City of Burlington Cycling Plan Update

Round 1Engagement Summary Report

Prepared by Lura Consulting for the City of Burlington

May 2018

LURA
LISTEN · UNDERSTAND · RELATE · ADVANCE

This engagement summary report was prepared by Lura Consulting, the independent facilitator and consultation specialist for the City of Burlington Cycling Plan Update in collaboration with Alta Planning and CIMA. If you have any questions or comments regarding the report, please contact either:

Zoie Browne
Project Manager
Lura Consulting
777 Richmond Street West,
Suite 2025
Toronto, Ontario M6J 3N5
416-410-3888 ext. 712
zbrowne@lura.ca

LURA
LISTEN · UNDERSTAND · RELATE · ADVANCE

Table of Contents

Executive Summary

The City of Burlington is at a turning point in its evolution and is transitioning from a suburban to an urban community. The City's growth is shifting from building greenfield communities to accommodating more residents and jobs within existing areas through re-development. Intensification is being directed to targeted areas in the City to ensure that denser land uses are carefully coordinated with infrastructure, which includes the City's existing and planned transportation system. The City is now seeking to update the Cycling Plan and establish a new, bold vision for cycling that aligns with the strategic goals and objectives for Burlington.

Community engagement is an integral component in shaping the future of cycling in the City of Burlington. The consultation approach was designed by LURA Consulting in collaboration with the City of Burlington, Alta Planning and CIMA, to ensure that local residents, businesses, and other stakeholders had an opportunity to participate in conversations about current cycling behaviours in Burlington as well as provide feedback on ways to make cycling more desirable and commonplace across the city. This engagement process will ensure that the City of Burlington Cycling Plan Update is reflective of the community's needs and priorities.

The engagement approach is being delivered in two distinct stages, both falling within "Phase 2" of the overall project workplan. Engagement Round 1 (Jan-Mar 2018) focused on building an understanding of how the current transportation network is experienced and perceived, and why people do (or do not) cycle. Engagement Round 2 (Date TBC) will present the draft Cycling Plan to stakeholders and the public for feedback and work towards the implementation of the overall project.

The project team hosted a range of face-to-face and online engagement activities which provided meaningful opportunities to reach broad and diverse audiences where they already gather or on their own schedule. This Round 1 Engagement Summary Report provides an overview of the public consultation approach and strategy as well as a summary of current behaviours (motivating and preventing factors), cycling comfort levels, major themes, network upgrade priority opportunities and vision for the future of cycling in Burlington that were highlighted throughout the engagement process.

1. Introduction

The City of Burlington is at a turning point in its evolution and is transitioning from a suburban to an urban community. The City's growth is shifting from building greenfield communities to accommodating more residents and jobs within existing areas through re-development. Intensification is being directed to targeted areas in the City to ensure that denser land uses are carefully coordinated with infrastructure, which includes the City's existing and planned transportation system. In order to grow "up" successfully, the City must become walk-friendly and bike-friendly; it must be designed around public transit and provide real and attractive mode choices beyond the car. The development of a multi-modal transportation system is an important objective of the City.

In 2009, the City's Cycling Master Plan was developed. Almost 10 years have passed since that time. Significant progress has been made in enhancing awareness of cycling through promotion and education campaigns, and the amount of cycling infrastructure has been greatly expanded throughout the City. These efforts have culminated in a silver Bicycle Friendly Community award in 2016 through Share The Road Cycling Coalition. The City is now seeking to update the Cycling Plan and establish a new, bold vision for cycling that aligns with the strategic goals and objectives for Burlington.

1.1 Project Background

The 2009 Cycling Master Plan was intended to guide the City in creating a network of on-road bikeways and multi-use pathways throughout Burlington, along with supportive policies, practices and programs to encourage more people to cycle.

To-date, modest advances have been made with respect to implementing the 2009 Cycling Master Plan, as summarized below:

- Implementation of over 200 kilometers of on-road and off-road cycling infrastructure;
- Adopted the practice of paving 4.0-metre-wide multi-use paths along Hydro corridors;
- Select road-diets have been piloted in order to reprioritize excess vehicular capacity and implement on-road buffered bike lanes;
- Transportation Services is actively collaborating with Capital Works to ensure that every road reconstruction project considers inclusion of cycling facilities with a preference for implementing on-road bike lanes; and
- Proactively delineating high-conflict areas at major intersections through the use of green pavement markings.

The vision for the future is to expand upon the City of Burlington's recent successes and increase the cycling mode share, making cycling a viable and convenient commuting alternative to the personal vehicle. The draft vision statement for the new Cycling Plan Update is summarized as follows:

"A cycling culture within the City of Burlington is encouraged and achieved through the implementation of cycling facilities that allow all users to feel comfortable and confident using a bike as their mode of transportation."

