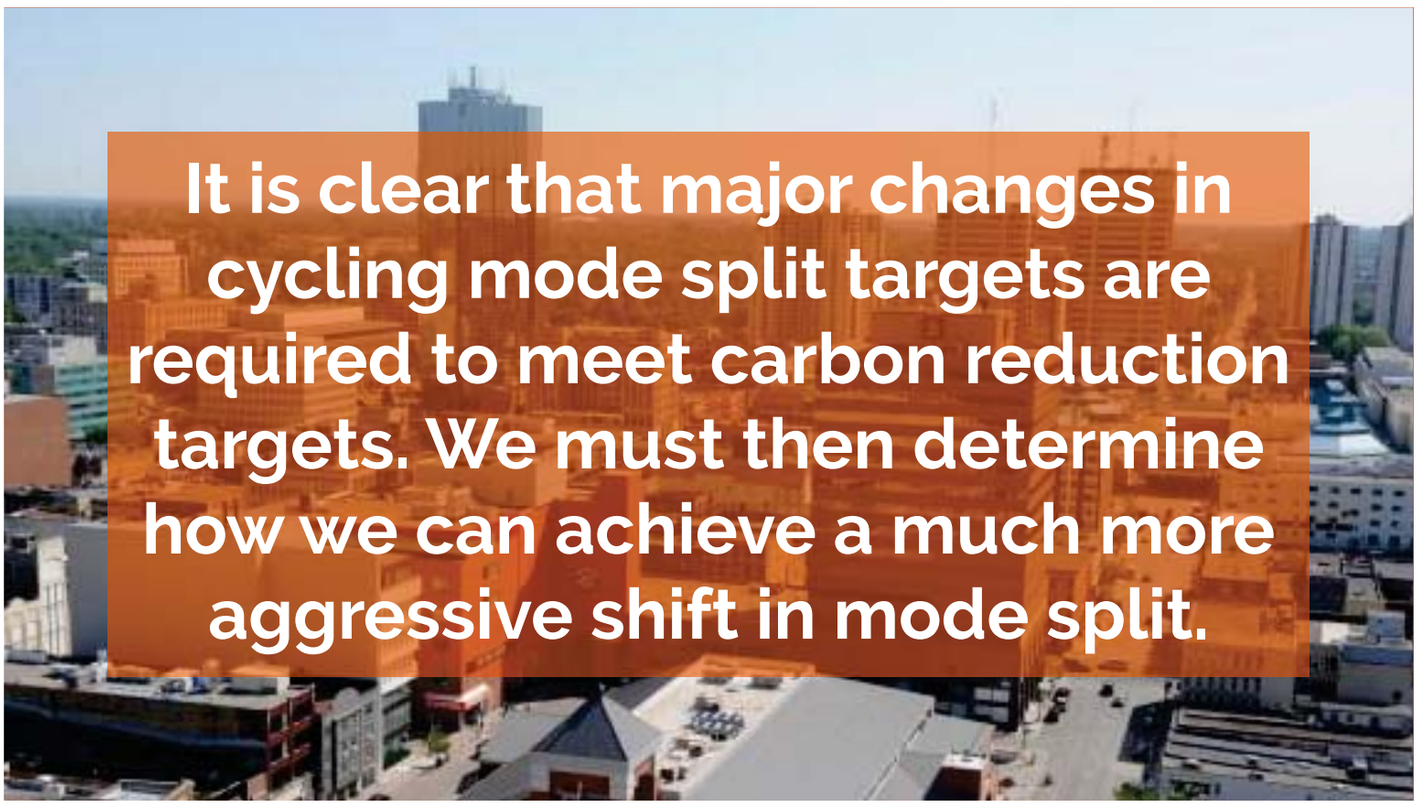
- 100% Electrification of London Transit Vehicles
- 25% Electrification of Private Cars and City Vehicles
- Mode Split:
  - 25% Automobile
  - 35% Transit
  - 35% Active Transportation (walking 10%, cycling 25%)
  - 5% Other
- Net GHG Emissions for this outcome: 1957 kt CO_2e, ~102% of permitted emissions

Financial Benefit of Acting Now

- With a rising price on emitting carbon in Canada, London will benefit economically from acting sooner rather than later on climate emergency
- Canada's price on carbon is not a tax, but a fee and dividend system, which charges excessive polluters and reward those who cut emissions faster and deeper
- As individuals and as a city we can collect dividend payments by lowering our overall carbon footprint
- If London acts earlier than other cities on decreasing emissions, it will represent a significant wealth injection into the city on the order of tens of millions of dollars per year

TMP-Based Analysis with Electrification

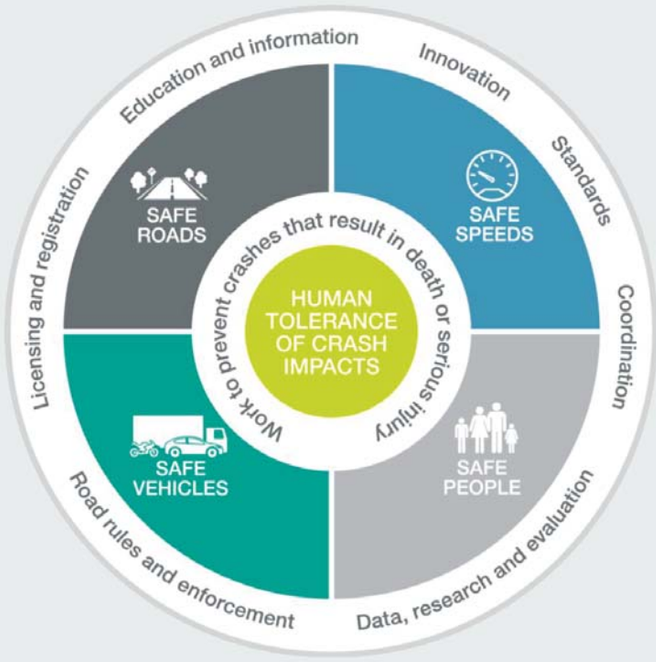
Price of 1t CO2e emitted in 2022:	$50
Price of 1t CO2e emitted in 2030 (PBO estimate):	$102
Current emissions (tonnes CO2e):	2,870,000
TMP emissions (tonnes CO2e):	2,789,000
Mode Split 30 emissions + 25% EV (tonnes CO2e):	2,053,000
Difference [MS30-ev25 - TMP] (tonnes CO2e):	736,000
2022 [MS30-ev25 - TMP] Difference x Carbon Dividend (annual):	$36,800,000
2030 [MS30-ev25 - TMP] Difference x Carbon Dividend (annual):	$75,072,000



Vision Zero

On May 16, 2017, Municipal Council adopted the following principles as its Vision Zero declaration:

- No loss of life is acceptable
- Traffic fatalities and serious injuries are preventable
- We all make mistakes
- We are all physically vulnerable when involved in motor vehicle collisions
- Eliminating fatalities and serious injuries is a shared responsibility between road users and those who design and maintain our roadways



Vision Zero vs. London Road Safety Strategy

Vision Zero

Traffic deaths are preventable, and the loss of life is not negotiable

London Road Safety Strategy

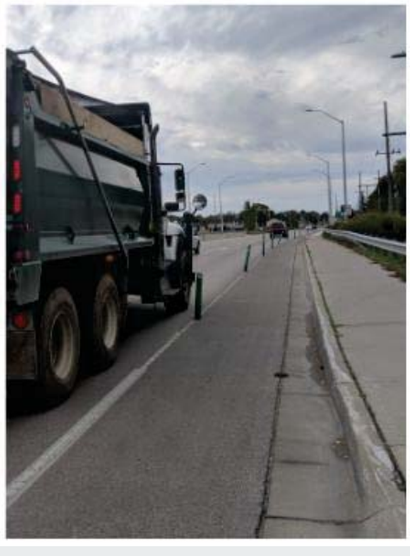
Reduce injury and death on roads by 10% within five years

Vision Zero holds transportation systems designers and policy-makers accountable and responsible for road safety, rather than individual road users

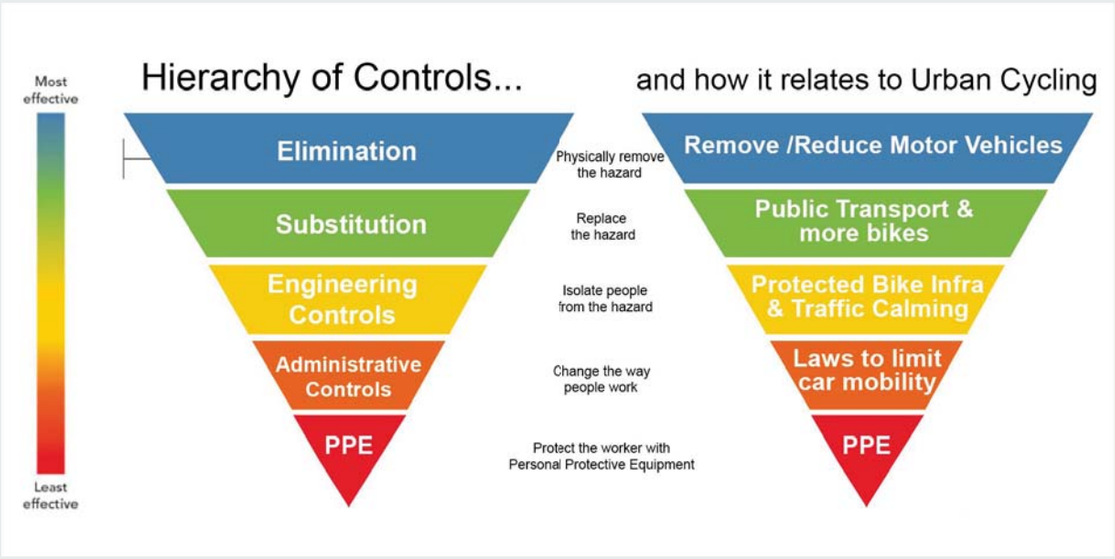
London's Interpretation of Vision Zero

- London's goal accepts:
  - More than 1000 injuries and deaths on our roads are inevitable
  - Programs (i.e. not safe systems) will reduce injury and death
- Vision Zero requires focus on **system failure**
- Safe system design focuses on building better roads, improving vehicle safety technologies, and managing kinetic energy (speed reduction) to reduce risk of injury
- Strives to create road system designs that anticipate human error, and that are forgiving when errors are made

Representative Non-Safe Systems

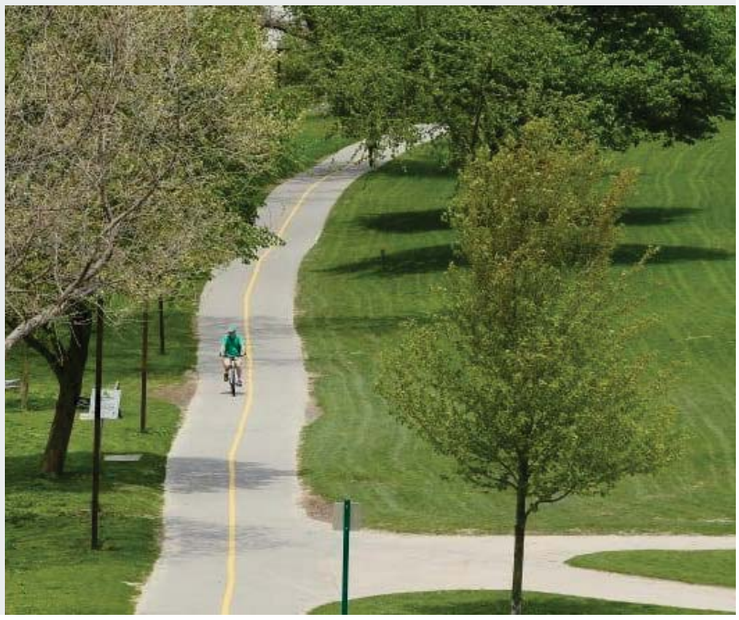


Hierarchy of Controls



Of the major initiatives in the CMP, the majority of planned initiatives are considered to be Administrative or Behavioural Controls. Less than 1% of planned interventions (protected bike lanes, 7.5 km out of 799 km of "facilities") could be considered Engineering controls, and 0% of the CMP could be considered Substitution or Elimination.