1.2 Report Contents

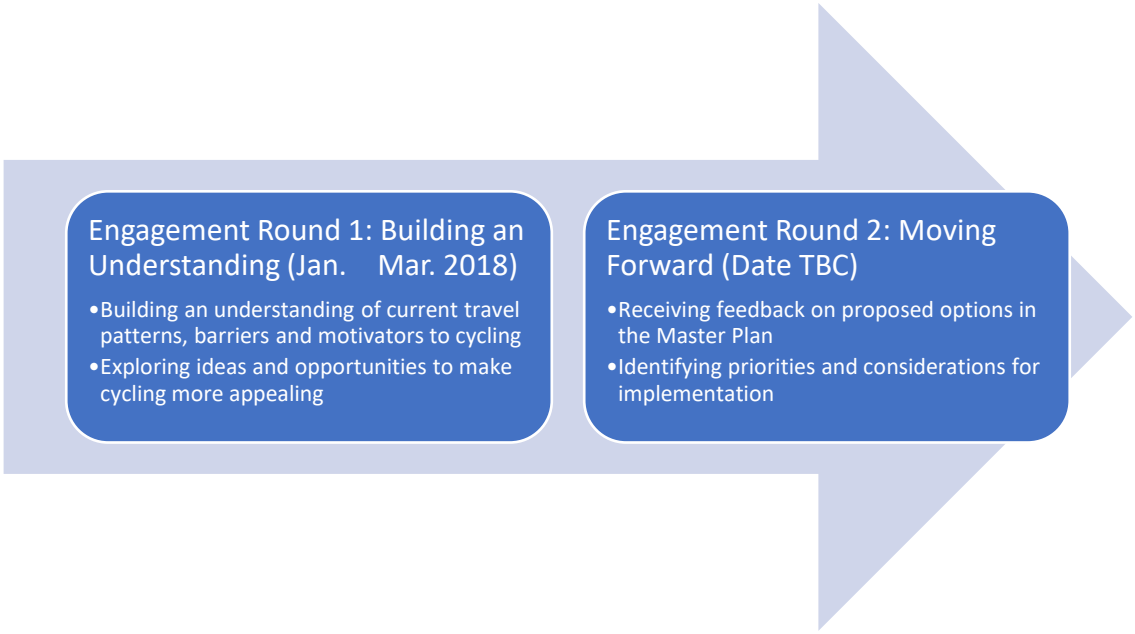
This Round 1 Engagement Summary Report provides an overview of the public consultation approach and strategy as well as a summary of current behaviours (motivating and preventing factors), cycling comfort levels, major themes, network upgrade priority opportunities and vision for the future of cycling in

Burlington that were highlighted throughout the engagement process. Section 2 provides an overview of the community engagement strategy and key consultation mechanisms used to encourage broad participation. A summary of feedback received during the study is included in Section 3. The next steps in the study process are briefly outlined in Section 4.

2. Community Engagement Strategy

The community engagement strategy was designed to ensure that local residents, businesses, and other stakeholders had an opportunity to participate in conversations about cycling in Burlington and provide feedback on ways to make cycling more desirable and commonplace. Gaining an understanding of the public's perspectives on cycling and current behavior has helped the project team tailor the Cycling Plan Update to reflect the community's needs. The engagement approach is being delivered in two distinct stages, both falling within "Phase 2" of the overall project workplan.

Engagement Round 1 (Jan-Mar 2018) focused on building an understanding of how the current transportation network is experienced and perceived, and why people do (or do not) cycle. Engagement Round 2 will present the draft Cycling Plan to stakeholders and the public for feedback and work towards the implementation of the overall project.



The project team hosted a range of face-to-face and online engagement activities to provide meaningful opportunities for community input into the Cycling Plan and to reach a broad audience. Opportunities to participate in engagement activities were promoted through various communication channels which include:

- A dedicated project webpage on the City of Burlington website (www.burlington.ca/cyclingplan);
- Information distributed to the Burlington Cycling Committee and shared through their networks;
- Media releases and a radio interview on Kx947 FM; and
- The City of Burlington's Twitter and Facebook accounts.

Approximately 3358 individuals participated in the Round One Engagement between November 2017 and March 2018. The following table summarizes the number of participants by engagement activity:

Engagement Activity	Date	Number of Events	Number of Participants
Pop-Ups	January 2018 – March 2018	17	1,807
Social Pinpoint	January 2018 – February 2018	N/A	1,528
E-mail Feedback	On-going	N/A	13
Burlington Cycling Committee Meetings	November 2017 – March 2018	4	10
Total		**21**	**3,358**

An overview of each engagement activity is described below.

2.1 Pop-Up Community Conversations

Pop-up community conversation events were designed and implemented in order to engage a broad spectrum of residents. Face-to-face engagement was conducted at locations and events where members of the community already visit. A total of 17 pop-up community conversation events were conducted at community centres, libraries and events located in all 6 wards of the City.

The opportunity to engage with residents at these events was also used to inform and educate people on the cycling environment in the City of Burlington. Project team members, assisted by Cycling Advisory Committee members, were able to talk to residents one-on-one and provide support and resources as needed. Popular resource items included the City of Burlington's Cycling Map, "Share the Road" bike magnets, and bike bells. Approximately 283 people were engaged in in-depth conversations and approximately 1807 people reached through project promotion and awareness. A complete list of pop-up events is provided in the table below.

Table 1: Pop-Up Community Conversation dates, locations and numbers reached and engaged

Date	Pop Up Location	Approximate Number of Participants Engaged	Approximate Number of Participants Reached
January 28, 2018	Burlington Art Gallery	30	40
January 29, 2018	City Hall - Council Meeting	6	8
January 29, 2018	Burlington Seniors' Centre	40	50
February 1, 2018	Haber Community Centre	12	20
February 3, 2018	Burlington Library – Central	55	70
February 5, 2018	Nelson Recreation Centre	25	35
February 6, 2018	Ron Edwards Family YMCA	35	55
February 9, 2018	Appleby GO Station		400
February 9, 2018	Burlington GO Station		250
February 9, 2018	Mountainside Community Centre	30	35
February 13, 2018	Tansley Woods Community Centre	13	22
February 14, 2018	Aldershot GO Station		400
February 14, 2018	Brant Hills Community Centre	17	25
February 17, 2018	It's a Family Affair Event – Mainway Recreation Centre	27	37
February 19, 2018	Aldershot Arena		250
February 24, 2018	Seniors' Recreation Registration	20	25
March 6, 2018	Doors Open Burlington	50	85
Total		283**	1807*

**The number of participants reached is based on the approximate number of those who were reached during the pop-up events either through brief discussions or by taking information cards that directed them to the project website.*

*** The number of participants engaged is based on the approximate number of those who were engaged during the pop-up events through in-depth conversation or by directly interacting with pop-up boards and materials.*