Cycling Infrastructure Assessment



Achieving the required GHG reductions is possible, and other cities of similar size have already done this

- It is important to note the role of great transit and land use policy in achieving these goals
- Here, we focus on how cycling infrastructure plays a role in achieving GHG reduction goals

Mode Split in Winter Cities

City	Population	Area (km²)	Bike Share (%)	Transit Share (%)
London, CAN	***355,000***	***232 sub/urban 402 incl. south rural***	***~1%***	***11%***
Montreal, CAN	1,780,000	431	3%	19%
Toronto, CAN	2,930,000	630	1%	24%
Vancouver, CAN	675,000	115	12%	17%
Copenhagen, DEN	602,000	88	62%	27%
Utrecht, NL	1,285,000	99	33%	28%
Uppsala, SWE	168,000	49	28%	20%
Munster, GER	**310,000**	**302**	**39%**	**11%**
Freiburg, GER	227,000	153	13%	12%
Bremen, GER	**557,000**	**326**	**25%**	**24%**

Achieving High Cycling Mode Split

- Attaining high modal splits for cycling and transit is possible in winter cities
- Attaining high modal split in relatively lower density cities is also possible (e.g. Bremen, Munster)
- High transit usage and high cycling mode split are not necessarily coincident (e.g. Munster); both require different infrastructure investments that are complementary when done well (e.g. Utrecht)

The Four Types of Bicyclists

Strong and Fearless

People willing to bicycle with limited or no bicycle-specific infrastructure

Enthused and Confident

People willing to bicycle if some bicycle-specific infrastructure is in place

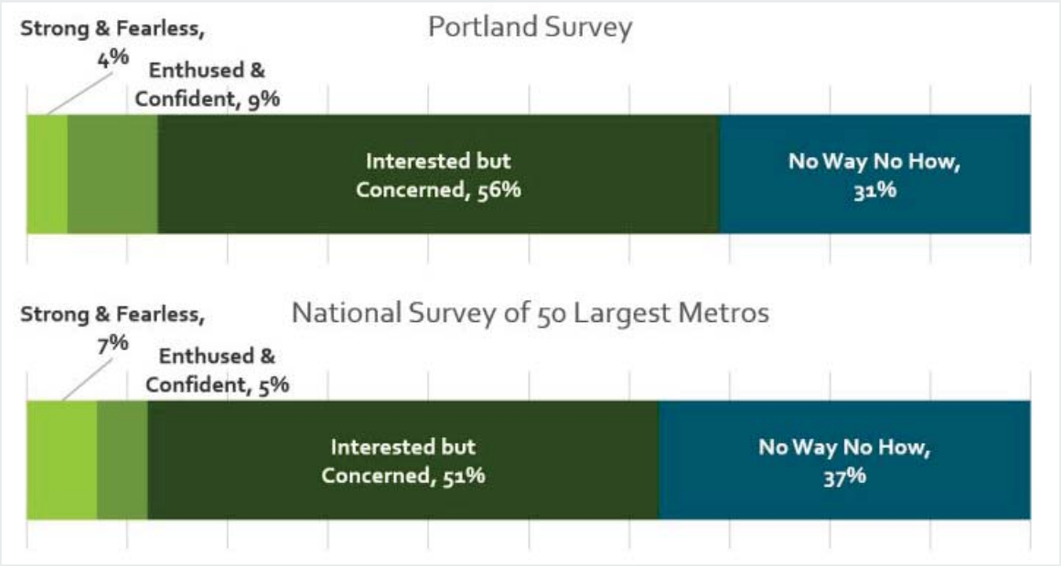
Interested but Concerned

People willing to bicycle if high-quality bicycle infrastructure is in place

No Way, No How

People unwilling to bicycle even if high-quality bicycle infrastructure is in place

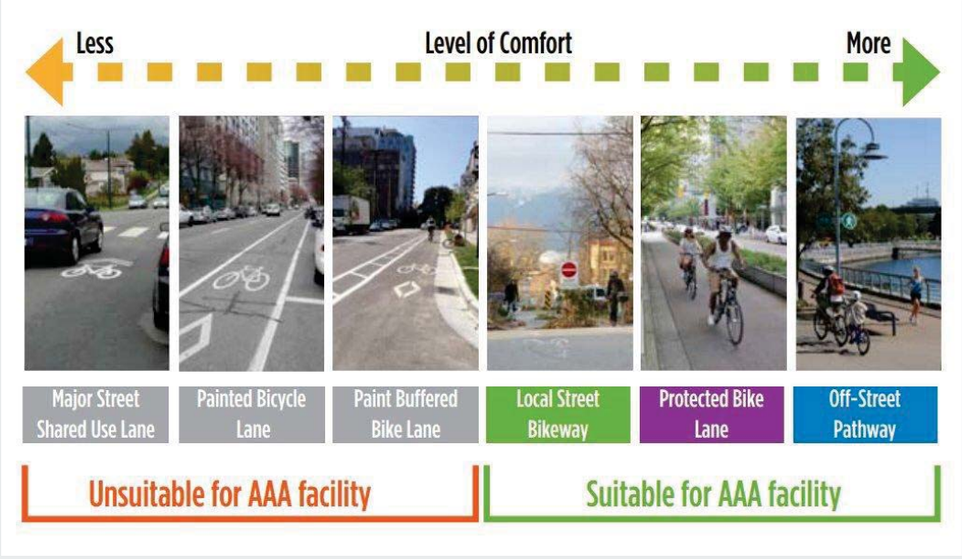
Distribution of the Four Types of Bicyclists

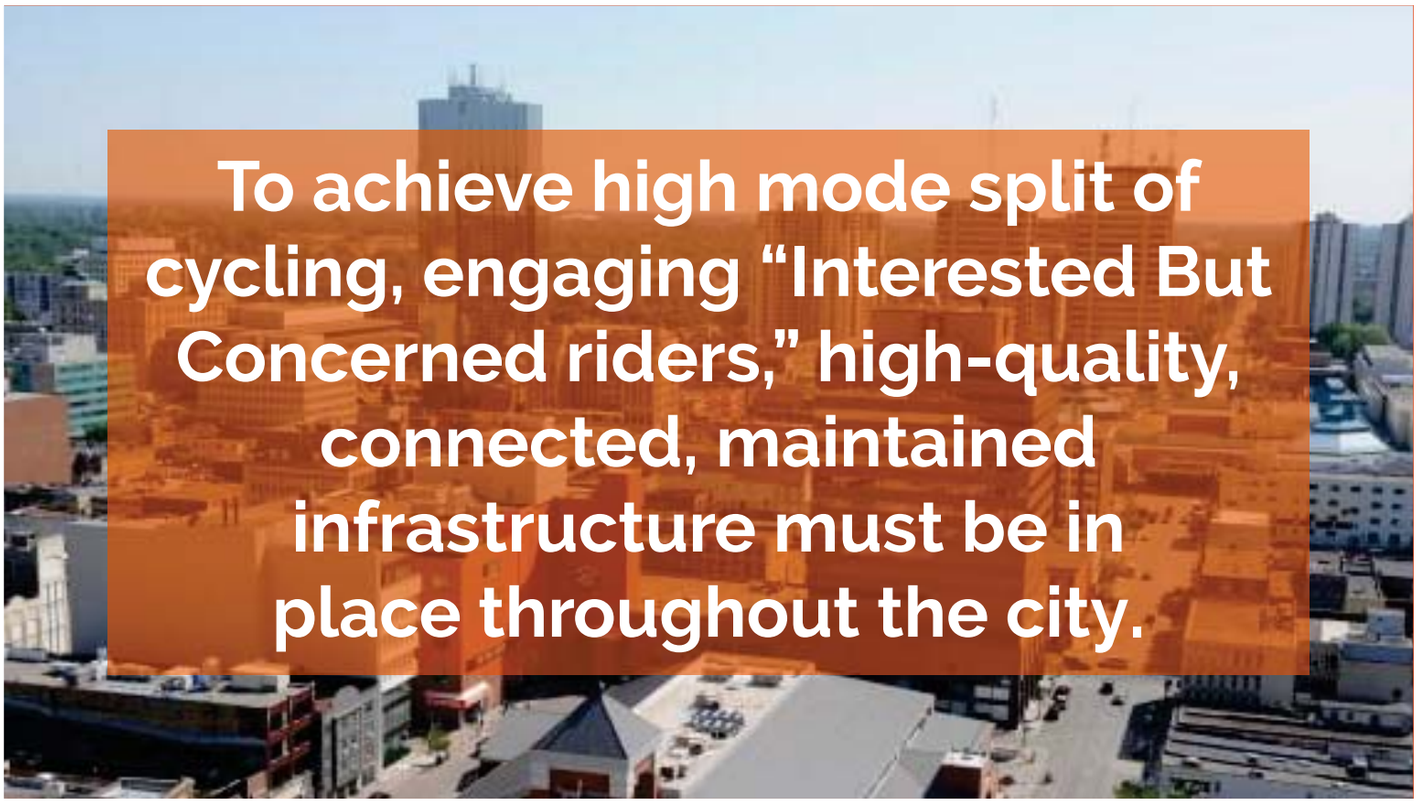


London, ON: A Major Outlier?

- “The market for commuter based cycling infrastructure is approximately 9% of the overall population” - City of London Transportation Master Plan
- London’s CMP is based on the premise that only 9% of the general population has a willingness to cycle; this is suspiciously similar to the “Strong and Fearless” and “Enthused and Confident” groups
- It is with virtually certainty that we conclude that London’s potential cycling market share is not a measly 9%, but given proper infrastructure, greater than 60% of the total population would choose cycling for many trips

Infrastructure Requirements for AAA





To achieve high mode split of cycling, engaging "Interested But Concerned riders," high-quality, connected, maintained infrastructure must be in place throughout the city.

AAA Infrastructure in the CMP

	Existing in 2016 (km)	Proposed in CMP (km)	Total (km)
Cycle Track (Protected Bike Lane)	0	7.5	**7.5**
In-Boulevard Multi-use Pathway	42	28.2	**70.2**
Multi-use Pathway	166	78.7	**244.7**
Total	**208**	**114.4**	**322.4**

- Of the 799 km of facilities proposed in the CMP, only 7.5 km (less than 1%) are cycle tracks
- This represents <1% of arterial road network
- The value of multi-use pathways is acknowledged for recreational cycling; however these are less effective for shifting mode share since they do not directly access many key destinations

Only 4% of London's planned bike routes over the next four years meet AAA quality standards. Stated differently, London's approach builds 96% of its cycling infrastructure to serve existing cyclists (Strong and Fearless, Enthused and Confident) marginally better, rather than planning streets for a wider ridership demographic, which represents more than 90% of the population.