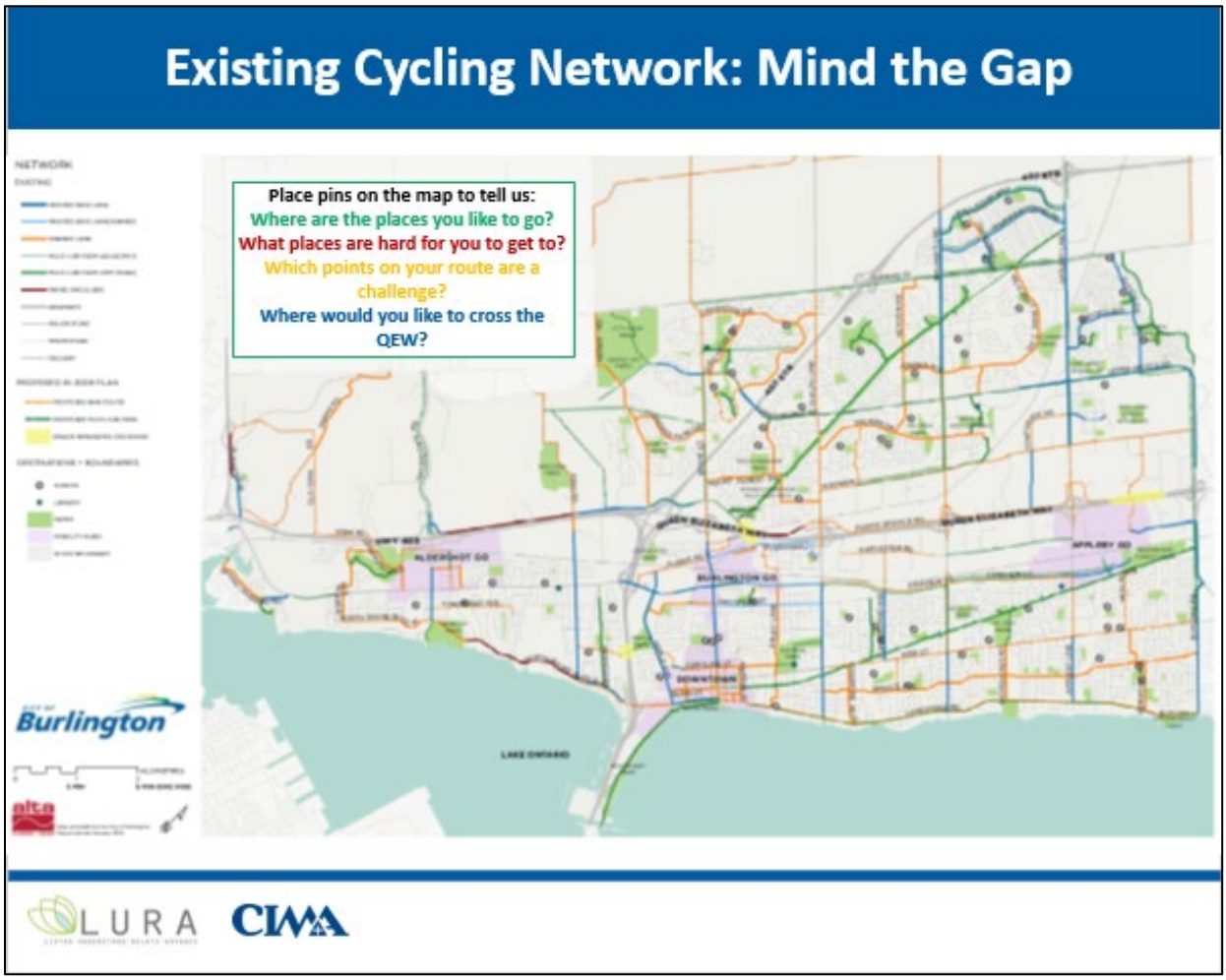
During the pop-up community conversation events, participants were invited to share their perspectives on the following:

- Cycling network gaps and opportunities;
- Cycling motivating and preventing factors; and
- Cycling comfort level.

Board 1: Cycling Network Gaps and Opportunities

The first board displayed the existing cycling network and multi-use pathways, as well as proposed routes from the 2009 Cycling Master Plan (Figure 1). The map was used to illustrate Burlington's current facilities and provide context for how cycling might be improved. Participants were encouraged to place dots on the map to indicate places they like to cycle to, places that are difficult to cycle to, challenging portions of their cycling routes, and desired QEW crossings. The map was also a helpful tool for gathering general feedback on current cycling behaviours in the City of Burlington.