Who Are We Building Bike Lanes For?

- Building for the “Fearless” and “Enthused and Confident” groups may allow London to meet the TMP-based 5% mode share goal
- However, it will never be able to grow beyond 5-10% mode share without accessing the “Interested but Concerned” group of riders
- Most people don’t consider cycling as an option for because they have never seen, let alone used, quality AAA bike infrastructure
- Once people see and try AAA infrastructure, they will choose a bike for many trips; until that point, citizens will never ask for it, because they don't know that it is even possible

Focusing on increasing cycling mode split is a cost effective and quick way of achieving GHG reduction targets as compared to transit, which is requires much larger infrastructure investments and longer timelines for completion.

Comparison with Other Cities

London's Cycling Master Plan was compared with the plans from similar cities around Canada: Halifax (2014), Waterloo Region (2014), Ottawa (2013), Waterloo (2011), Victoria Capital Regional District (2011), and K (2010)

City of Calgary

How Does London Differ?

- Addressing “Interested but Concerned” Cyclists
  - Each of the other cities recognizes this as an important group to target
- Identifying Goals and Expected Outcomes
  - Every other city identifies significantly increasing the cycling mode share and reducing cycling collisions as a metric for evaluating the cycling policies and actions
- Criteria for Evaluating the Success of Projects
  - The best plans consider methods for evaluating the success and gauging the potential for projects to increase mode share
- Data and Demographics Collection
  - Other cities address the need for and the means for collecting the data that their planning and evaluative processes require in order to facilitate data-driven decision-making

Conclusions

London’s CMP states its vision of “providing infrastructure which is considered comfortable, safe, and convenient…for all Londoners.”

➔ **Climate Emergency**
The target mode share of the CMP does not allow for sufficient reductions in GHG emissions

➔ **Vision Zero**
The current CMP is inconsistent with the Vision Zero safe systems design principles

➔ **Metrics of Success**
Kilometres of lanes is the metric of success in the current CMP; the degree to which it provides infrastructure that is “comfortable, safe, and convenient” is not evaluated

Recommendations

We RECOMMEND that council:

- request a detailed evaluation of the greenhouse gas emissions implications of the City of London Transportation Master Plan in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the greenhouse gas emissions implications of the City of London Transit Master Plan in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the greenhouse gas emissions implications of the City of London Official Plan or The London Plan in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the greenhouse gas emissions implications of the City of London Parking Strategy in accordance with the City of London's Declaration of Climate Emergency.

Recommendations

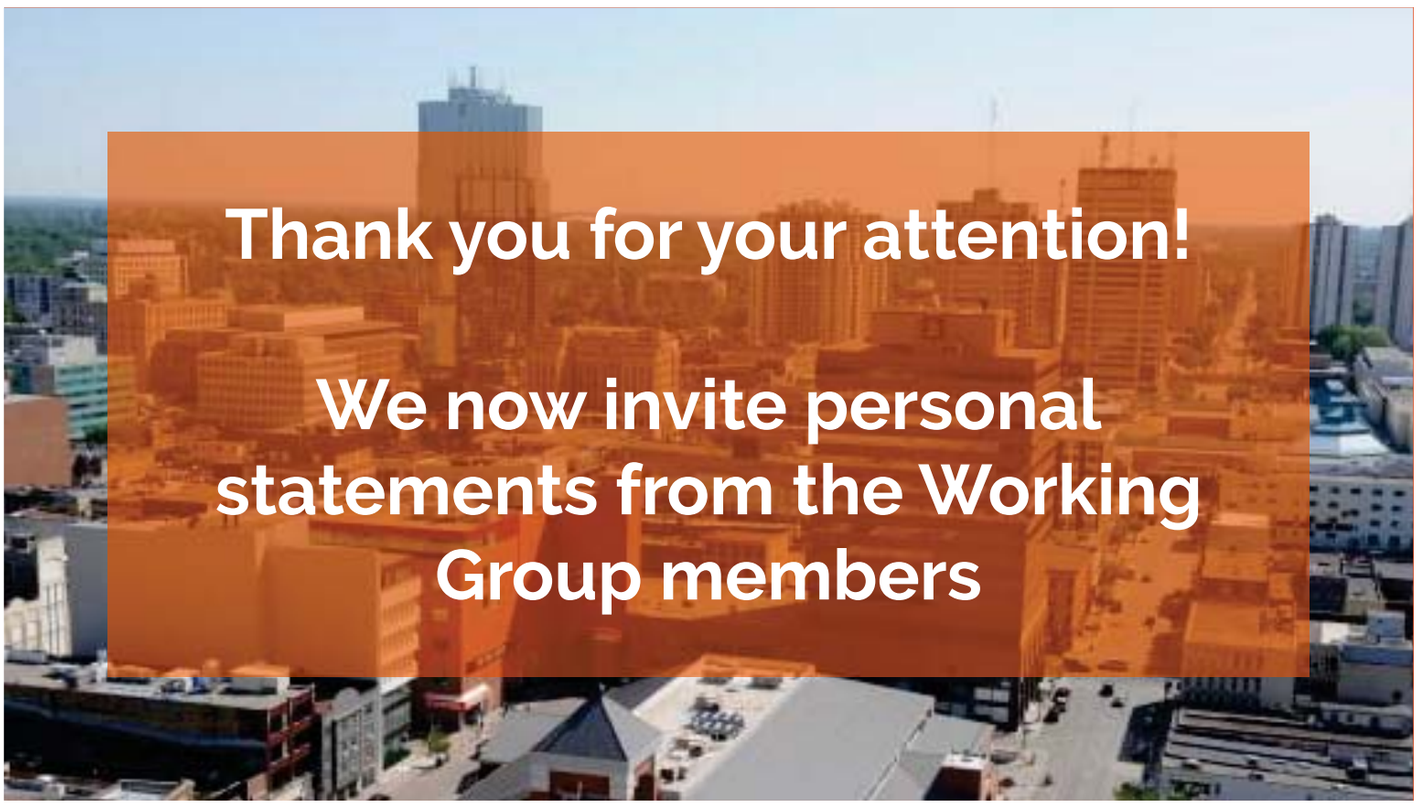
We RECOMMEND that council:

- request a detailed evaluation of the greenhouse gas emissions implications of the City of London Accessibility Strategy in accordance with the City of London's Declaration of Climate Emergency.
- request a detailed evaluation of the City of London Road Safety Strategy in accordance with the City of London's Adoption of Vision Zero
- direct staff to undertake major revisions to the City of London's Cycling Master Plan infrastructure implementation in accordance with the Declaration of Climate Emergency. The revised plan should be singularly focused on building All-Ages-and-Abilities infrastructure to achieve climate-informed modal split targets, while achieving cost allocation and social equity for basic affordable transportation by 2030.

Recommendations

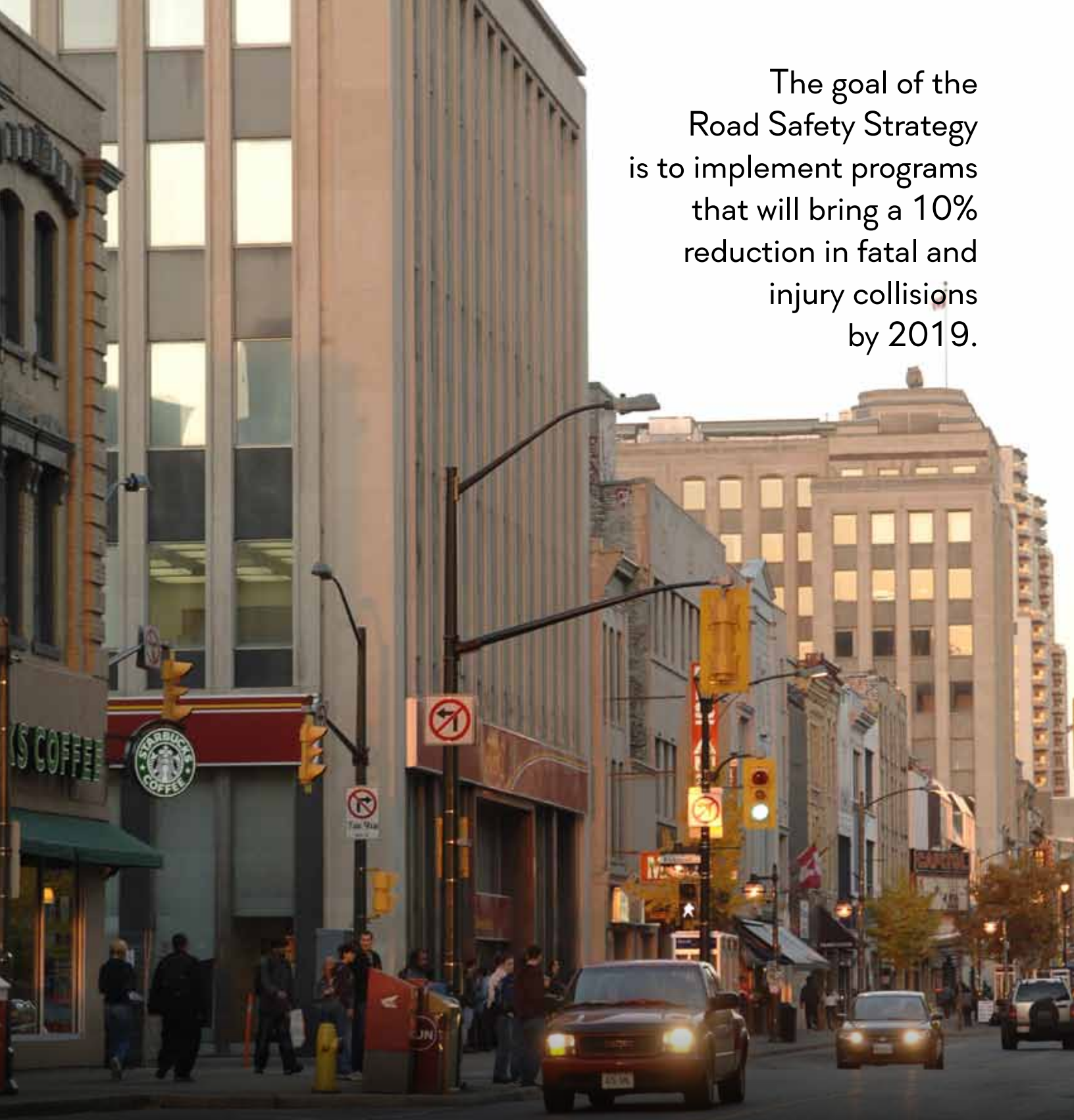
We RECOMMEND that council:

- direct staff to design and construct an emergency city-wide minimum grid of protected bike lanes designed for All-Ages-and-Abilities to be completed by July 1, 2021.
- enact a moratorium on all currently planned and future road widening. Presently budgeted funds for road widening ($75M/year) should be reallocated to transit and cycling for maximum mitigation of climate disruption.
- fund continued investment in active transportation (including walking, accessibility, and micro mobility) at a rate of $50/person/year, or ~$20M/year, comparable to the scale of investments in major cycling cities.
- decrease speed limits on all residential streets to 30 km/h.