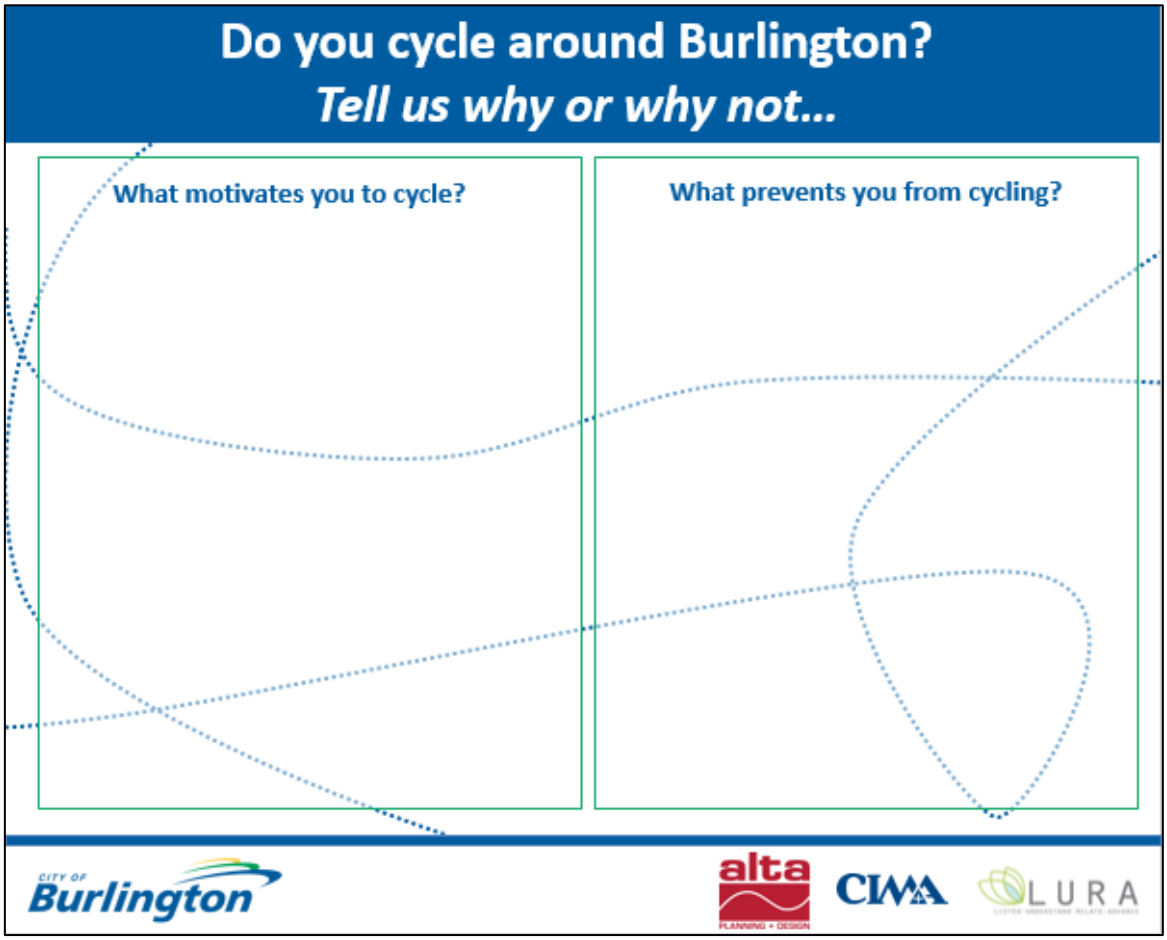
Figure 1 Existing Cycling Network: Mind the Gap



Board 2: Motivating and Preventing Factors for Cycling

A second board provided participants the opportunity to tell ambassadors why they are motivated to cycle and/or why they are discouraged from cycling (Figure 2). This activity allowed participants to share details about their current cycling experiences and provide feedback on how the City's cycling network, along with a host of other variables, encourage or hinder their cycling transportation options.

Figure 2: Cycling Motivating and Preventing Factors



Board 3: Cycling Comfort Level

The third board asked community members to consider multiple cycling facilities ranging from protected and separated cycling facilities to sharrows (Figure 3). Using stickers, participants were able to provide a rating between 1 (very uncomfortable) and 5 (very comfortable) to describe how comfortable they would feel using each type of facility. Comments were also sought to describe what residents liked and did not like about each facility type.

Figure 3 Cycling Comfort Level

2.2 Social Pinpoint

Increasingly, communities and residents are expecting and seeking online engagement opportunities in parallel with face-to-face engagement. Through our work with many similar communities, online survey responses demonstrated one of the highest response rates of all the engagement activities. The survey questions mirrored those asked in the pop-up conversations. This crowd-sourcing approach to public input, combined with effective traditional and social media outreach, greatly enhances the ability to gather broad and effective stakeholder input.

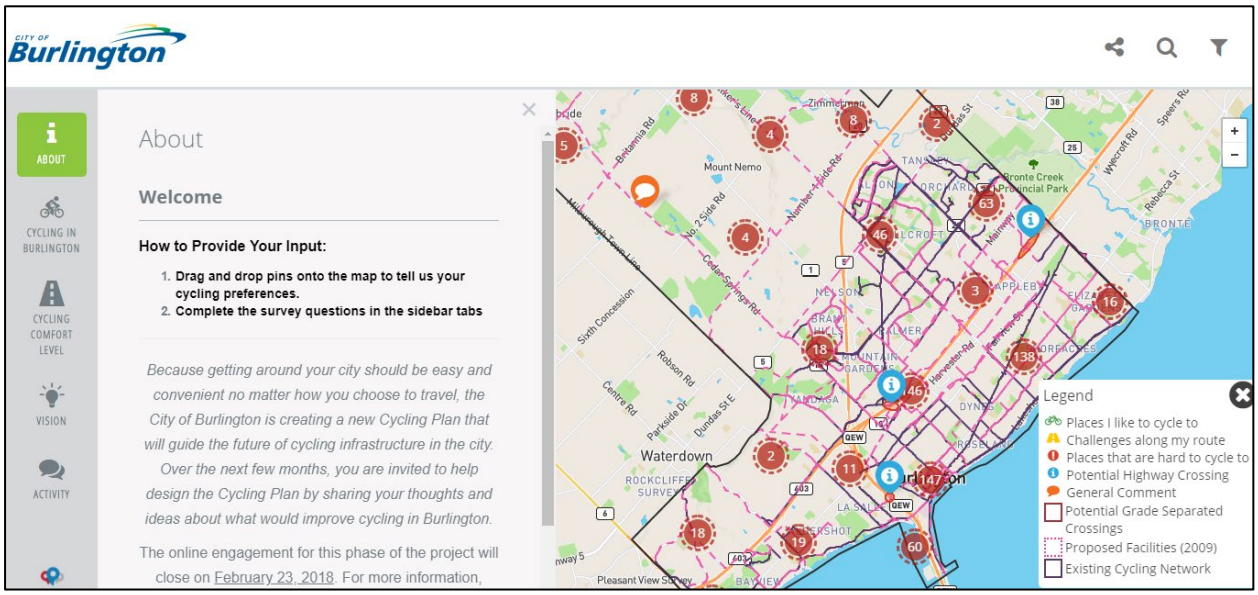


Figure 4 Screen capture of Social Pinpoint, showing how comments are displayed on the map

Social Pinpoint, an online engagement mapping tool, was utilized to provide a digital option to capture the same type of feedback sought during pop-up community conversations. Participants could drop icons representing "places I like to cycle to," "places that are hard to cycle to," "challenges along my route," or provide general comments, directly onto specific locations on a map of the City of Burlington (Figures 4 and 5). Sidebar activities offered further opportunities for participants to respond to the questions asked of participants at pop-up events in survey format as well as additional questions pertaining to the proposed 2018 Cycling Plan Vision and demographic details. Respondents could also share feedback on "Your Bicycle Comfort Level" by ranking how comfortable they feel on various types of cycling facilities. Over 1500 people visited the online engagement tool. 782 comments were received on the network map and 413 shared their insights on the sidebar survey questions activities.