London
CANADA

CITY OF LONDON
ROAD SAFETY STRATEGY
2014-2019



The goal of the Road Safety Strategy is to implement programs that will bring a 10% reduction in fatal and injury collisions by 2019.

This document describes the road safety strategy's target areas, programs and their respective actions that will guide the city, the county, and their partners in meeting the goal.

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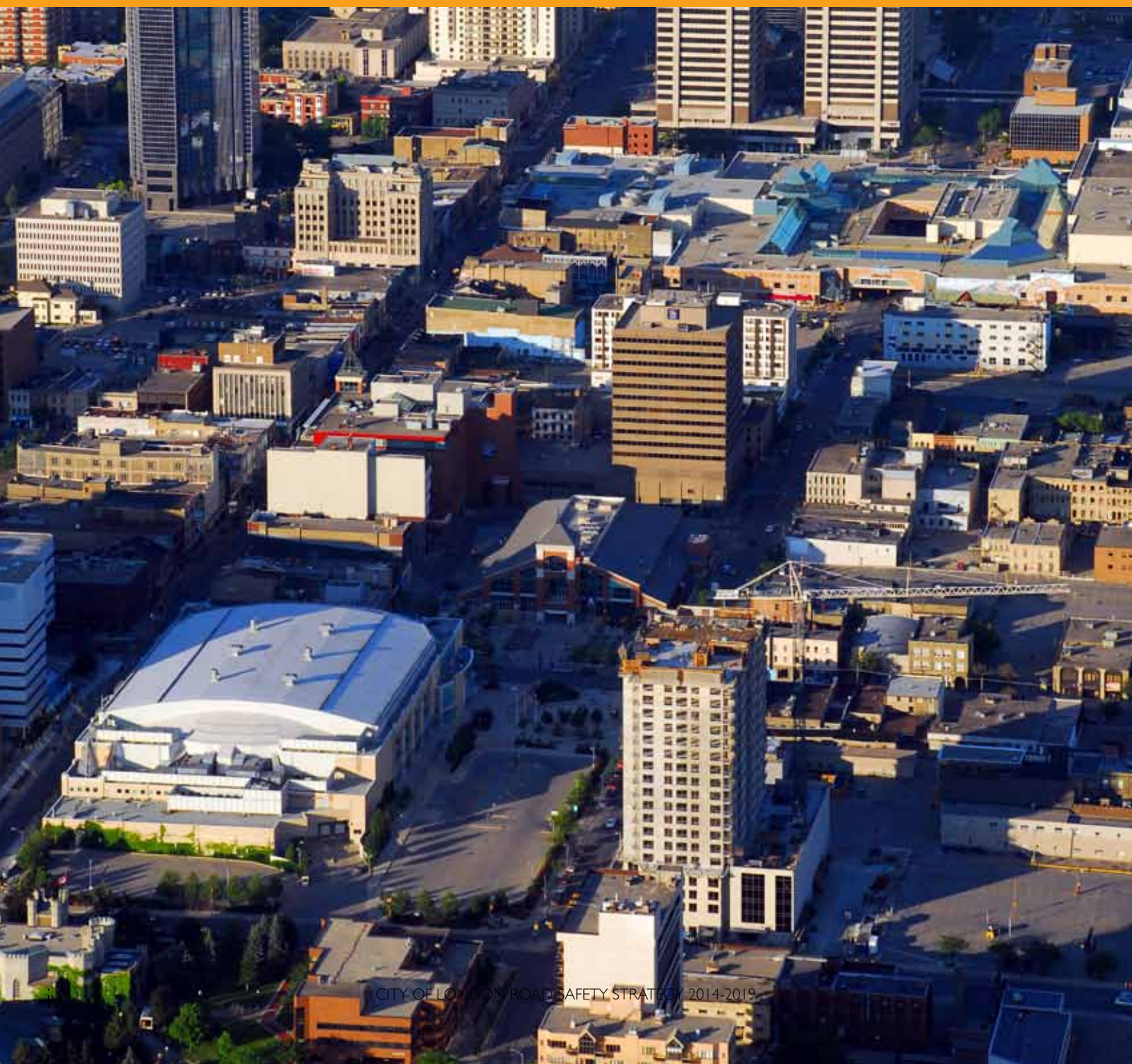
Message from the London Road Safety Strategy Team



The injuries and deaths that result from motor vehicle collisions are a serious public health concern in London and Middlesex County; they take a toll on the victims' families and friends, as well as the health and social services systems. Yet, most of these injuries and deaths are preventable and predictable through the use of strategic and effective road safety initiatives that not only include infrastructure changes and enforcement, but also public education. The London Road Safety Strategy is a plan that will set the stage for a coordinated approach that will be implemented by an active and knowledgeable partnership: the London Middlesex Road Safety Committee (LMRSC).

We would like to congratulate and thank the LMRSC members for their dedicated commitment and ongoing contributions to the development of the London Road Safety Strategy led by the City of London. Over the years, the LMRSC has worked on many specific road safety challenges, not only walkers and cyclists, but drivers as well. The individual organizations and partners represented on the LMRSC have been able to achieve more by working together than they could have on their own.

Each partner brings unique experience and expertise to address the 4 E's of road safety programs: engineering, education, empathy and enforcement. As committee members, we will strive towards our goal of improving the safety of all road users in London and Middlesex County. As part of the Committee's five-year strategic plan, the process of developing the London Road Safety Strategy has advanced the LMRSC's work of improving local road safety.

We would like to acknowledge the LMRSC members who represent the following organizations: Canadian Automobile Association (CAA), City of London, Fanshawe College, London Health Sciences Centre (LHSC), London Police Services (LPS), Middlesex County, Middlesex London Health Unit (MLHU), Ontario Provincial Police (OPP), Ministry of Transportation, Western University, 3M, Young Drivers of Canada and City of London Community Safety and Crime Prevention Advisory Committee.

We would also like to acknowledge the following organizations for their continuous support to the strategy: the London Block Parent Program, and the Thames Region Ecological Association (TREA).

The citizens of London and Middlesex County will benefit from the many road safety programs that will result from the London Road Safety Strategy. This effort will deliver results that may prevent injuries and save lives. The LMRSC cannot achieve its goal without the support of all road users in London and Middlesex County. It is important that all road users understand their responsibilities when using roadways, whether they are driving a car, riding a bike or walking. We ask everyone to embrace the London Road Safety Strategy and to do their part in reducing, or better yet, eliminating the injuries and deaths related to motor vehicle collisions.

We would like to thank the London Road Safety Strategy steering committee members for their effort to improve the health and safety of our citizens.

London Road Safety Strategy Team

Executive Summary

Over past decades, improved roads, improved vehicles, new driver licencing regulations, more stringent drinking and driving laws, seat belt laws, and other initiatives have led to a decline in number and severity of traffic collisions in Canada. However, in recent years, with increasing number of private cars, transit vehicles, trucks, bicycles, and pedestrians on the roads, and increasing congestion and risk to road users have caused a decline in the quality of mobility and safety for all road users.

To respond to this challenge, federal, provincial and municipal agencies in Canada have developed and have been implementing programs to directly address road safety.

Led by the City of London, and in collaboration with the Middlesex London Health Unit, Middlesex County, and other partners, a Road Safety Strategy for London was developed. The London Road Safety Strategy identifies the most important traffic safety issues in the City and surrounding areas. The Strategy also sets out the vision, mission, goals, and actions that will guide the City, the County, and their partners in creating safer roads.

A comprehensive review of the 4-year traffic collision history (2008-2011) was combined with the findings of several forms of public input collected by the City. It was concluded that the areas to be targeted by the Road Safety Strategy during the next five years (2014 - 2019) are:

- **Intersections**
- **Distracted and Aggressive Driving**
- **Young Drivers**
- **Pedestrians**
- **Cyclists**
- **Red Light Running**

For each target area, one or more countermeasures were identified through a comprehensive evaluation process. For an effective program, the multidisciplinary nature of road safety is embraced by the proposed countermeasures. The countermeasures were based on Engineering, Enforcement, Education and Empathy approaches with special focus on prevention of future fatal and injury collisions.

Engineering, Enforcement, Education are traditionally known as the three "E"s. The Empathy approach was introduced to bring awareness of the need for mutual understanding between road users when meeting under conflicting circumstances.

Empathy forms a complementary part of the education actions towards a road users' safety cultural transformation.

New actions or expanded actions forming existing programs in the City will support the implementation of the selected countermeasures, leading to increased safety.

All programs and their respective actions forming the Road Safety Strategy have been adopted by the City of London, County of Middlesex, and their partners. They believe that these programs can be realistically delivered and will effectively result in approximately 155 fewer fatal and injury traffic collisions by 2019/2020.

"155 fewer fatal and injury traffic collisions by 2019/2020"

INTRODUCTION

Development of the London Road Safety Strategy consisted on the completion of several tasks following the traditional state/provincial or municipal approach of analysing collision statistics, identifying the nature of the most severe problems, matching countermeasure programs to address the most severe types and developing delivery strategies.

The first step in finding the Target Areas was to conduct a broad-based literature search and compare it to the City of London and Middlesex County collision database. The collision data were then analyzed looking for traditional and non-traditional areas of high collision frequency.

Selection of the Target Areas was not purely data-driven. There were three sources of input to the development of Target Areas: collision data, public input, and initial City input.

To maximize the potential for success, the choice of Target Areas was adjusted based on a number of factors; which include the severity of the collisions, the potential effectiveness of the countermeasures and the capacity of the involved agencies to change or add to their current programs to deliver countermeasures specific to the safety strategy.

An iterative process was conducted and resulted in the selection of a list of priority programs integrated by Target Area (Intersection, Aggressive/ Distracted Drivers, Young Drivers, Pedestrian, Cyclist, and Red Light Running) , and type of countermeasure (Engineering, Enforcement, and Education/Empathy).

The purpose of the iterative exercise was to assess the road safety partner's ability to undertake specific countermeasures to best reflect their ability to deliver the programs. The City of London action items are predominantly engineering programs. The education/empathy and enforcement programs are predominantly led by partner groups such as Middlesex-London Health Unit, London Health Sciences Centre, Young Drivers of Canada and London Police.

The focus was on programs that are achievable within the resources available and, according to best projections, will achieve the desired objective of 10% reduction within five years.

Existing Traffic Safety Conditions

Traffic collision data, contained in the City of London's database for the years 2008-2011, were analysed to identify trends and collision characteristics.

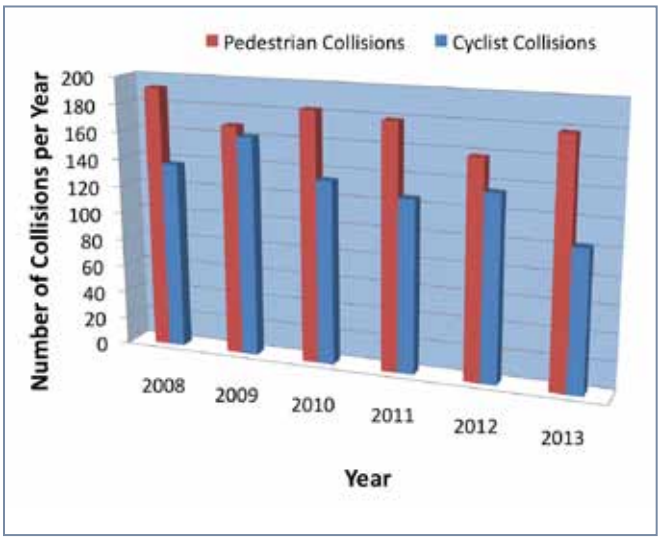
Overall Number of Traffic Collisions

The total number of traffic collisions, recorded in the City of London, has declined over the years 2008 to 2011 from about 8,400 to less than 7,500 collisions.

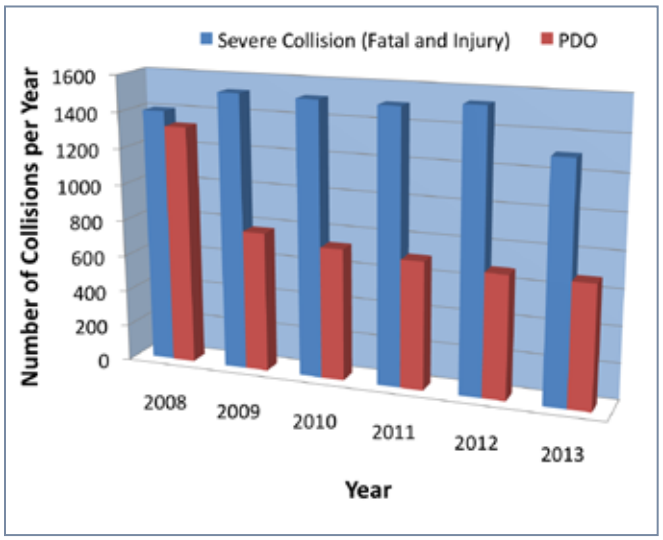
Note: All illustrations are based on total number of traffic collisions, unless the collision severity is specified.

Property-Damage-Only and Severe Traffic Collisions

Information collected by the City of London indicates that Property-damage-only (PDO) traffic collisions as well as the number of severe (i.e., fatal or injury) traffic collisions have remained relatively constant for the period 2009 through 2013.



Pedestrians - Cyclists Collisions*



Severe Collisions*

Traffic Collisions Involving Vulnerable Road Users

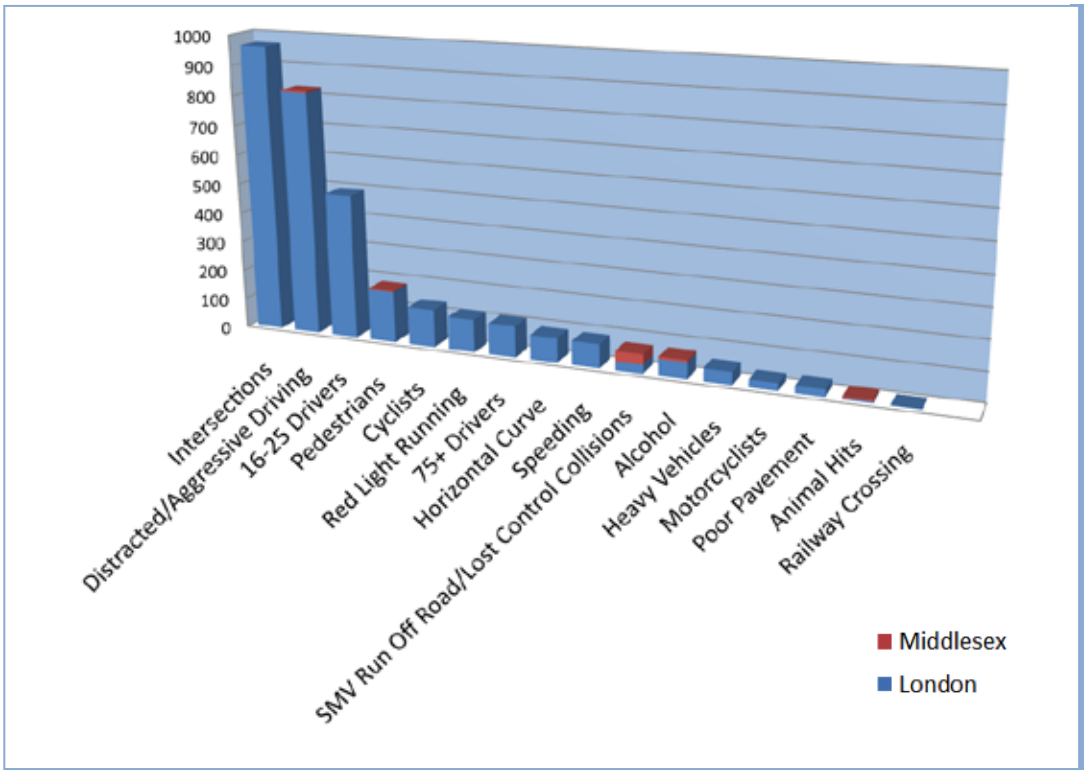
Traffic collisions involving vulnerable road users have declined slightly. Collisions involving vulnerable road users represent less than 5% of all collisions recorded in the City of London. However, the severity of these collisions is significant, with over 90% resulting in a collision causing personal injury or death.

**Note: Only 2008-2011 data was used to develop the Road Safety Strategy. Data for 2012 and 2013 is presented here for information purposes.*

Pedestrians and cyclists are considered vulnerable road users.

Severe Traffic Collisions by Collision Type

The annual average numbers of traffic collisions by type show that a high number of collisions occur at intersections, followed by a large number of distracted and aggressive driving causing severe collisions.



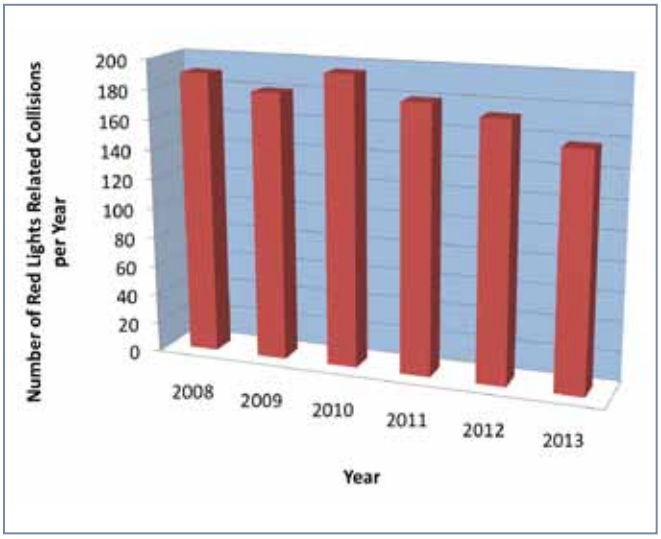
Young drivers, pedestrians, cyclists, red-light running, and older drivers have each been recorded as collision attributes for about 100 collisions annually.

London-Middlesex Fatal and Injury Traffic Collisions (annual average)

Traffic Collisions at or near Intersections

For the purpose of the Road Safety Strategy, intersection collisions are defined as traffic collisions occurring within the intersection area or intersection-related collisions involving vehicles waiting or proceeding towards the intersection, as noted in the Collision Police Report.

The traffic collision data have shown that (1) the majority of the traffic collisions in the City of London occurred at intersections or near an intersection; (2) the majority of the collisions involving vulnerable road users were recorded at intersections or close to intersections; and (3) on average, 175 collisions involving red-light running were recorded annually.

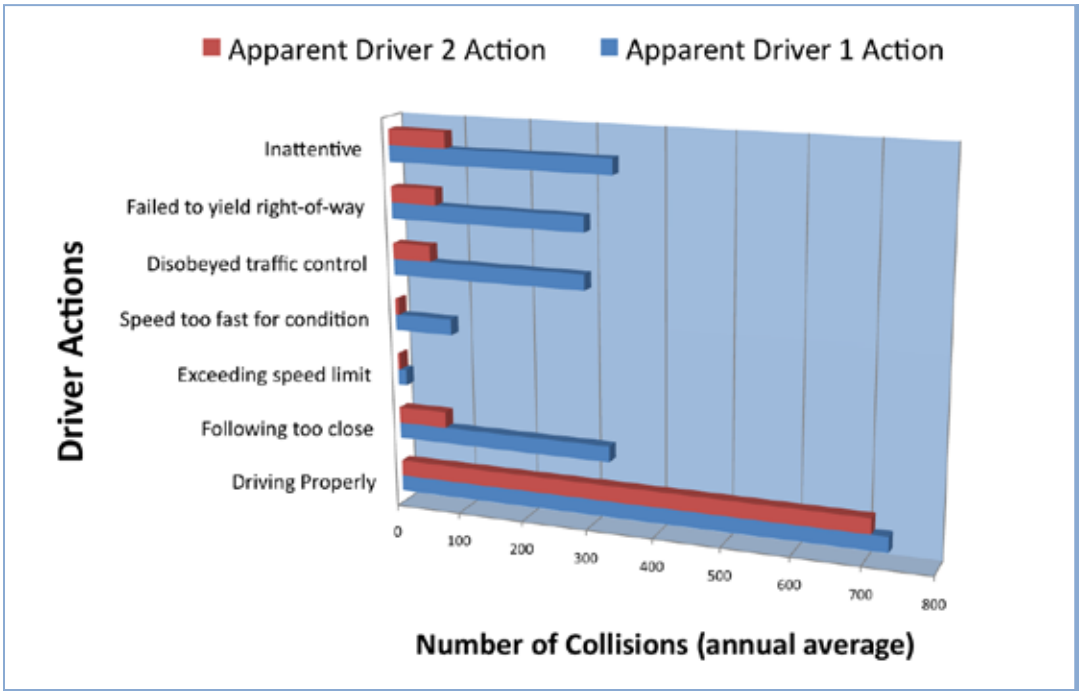


Red Light Related Collisions*

Driver Behaviour

Aggressive driving behaviour is defined as "following too close", "failing to yield", "disobeying traffic control" or "speeding". These behaviours are highly represented as contributing factors to the occurrence of traffic collisions.

In the City of London, speeding was noted as a contributing factor to about 120 traffic collisions recorded annually in the City. The traffic collision data also shows that, in average, every year almost 1,500 drivers are involved in traffic collisions although the traffic collision police reports identified them as "driving properly" and not showing any of the usual collision contributing factors such as following too close or exceeding speed limits.



Contributing factors noted by the Police Report for all drivers involved in a collision.

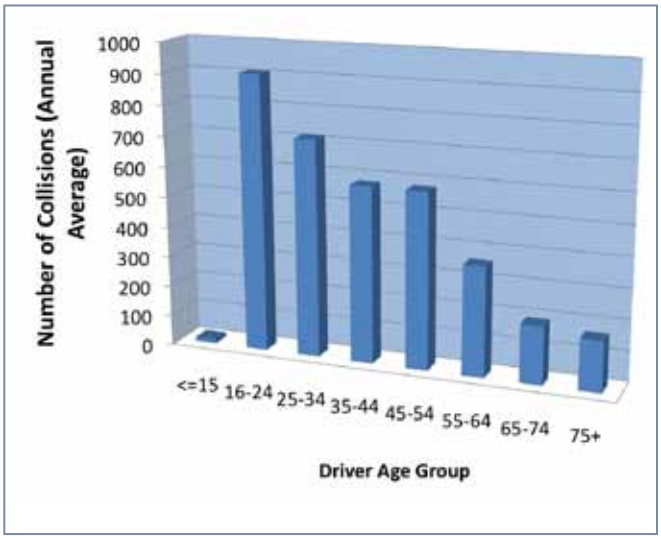
Demographics

Research has shown that young drivers (especially males) are more likely to engage in driving behaviours that increase the risk of traffic collision occurrence (such as aggressive driving).