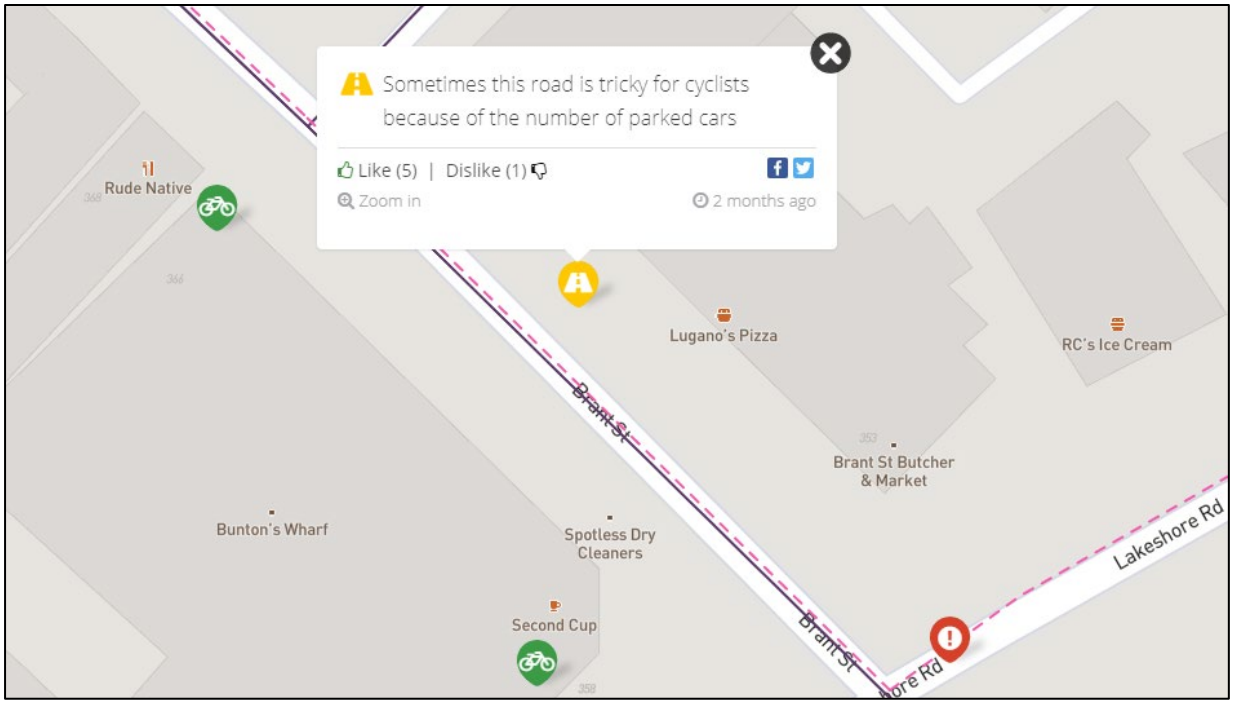


Figure 5 Screen capture of Social Pinpoint online engagement mapping tool

2.3 E-mail Feedback

Throughout the entire engagement process, the public was able to submit comments by e-mail correspondence through the City of Burlington's Transportation Planning division. During Round 1 Engagement, a total of 13 e-mails were received. These email communications can be found in Appendix E.

2.4 DIY Workshop Kit

A DIY workshop kit was developed to allow members of the community a guide to organizing their own meetings about the City of Burlington's Cycling Plan Update. The engagement tool included all the materials, resource and instructions to run an education presentation about active transportation, as well as a series of interactive activities. Workbooks were included in the kits to allow participants to record and submit their comments. One DIY Workshop Kit was submitted by the City of Burlington's Sustainable Development Committee and included in this report analysis. The DIY workshop kit was distributed to 10 stakeholder groups which include:

- Burlington Downtown Business Improvement Area
- Aldershot Business Improvement Area
- Mayor's Millennial Advisory Committee
- North BurLINKton
- Burlington Downtown Refugee Alliance
- Burlington Green
- Local High Schools
- Halton Region Public Housing
- City of Burlington's Integrated Transportation Advisory Committee (ITAC)

- City of Burlington's Sustainable Development Committee (SDC)

Verbatim responses to the workbook received along with copies of the DIY Workshop Kit for Facilitators and DIY Workshop Kit for Participants can be found in Appendix D.

2.5 Burlington Cycling Committee

The Burlington Cycling Committee, an advisory committee to Council, was an integral part of this engagement process. As part of the Burlington Cycling Committee's quarterly meetings, Lura and Alta Planning provided updates on the cycling plan project and collected feedback from the committee on the engagement tactics and target audiences. The project team joined the committee's meetings to provide updates and presentations on four occasions: November 28, 2017; January 30, 2018; February 27, 2018; and March 28, 2018.

Committee members participated in mapping exercises (led by Alta) as well the "cycling comfort level" activity (led by Lura), as presented in the pop-up engagement events. For consistency, their responses are included in Appendix B.

The chair of the committee created a range of cycling profiles which were shared publicly. Committee members were also encouraged to assist in the promotion of engagement opportunities through: sharing events and community profiles through their social media accounts; attending pop-up events; and, hosting DIY workshops. This group also worked with the project team to identify key stakeholders to target for the DIY workshops.

Committee members also participated in a visioning exercise facilitated by the project consultant team, reflecting on the proposed vision for the 2018 Cycling Plan. Committee members were asked to respond to the following questions. For consistency, their responses will be included in Appendix C.