Due to the fact that the City of London is the residence of a large student community, the traffic collisions were grouped by driver age groups.

Traffic collision records show that the 16-24 age group is responsible for more collisions than any other age group.

However, it is noted that the total driver population licensed by age group (permanent and temporary residents, such as university students) in the City of London is needed to estimate the likelihood of collision involvement by age group.



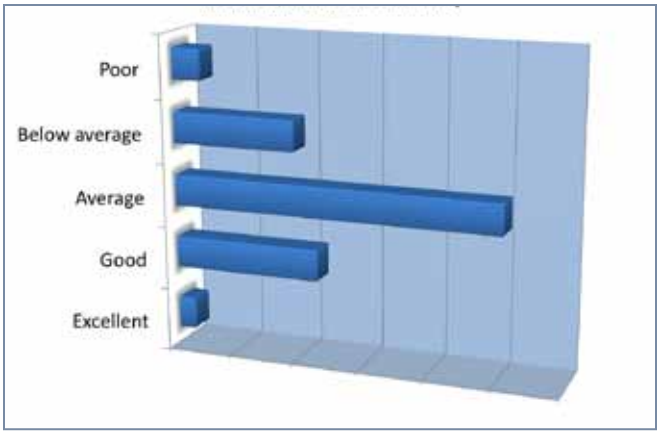
Collisions by Age Group

Public Observations of Traffic Safety in the City of London and Middlesex County

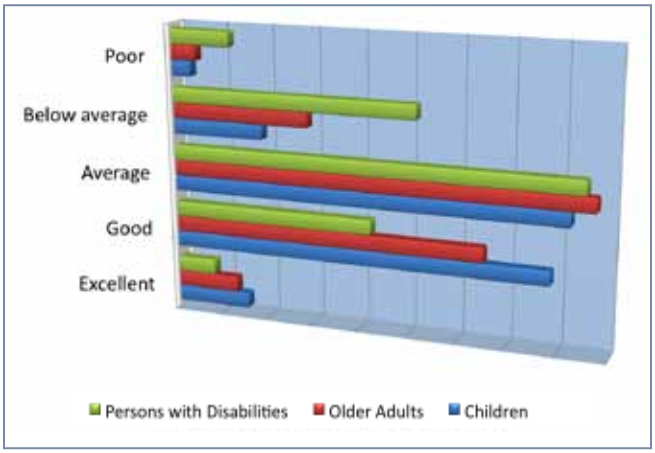
Public input was sought for several traffic safety focus areas.

FOCUS AREAS	AREAS SELECTED FOR PUBLIC INPUT
General Information	Overall level of road and traffic safety in London and Middlesex County and identification of road safety concerns in most need of improvement
Distracted Driving	Distracted driving behaviour in the City
Cycling	The use of a bicycle as a mode of transport, and its level of road safety (from a cyclist perspective)
Occupant Restraints	The use of seat belts and child car seats
Walking	The walking environment and its interaction with children, older adults, and persons with disabilities
Speeding	Speeding and its relationship with aggressive driving and red-light running
Young and Older Adult Drivers	Safety and the age of drivers
Drinking and Driving	Drinking and driving behaviour among the general public
Middlesex County	Safety in the county roads in general, and speeding behaviour in particular

Western Fair Farmer's and Artisans' Market – Public Exhibit



Public Observation Regarding Overall Level of Road and Traffic Safety in London and Middlesex County



Public Observation Regarding Safety Level of the Street and Sidewalk System in London and Middlesex County

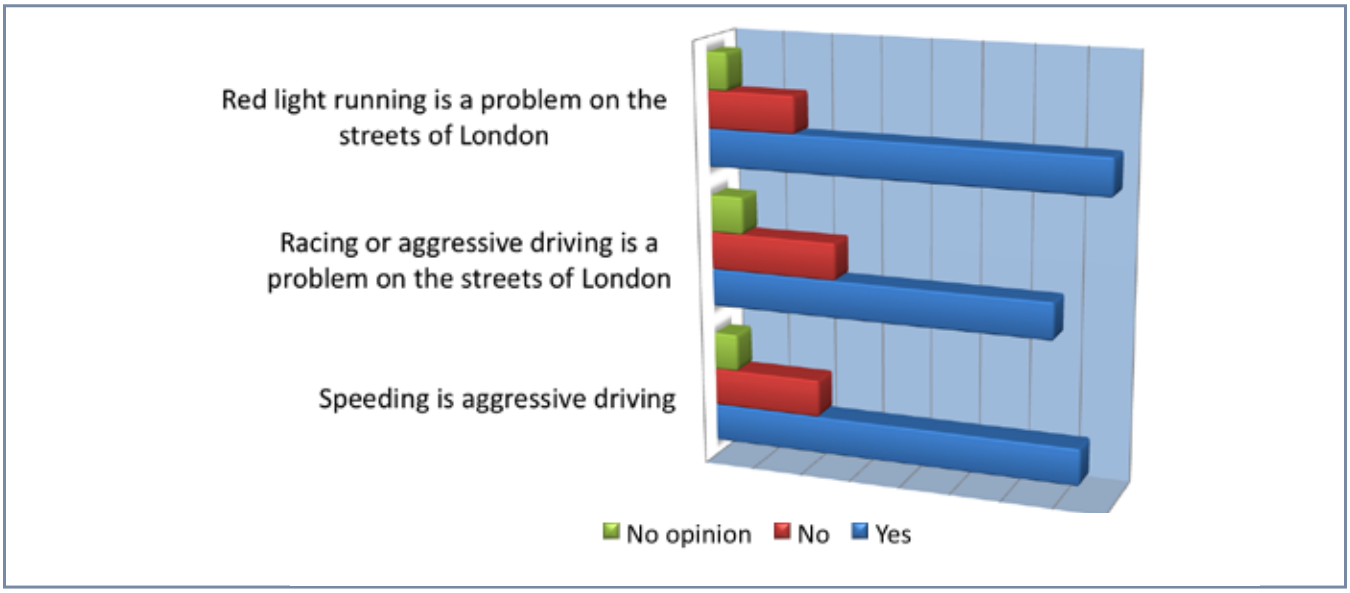
The public provided observations, based on their own experiences. Public events and online public surveys were carried out to attain the public observations of the traffic safety issues in the City of London and Middlesex County.

The current status of traffic safety in general, as well as that for cyclists and pedestrians, is considered average or above average, by the public.

In contrast, the current traffic safety status for persons with disabilities is considered lower (below average or poor) than for children and older adults.

Public considered that aggressive driving (including speeding) and red-light running are a concern in London and Middlesex County. However, it was also noted by the public that drivers seem to exceed posted speed limits on Middlesex County roads more than on City of London roads.

The public observations were compared with the findings of the traffic collision data analysis. These comparisons identified the commonalities and differences between the two sources of information.



Public Observation Regarding Speeding in London and Middlesex County

The results of the iterative process was the identification and endorsement of the City of London and the Middlesex County Road Safety Strategy Vision, Mission and Goals.

Enhancing road safety requires a multidisciplinary, holistic and integrated approach. The City of London's Road Safety Strategy contains countermeasures and supporting actions representing the 4-E's.

ENGINEERING

Physical modification to the roadway network or changes in the traffic operations and signing systems, aiming to create a road environment that is safer for all road users.

ENFORCEMENT

Police is responsible for the enforcement of the Highway Traffic Act and related legislation. It encompasses four main tasks: (1) enforcing the law; (2) promoting road safety; (3) investigating incidents; and, (4) patrolling. Effective enforcement complements the education actions towards a road users' safety cultural transformation.

EDUCATION

A broad based multi-media activity, which in the past took place in schools and other educational establishments. Effective education will lead to traffic cultural transformations and the development of sustainable and safe road user behaviours. It is an on-going process.

EMPATHY

A complementary part of the education actions towards a road users' safety cultural transformation. Approaches road users holistically aiming to develop a better understanding of each other's positions in traffic toward mutual tolerance and respect, and safer road environment.

Road Safety Strategy Target Areas

Target areas were selected for inclusion into the Road Safety Strategy. Target areas provide guidance for the selection of safety programs. The selection of target areas was based on the findings of the traffic collision data analysis and the public input. The traffic collision data analysis focused on combined fatal and injury data, because the information about the traffic collisions that resulted in physical harm to any of the involved road users is of better quality than property-damage-only collisions. Safety programs were selected with more emphasis on severe collisions to provide the highest benefit to the citizens of the City and the County.

*Active & Safe Routes to School (ASRTS)

The road safety strategy was developed with especial attention to the capacity of the service providers to implement the countermeasures and supporting actions selected to reduce fatal and injury collisions within the time frame (2014 – 2019).

Road Safety Programs

Actions Integrated by Target Area and Type of Countermeasure

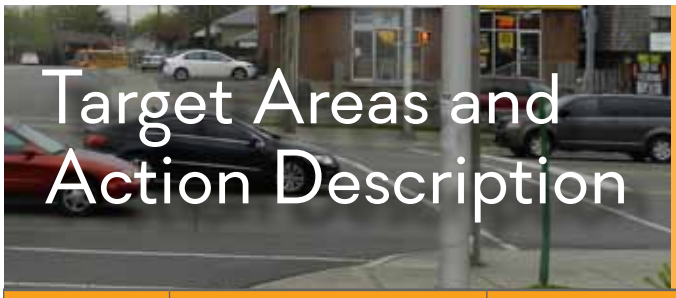
Leadership and commitment are required to reach the goal of road safety programs. Moreover, coordination of road safety programs and their actions among agencies creates synergy leading to greater effectiveness in the reduction of future collisions.

Each road safety program was assigned a lead agency. While all agencies are committed to deliver road safety programs as set toward meeting the goal, lead agencies are further required to:

- Provide a central point of communication between team members
- Receive and provide updates regarding events and activities conducted by team members
- Facilitate the coordination of events, materials, and/or campaigns to avoid duplication of efforts

Issue Based Working Group Leaders

TARGET AREA	AGENCY LEADER	PARTICIPATING AGENCIES
Intersections London	City of London	City of London London Police Service (LPS)
Intersections Middlesex	Middlesex County	Middlesex County Ontario Provincial Police (OPP)
Distracted/Aggressive Drivers	London Police Service	LPS Middlesex County Canadian Automobile Association (CAA) Middlesex-London Health Unit (MLHU) London Health Sciences Centre (LHSC) Ministry of Transportation (MTO) OPP
Young Drivers	London Health Sciences Centre	LHSC LPS Young Drivers of Canada
Pedestrians General	City of London	City of London LPS LHSC
Pedestrians Active and Safe Routes to School & Safe Neighbourhoods	London Block Parent Program	City of London London Block Parent Program OPP Thames Region Ecological Association (TREA)
Cyclists	Middlesex-London Health Unit	LHSC City of London Middlesex County OPP MTO TREA CAA
Red Light Running City of London	City of London	City of London LPS
Red Light Running Middlesex County	Middlesex County	Middlesex County OPP



Target Areas and Action Description

Intersections in City of London and Middlesex County

ACTION No.	ACTION	DESCRIPTION	LEADER AGENCY	ENGINEERING	ENFORCEMENT	EDUCATION	EMPATHY
1	Development of Network Screening and High Collision Location Identification	Identify abnormally high collision locations based on collision type, using screening filters	City of London	✓			
2	Collision Counter-measure Program	Identify intersections experiencing higher than expected number of collisions, using prediction models	City of London	✓			
3	Traffic Signals Improvement Program - Left Turn Phasing	Continue to review advance left-turn phasing and to analyse need for protected left-turn phase	City of London	✓			
4	Traffic Signal Improvement Visibility Review	Continue to review visibility of downstream signal heads where multiple traffic signalized intersections are within 250m of each other. Review visibility of signal heads and sight distances at individual and adjacent signal locations.	City of London	✓			
5	Crosswalk Pavement Marking Program	Continue to identify which locations would benefit from ladder markings (refer to TAC Pedestrian Traffic Control Guide); create a criteria to assist in identifying the locations for ladder markings, and for maintenance of markings after installation.	City of London	✓			

ACTION No.	ACTION	DESCRIPTION	LEADER AGENCY	ENGINEERING	ENFORCEMENT	EDUCATION	EMPATHY
6	Pro-active Enforcement Program	Enhanced use of pro-active enforcement strategies - specific to high risk intersections as determined by collision screening programs (above)	London Police Service		✓		
7	Advance Street Name Sign Program	Install advance street name signs using ClearView font and Upper/Lower case lettering before major intersections	City of London	✓			
8	Collision Reduction Strategy - Assessment	This program entails the OPP working alongside community stakeholders to enhance traffic safety within Middlesex County. A statistical analysis of the 5-year traffic collision data provided the background for this program.	Ontario Provincial Police (OPP)		✓	✓	
9	Collision Reduction Strategy - Enforcement	The OPP will continue to participate in proactive strategies in locations identified by the Collision Reduction Strategy Assessment. This program entails use of the mobile speed enforcement sign, the RADAR and Laser intercept programs, and RIDE at high risk locations.	Ontario Provincial Police (OPP)		✓		
10	Signage and Safety Standards Consistency	Coordination of County and City standards for signage and safety measures at rural intersections	Middlesex County	✓			
11	Signage Replacement Program	Using mobile LiDAR to evaluate reflectivity of signs, and to prioritize their efficient replacement of faded regulatory and warning signage	Middlesex County	✓			

Distracted and Aggressive Drivers

ACTION No.	ACTION	DESCRIPTION	LEADER AGENCY	ENGINEERING	ENFORCEMENT	EDUCATION	EMPATHY
12	Roadway Alignment Improvement Program	Engineering improvements to horizontal and vertical alignments for reconstruction projects. Improved coordination with all 4R (reconstruction, rehabilitation, resurfacing, restoration) projects.	Middlesex County	✓			
13	Unmarked Enforcement of Distracted Driving	Initiatives involving unmarked vehicles and/or officers in plain clothes	London Police Service		✓		
14	Driver Education Campaign - Tweets	Police media tweets campaign "Look where you are driving"	London Police Service			✓	✓
15	Driver Education Campaign for Distracted/ Aggressive Drivers	Program in collaboration with London Health Sciences Centre and other partners	Middlesex-London Health Unit (MLHU)			✓	✓

Young Drivers

ACTION No.	ACTION	DESCRIPTION	LEADER AGENCY	ENGINEERING	ENFORCEMENT	EDUCATION	EMPATHY
16	Young Drivers Education Campaign - Distracted and Impaired	Continue the education campaign focused on distracted driving and impaired driving by alcohol and drug in secondary schools	London Police Service		✓	✓	✓
17	Young Drivers Education Campaign - Skill Building	Continue Young Drivers of Canada's training for skill building, cognitive assessment, and development training for co-drivers and resources for G1 & G2 drivers	Young Drivers Canada			✓	✓
18	Young Drivers Education Campaign - Inexperience in Driving	Collaborate and explore ways to better understand youth and inexperience in driving needs, and integrate their needs with engineering modifications to traffic signals and geometric elements	London Health Sciences Centre (LHSC)			✓	✓
19	IMPACT (Impaired Minds Produce Actions Causing Trauma)	Continue campaign focused on reaching out to youth (ages 15-19) to discuss the consequences of high risk behaviour such as aggressive and distracted driving	London Health Sciences Centre (LHSC)			✓	✓

Pedestrians: General

ACTION No.	ACTION	DESCRIPTION	LEADER AGENCY	ENGINEERING	ENFORCEMENT	EDUCATION	EMPATHY
20	Pedestrian Refuge Island Program	Construct new pedestrian refuge islands where needed based on City's criteria	City of London	✓			
21	Collision Data Improvement Program - Pedestrians	A plan will be devised toward sharing the LHSC Emergency Department Admissions data on pedestrian injury among participating agencies	London Health Sciences Centre (LHSC)			✓	✓
22	Pedestrian Facilities Upgrades, OTM Book 15, AODA, TAC Pedestrian Traffic Control Guide	Enhance pedestrian safety by expanding and upgrading pedestrian facilities based on recent guidelines	City of London	✓			
23	Pedestrian Crossing Enforcement Strategy	As a supplement to education and awareness countermeasures, targeted strategies for pedestrians who cross the road in contravention of the act or applicable by-law will be enforced at selected locations	London Police Service		✓		

Pedestrians: Safe Routes to School & Safe Neighbourhoods

ACTION No.	ACTION	DESCRIPTION	LEADER AGENCY	ENGINEERING	ENFORCEMENT	EDUCATION	EMPATHY
24	Safe Routes to School Program	Review local issues around schools as an integral part of an active Safe Routes to School program	City of London	✓			
25	Safe neighbourhoods	Continue the engineering collaboration with schools (1) through the walkabout at every school with parents, police, teachers City staff to review identified safety concerns; (2) the dissemination, through the school newsletter, of the generic set of questions and answers on the pros and cons of perceived solutions to traffic concerns.	City of London			✓	✓
26	Active and Safe Routes to School (ASRTS)	ASRTS is a community partnership. Interested schools are provided with a comprehensive strategy to meet the needs for safety and active transportation at their school. An educational planning manual is available.	Middlesex-London Health Unit (MLHU)			✓	✓
27	Safe Routes to elementary and secondary school program by OPP in Middlesex County	Continue partnership between the OPP and Thames Valley District School Board to support local school programs and educate the youth	Ontario Provincial Police (OPP)			✓	✓

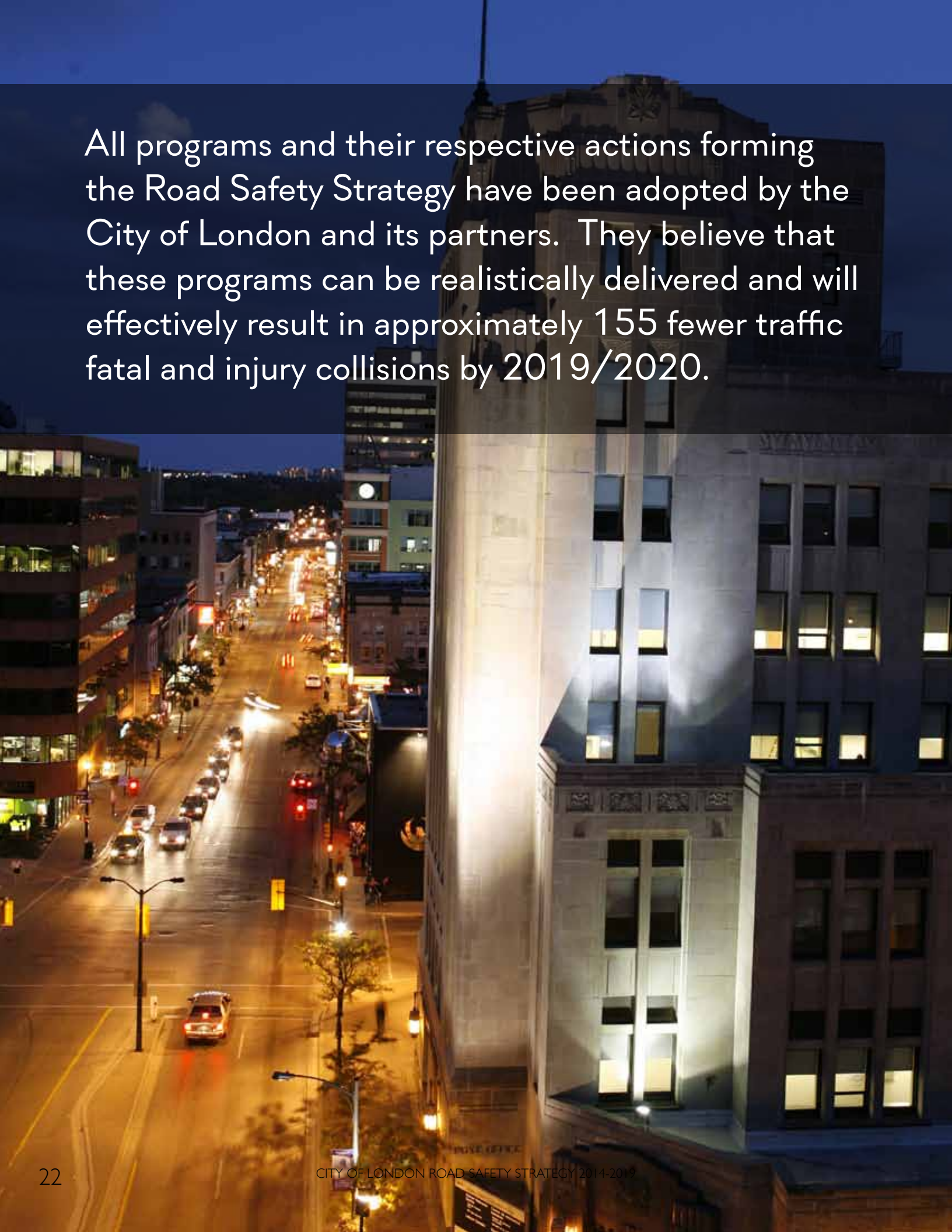
Cyclists

ACTION No.	ACTION	DESCRIPTION	LEADER AGENCY	ENGINEERING	ENFORCEMENT	EDUCATION	EMPATHY
28	Cyclist Crossing Enforcement Strategy	As a supplement to education and awareness countermeasures, targeted strategies for cyclists who cross the road in contravention of the act or applicable by-law will be enforced at selected locations	London Police Service		✓		
29	Collision Data Improvement Program - Cyclists	A plan will be devised toward sharing the LHSC Emergency Department Admissions data on cyclist injury among participating agencies	London Health Sciences Centre (LHSC)	✓			
30	Annual addition of Bike Lanes	Continue the expansion of dedicated bike lanes on major roads as per the City's Cycling Master Plan	City of London	✓			
31	Share the road signage and educational project in the City of London and Middlesex County	Middlesex County, City of London, Middlesex-London Health Unit, and London Middlesex Road Committee launch a new Share the Road educational campaign for West London and Middlesex County in 2014	Middlesex-London Health Unit (MLHU)			✓	✓

Red Light Running

ACTION No.	ACTION	DESCRIPTION	LEADER AGENCY	ENGINEERING	ENFORCEMENT	EDUCATION	EMPATHY
32	Traffic Signals Improvement Program Signal Timing	Continue the review of signal clearance times and extensions	City of London	✓	✓		
33	Traffic Signal Sight Distance Review	Continue the review of signal clearance times and sight distances at high right-angle collision locations	City of London	✓			
34	Traffic Signals Improvement Program - Signal Coordination	Continue to optimize and co-ordinate signal timings along corridors	City of London	✓			
35	Red-Light Camera Implementation	Install Red-Light camera equipment at selected locations	City of London	✓			
36	Pro-active Enforcement Program - Red-Light Running	Use of co-ordinated enforcement strategy with use of both plain clothed and uniformed officers in close collaboration with the engineering program	London Police Service		✓		
37	Traffic Signals Improvement Program - LED Signals	Use of LED signals to increase visibility of red light as an integrated program with the other strategies related to red-light running	Middlesex County	✓			
38	Pro-active Enforcement Program - High Risk Intersections	Enhanced use of proactive enforcement and education at high risk intersections as identified in the Middlesex Collision Reduction Strategy in close collaboration with the engineering program	Ontario Provincial Police (OPP)		✓		

All programs and their respective actions forming the Road Safety Strategy have been adopted by the City of London and its partners. They believe that these programs can be realistically delivered and will effectively result in approximately 155 fewer traffic fatal and injury collisions by 2019/2020.