- What do you think of this vision statement?
- What do you envision as the future of cycling in Burlington?

3. What We Heard – Summary of Participant Feedback

The following section provides overview of the common themes and ideas that were identified from participant feedback at face-to-face and online engagement activities. This summary is categorized by: **current behaviours (motivating and preventing factors); cycling comfort levels; proposed 2018 Cycling Plan vision; major themes; and network upgrade priority opportunities.** "Current behaviours" highlights the motivating and preventing factors that influence current cycling habits in Burlington. "Cycling Comfort Levels" highlights the Level of Traffic-Stress (LTS) that influence comfortable cycling. "Proposed 2018 Cycling Plan Vision" highlights feedback received on the draft vision statement and how respondents envision cycling in the future. "Major themes" highlights the overarching messages and ideas that emerged from feedback. "Network Upgrade Priority Opportunities" highlights the commonalities of suggestions that occurred throughout engagement relating to gaps in the existing cycling network and cycling comfort levels.

A summary and verbatim responses to questions about motivating and preventing factors to cycling can be found in Appendix A.

A summary and verbatim responses to questions about the cycling network and cycling comfort levels can be found in Appendix B.

A summary and verbatim responses to questions about the proposed vision for the 2018 Cycling Plan can be found in Appendix C.

3.1 Current Behaviours (Motivating & Preventing Factors)

Many residents expressed their enjoyment for cycling as a method of getting around the city. Some cycle for commuting purposes such as getting to work, to school, or to the GO station as part of a longer multi-modal commute. Multiple participants said that they bike around Burlington to complete errands (e.g., grocery shopping, shopping, bank visits) and to get to different activities (e.g., the gym, the pool, the local park, the library). Some residents noted that they like to cycle to specific destinations in the city or in nearby cities such as Mapleview Mall, Bronte Creek Provincial Park, The Royal Botanical Gardens in Hamilton, and Burlington Air Park. Some respondents, who noted they do not own a car, or do not have a driver's licence, said that cycling is their primary mode of transportation. A few participants said they were able to save money on vehicle costs by only having one family vehicle and cycling whenever possible.

For many residents, the lack of current connectivity between existing cycling infrastructure is a significant deterrent to cycling in the city. Some considered the network to be disjointed and indicated that the lack of consistent lanes leaves them feeling stranded or unsafe in certain areas of the city, particularly at major intersections. The Queen Elizabeth Expressway (QEW) was noted as the largest infrastructural barrier that prevents residents from cycling.

In general, respondents indicated that they cycle for exercise and to maintain their physical and mental health. Several participants noted that Burlington's network of cycling trails motivates them to cycle recreationally. Respondents also regularly commented on their enjoyment of the Centennial and Hydro Corridor Trails that run through the City. Some participants identified some roads that they enjoy cycling on such as: North Shore Boulevard, Upper Middle Road (between Burloak Drive and Walkers Line), Palladium Way, Britannia Road and Bell School Line. The Waterfront Trail is also popular amongst community members and many respondents enjoy having access to these scenic amenities. Some residents cycle recreationally as a social activity amongst groups of friends or family members. Several participants also indicated that they bike to be environmentally conscious and in a specific effort to decrease their carbon footprint.

External factors like the weather (e.g., snow, rain, and cold temperatures in the winter) discouraged respondents from cycling. Other factors noted included age, physical ability, and a general lack of motivation, interest, or free time. A few responds indicated they would cycle but they do not own a bike.

3.2 Cycling Comfort Levels

Originally developed by researchers at the Mineta Transportation Institute, Bicycle Level of Traffic Stress (LTS) quickly assumed the mantle of industry best practice for assessing the comfort and connectivity of bicycle networks. LTS is an objective, data-driven approach to evaluating bikeways by matching up roadway design, traffic volumes, and motor vehicle speeds to individual perceptions of bicyclist comfort and a willingness to travel out of ones' way to maintain that level of comfort. LTS results demonstrate the

importance of assessing a bikeway networks not only for connectivity but also for their ability to serve the diverse needs of all its users. Through all methods of engagement, participants were asked to rank their cycling comfort levels on four varying cycling facility types on a scale from 1 ("very uncomfortable") to 5 ("very comfortable"). There were 838 votes received through pop-up events and Social Pinpoint online survey. The average ranking for each of the facility types are as follows, from highest to lowest:

Table 4: Cycling Facility Comfort Level Ratings

Facility Type	Average Rating (out of 5)
Level of Traffic Street (LTS) 1: Trail or cycle track separated from traffic	4.52
Level of Traffic Street (LTS) 2: On-road buffered bikeway or protected bikeway	3.85
Level of Traffic Street (LTS) 3: Narrow bike lane or shoulder on a busy street	2.24
Level of Traffic Street (LTS) 4: Higher speed roadway with sharrows or no cycling facilities	1.66

The general trend, as indicated by the ranking exercise, is that residents prefer a greater degree of separation between cyclists and cars to feel safer on the road. Participant feedback demonstrates that a significant area of opportunity for the City is to find ways to encourage residents to cycle in Burlington is to modify existing cycling infrastructure or build new cycling infrastructure that are either trails, cycle tracks separated from traffic, on-road buffered bikeways, or protected. Participants were also asked to provide comments regarding the four facility types. A full list of verbatim participant responses can be found in Appendix B.

Figure 6 Trail or cycle track separated from traffic example

LTS 1: Trail or cycle track separated from traffic

Residents indicated support for separated trail facilities as a safe type of cycling facility. Some participants indicated that separated trail facilities should be used to improve connectivity to GO stations and other portions of the cycling network.

Multiple participants said that they approved of the separated trail or cycle track as it provided adequate distance from traffic. Existing infrastructure on Rebecca Street and Burloak Drive were noted as examples of separated cycling infrastructure that are working well. However, some questioned if the construction of such facilities would exceed the City's budget.

Figure 7 On road buffered bikeway or protected bikeway example

LTS 2: On-road buffered bikeway or protected bikeway

While on-road buffered or protected bikeways received relatively high-scores from participants, some felt that they offered only limited safety. Safety concerns included: the potential risk for young cyclists, the potential for accidents at intersections, and limited barriers.

Some participants noted that they liked the idea of bollards as they added clear delineation between cycling lanes and vehicle lanes. Other participants liked wide painted buffers to add separation between cars. A few respondents noted that their comfort level would be determined by the speed of the road and these types of facilities would not be suitable for major roads.

Figure 8 Narrow bike lane or shoulder on a busy street

LTS 3: Narrow bike lane or shoulder on a busy street

Residents frequently said that road shoulders need to be paved to support cycling. A few participants liked the idea of painting bike lanes green to better mark their use as cycling lanes. Some participants indicated that narrow bike lanes cause conflicts between cars and cyclists.

These cycling facilities types received a relatively low comfort level ranking. Many participants felt that narrow bike lanes or shoulder facilities were not safe. Residents indicated that they preferred lanes with greater levels of protection from traffic.

Figure 9 Higher speed roadway with sharrows or no cycling facilities example

LTS 4: Higher speed roadway with sharrows or no cycling facilities

Most respondents indicated that they do not like the design of sharrows. Some participants said that sharrows are pointless or even a waste of money as they do not enhance safety or the cyclist experience. Most comments received regarding these types of cycling facilities indicated that participants find sharrows to be an unsafe form of cycling infrastructure.

3.3 Proposed 2018 Cycling Plan Vision

Through Social Pinpoint online engagement and Burlington's Cycling Committee visioning exercise, respondents were asked to provide feedback on the proposed vision for the 2018 Cycling Plan. The vision, as identified by the City of Burlington, is provided below.

"A cycling culture within the City of Burlington is encouraged and achieved through the implementation of cycling facilities that allow all users to feel comfortable and confident using a bike as their mode of transportation."

Generally, respondents noted they are supportive of the proposed 2018 Cycling Plan Vision. However, those who expressed concern or disapproval of the vision statement noted issues with active transportation as a priority in the City of Burlington above other transportation options (i.e., public transit and driving). A few people suggested that there was a lack of consideration and planning for an aging population and that the

bus network should be more of a focus. Furthermore, participants expressed concerns about current traffic congestion resulting from cyclists and motorists sharing the road.

Several respondents noted the importance of including safety in the statement or making it shorter, more concise and not so broad. Other respondents noted that it should include more about connectivity, multi-use paths and the health of people and the environment. There were a few respondents who indicated that the words 'cycling culture' are unclear to readers. Some respondents also noted that general education and sense of awareness of cycling culture in the city needs to be supported by cyclist and motorists and it is unclear how the vision states that this will be accomplished. Many respondents envision the future of cycling in Burlington to include more people and communities cycling safely, more often, and with better connections to trails, local destinations and other municipalities.

3.4 Major Themes

Safety

Several respondents indicated that the City's current cycling network does not feel safe. A concern is that many of the current lanes are too narrow and that the painted lines, which exist on many of the City's current cycling routes, do not offer enough protection from vehicles. Particular concern was expressed for the safety of children using on-road facilities. Many people are currently uncomfortable with sharrows on high traffic roads, and especially uncomfortable crossing the QEW. Comfort levels seemed to be determined most by space of cyclists to traffic and conditions on the road.

Participants referenced a lack of safety caused by narrow bike lanes, poor sightlines on certain roads with tight corners, and poorly maintained shoulders. Participants also noted that challenges in areas where drivers do not pay attention to cyclists such as: right-hand turn lanes at intersections, parking lot entrances and exists, highway on and off ramps, and underpasses. A lack of lighting was also found to make cycling challenging in some areas after dark. Appleby Line, Dundas Street, Plains Road and Maple Avenue were all noted as challenging routes. Some participants also noted that it is difficult to get to other municipalities and to GO stations because of a lack of general safety.

Connectivity

Access to important destinations and connections between on-road and off-road networks are valuable to respondents. Participants noted the inconsistency and disjointed nature of current cycling facilities is a hindrance to cycling in the City. Increased cycling network connectivity is seen as a way of enhancing cyclist safety. The importance of better connections was emphasized specifically to key destinations and facilities such as: GO Transit Stations; local schools, public facilities, the lakeshore, neighbouring cities, existing trails, and overall improved connectivity between North Burlington and South Burlington.

Residents noted that there should be increased connectivity between on-road facilities and off-road recreational trails. Additionally, some participants noted that cycling infrastructure is needed to help cyclists get to areas in North Burlington. A lack of connectivity between the City's cycling routes makes it difficult for residents to access certain areas. Participants also said that a lack of continuous bike lanes make it hard for them to get to certain parts of the City. For example, participants noted difficulty accessing Centennial Trail both from downtown Burlington and from North Burlington. Residents mentioned that

many lanes do not "go anywhere" or abruptly end in inconvenient places. Participants also noted that it is challenging to travel to other municipalities because of a lack of connectivity.

Infrastructure

While participants want more cycling facilities and pathways, the existing network of off-road bike trails were highlighted as positive cycling amenities. The on-going maintenance of new and existing bike lanes and trails is important to users. Cyclists want routes that are free of gravel, debris, and snow. Additionally, protected and/or buffered crossings for several of Burlington's high-speed, high-traffic roadways (e.g., Plains Road/Fairview Street, Appleby Line) are desired. Other physical barriers (i.e., QEW, Plains Road and Highway 407) and land use patterns for direct routes to destinations were noted areas where improvements could be made to enhance cycling in the City.

Some residents find that Burlington's cycling infrastructure poses a challenge on their routes. Specific issues include fading painted buffers and bike lane symbols, narrow lanes, and unpaved shoulders. Certain road design features such as median and curb-lane planters, speed bumps within close proximity of the curb, and inconsistent radius curves make certain routes more challenging. A few participants noted that some lights take too long to turn for cyclists either because they favour motorists or have sensors that do not recognize the weight of bicycles.