Steering Committee Members

- Canadian Automobile Association
- City of London
- London Block Parent Program
- London Health Sciences Centre
- London Police Service
- Middlesex County
- Middlesex-London Health Unit
- Ministry of Transportation
- Ontario Provincial Police
- Thames Region Ecological Association
- Young Drivers of Canada


London
CANADA

Cycling Advisory Committee Work Plan – 2019

Updated 2019-05-07

	Activity	Background	Responsibility	Proposed Timeline	Proposed Budget	Cycling Master Plan Alignment	Link to Strategic Plan	Status
CAC 18.1	Assist the City in enhancing cycling connections throughout the City to the Provincial cycling network.	• To be provided through Cycling Master Plan, EA input • Explore potential of rail corridor to St Thomas • Help define preferred route to attach to Trans Canada Trail in St Thomas	Parks and Rec Planning Andrew Macpherson	CMP does not ID a Timeline		Action #3 Identifying Touring Loop Routes	**CITY BUILDING POLICIES** Elevate London's Profile as a Regional Cultural Centre 534 Advance the eco-tourism, agri-tourism, and cultural tourism opportunities available in the city and support linkage likes to surrounding regional cultural facilities. **OUR STRATEGY** 60 Direction #6 10. As opportunities arise, utilize rail corridors as mobility links for transit, cycling, and walking.	Discussion with St.Thomas and Elgin county are currently on hold pending completion of a rail segment. Update:The cycling master plan identifies this route as a desired line. The Cycling Master Plan doesn't identify a timeline. This would be through Parks Planning, as the cycling facility is a multi-use path.
CAC 18.3	Provide recommendations for better integration of the recreational and commuter cycling networks	• Participate in analysis • Dundas/Queens couplet	CAC Transportation Peter Kavcic -CAC lead for this item required Garfield Dales Andrew Giesen	Ongoing Q3-2019				Ongoing. Update:Currently the Dundas section from Adelaide to Ontario is in design. Can present Q3 2019. The remaining links to the east-west bikeway are planned for design in 2020.
CAC 18.10	Education	Promotion of user friendly version of Cycling Master Plan	CAC Environmental Programs: Jay Stanford and Allison Miller	Ongoing 2019				No update since first mentioned
CAC 18.11	Education	Cycling map	Environmental Programs: Jay Stanford ~~CAC~~ ~~Fanshawe~~ ~~Wil Pol~~	Q2-2019				Expected by June 2019

CAC 18.17	Safe cycling education and enforcement	Multiple requests to council recommending 14 and over cycling on sidewalks indicating a need for a campaign	CAC CAN-Bike Environmental Programs: Jay Stanford and Allison Miller	Q2-2019		• Action #5 Identifying & Implementing CAN-Bike Program • Action #11 Enhancing Enforcement		**Related**: Enviro Programs and CAN-Bike developed promotion material geared to seniors Planned sessions geared to adults in May and during London Celebrates Cycling
CAC 19.1	Cordon Counts of Dundas and Queens couplet before and after count data	Re: CAC cordon counts for the couplet, here's the type of research questions that I think about: • How is progress in our community's bike network measured? • What are the biggest challenges facing collection and communication of bike data? • What role does count data play in realizing and supporting this project?	CAC Environmental Programs: Jay Stanford Rebecca Henderson Peter Kavcic	Q3-2019				Recommended a fall cordon count to compare for 2020 couplet work. If we can answer these questions at CAC, we'll know whether to recommend cordon counts in our work plan CAC requests city to formalize schedule for a Fall '19 cordon count
CAC 19.2	East-West Cycle Track	Provide an official recommendation to City Staff	CAC WG Peter Kavcic	Q3-2019				Council endorsed plan already. Next steps for committee are to provide feedback when staff come forward with design and presentation. Next step: expecting to review Adeliade to Ontario St

CAC 19.3	Analysis of Colborne Cycle track, data collection and parking in the lane	• Acknowledge benefits • Provide recommendations • Comment on the consultation process with CAC (What were the recommendations from CAC, and how did it influence the outcome?) • City Staff commit to reviewing the data collection and design objectives and sharing Program Participation Data on an ongoing basis with CAC • See also CAC 19.1	CAC - Dave Mitchell	Q2-2019			**Parks & Recreation Master Plan - Physical Activity, Active Living, and Active Aging** 6. Continue to review program participation data to make informed decisions about program development by age group and location through the establishment of participation targets. 7. Work together with other service providers and stakeholders to understand and address overall participation rates and gaps in parks, recreation, and sport pursuits in London.	
CAC 19.4	Assist in the annual London Celebrates Cycling event	Work with city staff and stakeholders to provide a signature event that promotes all components of cycling culture	London Celebrates Cycling Subcommittee Allison Miller Dan Doroschenko Dave Mitchell William Pol Rebecca Henderson Jason Jordan Dan Foster	Mar-Jun 2019		• Action #5 Identifying & Implementing CAN-Bike Program • Action #12 Establishing High-Profile Events • Action #9 Establishing Performance Measures	**CITY BUILDING POLICIES** Support cultural and innovative programming to create a city that exudes innovation, vibrancy, creativity and entrepreneurialism 535 - 539	Update: Schedule to be finalized by May 10th. Will circulate when compltete. Posters & Posters to be printed by May 17th. URL link to City website: **www.london.ca/CelebratesCycling** will be ready May 17th.
CAC 19.5	Improved Facilities & Infrastructure	Main Branch TVP Extension Environmental Assessment	Parks & Rec Andrew Macpherson	Q2-2019				Contract for council approval May 2019

CAC 19.7	Enhanced Neighbourhood Bike Parking tied to Transit	City developing designs and locations for bike parking tied to transit routes outside of downtown	Environmental Programs: Jay Stanford and Allison Miller	2019-2020		• Action #7: Identifying & Enhancing Local Cycling Hubs • Action #8: Enhancing Bicycle Parking • Action #13: Encouraging Integration with other Modes		CAC to be engaged in Q1 2020.
CAC 19.8	Downtown Enhanced Bike Parking for Residents and Employees	City reviewing options to provide higher order, secure bike parking downtown. Options include bike lockers to a bike station	Environmental Programs: Jay Stanford and Allison Miller	2019-2020		• Action #7: Identifying & Enhancing Local Cycling Hubs • Action #8: Enhancing Bicycle Parking		CAC will be asked to provide feedback as project moves forward (Q1 2020)
CAC 19.9	Bike Share Business Case	CAC to provide input as requested on bike share business case	Environmental Programs: Jay Stanford and Allison Miller	April-July 2019		• Action #4: Exploring a Bike Share System		Introductory presentation made to CAC January 2019
CAC 19.10	Engagement of business community with Ontario by Bike	Work through City, Tourism London, and local BIAs to engage London businesses to target cyclists as customers	Environmental Programs: Jay Stanford and Allison Miller Tourism London Downtown London & other BIAs	Ongoing		• Action #3 Identifying Touring Route Loops • Action #7 Identifying & Enhancing Local Cycling Hubs		Ontario By Bike London webinar held April 2019. CAC will be engaged as needed (tbd)
CAC 19.11	Guide for Cyclists Booklet translated into priority languages (Arabic, Spanish, English, French) Educational support for the Bikes for Newcomers Program	Educational support for the Bikes for Newcomers program, which is provided by London Cycle Link and Squeaky Wheel in collaboration with Cross Cultural Learners' Centre	London Cycle Link Squeaky Wheel	April 2019	$400		**Parks & Recreation Master Plan - Inclusion and Access** 4. Expand our reach to newcomer populations by: Translating promotional materials into predominant languages.	Motion passed and expense request submitted to City Staff.
CAC 19.12	Cyclist-motorist post-crash education for motorists and cyclists	Educational initiative for motorists and cyclists in the event of a crash	London Police Services Sgt Sean Harding	Q4-2019				LPS representative will be requested to follow up

CAC 19.13	Send a member of the CAC to the annual Share the Road conference in May		Rebecca Henderson	Q2-2019	$300 (2019) $200 (2018)			Motion passed and expense request approved by City Staff
CAC 19.14	Increase resident awareness and marketing of parks, recreation, and sport opportunities.	Leveraging new and emerging technologies that enhance the customer service experience Enhance and update current 2015 PDF version of the London Pathway Map by leveraging open source approaches such as Open Street Map. https://www.openstreetmap.org/	Allison Miller CAC	Q3-2019			**Connecting People and Neighbourhoods** Support efforts to expand active transportation networks, including trails and pathways within and connecting to parks and open spaces.	Waiting to see if this is an initiative to be undertaken by city staff
CAC 19.15	Form a CAC Work Group on Bicycle Theft	Reference 18.12	CAC WG London Police Services Jay and Alison	Q4-2019				
CAC 19.16	Post implementation analysis of King St. (Ref. 18.4)		CAC WG Peter Kavcic	Q4-2019				Look for at full quarter of use before completeling review
CAC 19.17	Promote new website, there is a website overhaul		CAC					Awaiting more detail on conmpletion
CAC 19.18	Annual audit of …. Street and MUP cleaning... (risk mitigation strategy)		Doug MacRae John Parsons Jay Stanford Andrew MacPhearson	Q4-2019				
CAC 19.19	Recognition Program for a year-round cyclist (see CAC 18.15)	Recommend this ties into London Celebrates Cycling	Cycling Award Sub-Committee Jason Jordan (strikeout) Allison Miller Jay Stanford	Q4-2019				Address in the London Celebrates Cycling 2019 review
20.1	Analysis of cycling map for next porinting/revision		Allison Miller CAC	Q1-2020				
CAC 19.20	Integration of Parks and Rec plans for MUPs and city planning process for site plans	Z-9020 at site plan stage would have a recommnedation of a connection to exisiting MUP	Parks and Rec Planning Andrew Macpherson Stephanie Wilson	Q3-2019 (for confirmation)		TBD	TBD	