3.5 Network Upgrade Priority Opportunities

Digital engagement respondents through Social Pinpoint mapping engagement tool were asked to vote on the top 3 cycling network upgrades opportunities they felt were the most important priorities for the City to consider. A total of 358 votes were submitted. The following is a breakdown of the votes from highest to lowest:

Table 3: Cycling Network Upgrade Priorities Opportunities

Priority	Votes
Filling in the gaps in the existing network	79
Higher-level cycling facilities on the road (i.e. physically-separated space)	74
Education of cyclists and drivers	44
Facilitating safer trail crossings of streets	43
Enhancing bike facilities (such as bike lanes) through intersections with traffic lights	41
Other (expanded off-road networks, secondary road cycling infrastructure, off-road facilities only, and safe QEW crossings)	40
Wayfinding and route signage (i.e. signage for trail/bike lane network destinations and connections)	20
End-of-use facilities (i.e. bike parking, showers and lockers)	17

Feedback received through online engagement via Social Pinpoint and face-to-face engagement via pop-up community conversations align with the votes received as priority opportunities for network upgrades. A summary of this feedback is presented below in no particular order of importance.

Filling in the Gaps in the Existing Network

Participants noted the need for continuous north-south and east-west routes. Residents identified several routes where bike lanes would improve connectivity and make their journeys less challenging including: Waterdown Road, Brant Street, Plains Road, Dundas Street, North Service Road and Lakeshore Road.

Higher Level Cycling Facilities on the Road

Participants noted that cycling facilities in the City need to be properly maintained to encourage cycling. The bike lanes on Palladium Way were noted as the type of lanes that provide sufficient space between cars and bikes. Residents also said that there are simply not enough bike lanes in the City. Aldershot was noted as an area with too few lanes.

Some participants said that protected bike lanes would make certain routes less challenging. A few infrastructure improvements were suggested such as: additional off-road bike paths and more bike parking. Maintenance of construction debris, snow and ice, gravel, leaves, pet waste, and other forms of debris were a few of the noted as items to be removed from on-road and off-road pathways on a regular basis to improve the cycling network. Residents also noted the need to address potholes along curbs where cyclists ride.

Education

Several comments were received that indicated participant's support for the expansion of Burlington's cycling network. Some noted that while cycling might not have strong uptake currently, facilities should be planned to support more cycling in the future. However, not all participants were as enthusiastic. Multiple comments were received indicating that on-road cycling facilities are not appropriate for Burlington. The fear is that cycling lanes will increase or cause traffic congestion. Residents who expressed opposition to on-road bike facilities indicated that the New Street pilot project had created negative impacts on traffic flow. A few participants said that the City will need to change the mindsets of residents to think more positively about the benefits of cycling infrastructure in the future.

Some said that it is difficult for motorists and cyclists to share the road as many drivers are unaware of the proper way to interact with cyclists. Many participants want to see the expansion of the City's cycling network paired with education campaigns to increase safety for both drivers and cyclists. Training should also be given to the City's public transit operators. Education campaigns should indicate that both drivers and cyclists are accountable for making the roads safe for all users. Cyclists should also be made aware of safety gear such as reflective strips and bike lights. A few participants said that cyclists should be fined for not obeying the rules of the road.

Safer Crossings

Many respondents indicated that on-road buffered and protected bikeways and/or separated tracks from traffic would make users feel safer. The speed of traffic; lack of designated paths; wayfinding signs; gaps within routes and driver awareness of cyclists are significant safety concerns. Multiple residents indicated

that they preferred off-road cycling paths or multi-use paths to on-road facilities. Participants indicated that off-road facilities often feel safer than on-road facilities.

Several residents encouraged the City to be strategic in expanding its cycling network. This included recommendations to avoid duplication by not adding on-road facilities where off-road infrastructure already exists, building a few safe and well-connected lanes rather than many disjointed ones, and prioritizing the downtown core and dense areas where ridership may be more focused. A few participants said that Burlington's mobility hub plans should incorporate cycling facilities.

Safe QEW Crossing

Conflicts near QEW on-ramps and off-ramps were regularly noted as particularly dangerous areas for cyclists. A few participants stated that cyclists need to be more conscious of road rules. Many participants indicated support for enhanced QEW crossings and some were curious about the price tag of such infrastructure. While participants had differing opinions regarding which QEW crossings should be prioritized, most participants supported the added north-south and east-west connectivity that *any* safe QEW crossing would add to Burlington's cycling network.

The potential QEW Highway Crossing near Roly Bird Park, as noted in the 2009 Burlington Cycling Plan, was supported by many participants. Additionally, some respondents noted support for QEW crossings at Walkers Line or Appleby Line. While many residents support the proposed crossing near Brant Street, some said that it is not a good location because of the existing sidewalk on Brant Street, business operations along the rail corridor, and the rail corridor's ownership by all levels government. A few residents noted that QEW crossings should connect to the City's existing network and to GO stations. Additionally, a few participants said that Highway 403 crossings are also necessary safe crossing areas.

End-of-use Facilities and Supportive Amenities

Consistent support was shown for the City's existing network of recreational trails. However, several comments were made indicating that multi-use trails need to have a clear delineation of uses so that cyclists and pedestrians can comfortably coexist on such trails. Multiple residents indicated the need for supportive amenities along off-road trails and on-road networks such as bathrooms, water bottle filling stations, bike repair facilities, bike racks and lock-ups, and a bike share program to make cycling more convenient in Burlington.

Some participants requested that the city also consider BMX and mountain bike facilities when developing their cycling network. Lastly, some noted that accommodations should be made for cycling groups that enjoy riding along the waterfront to avoid traffic obstruction. Several respondents suggested the need to address concerns about the lack of facilities to park or lock their bikes downtown, at GO stations or in other areas of the City. A few participants said a lack of places to park near multi-use trails prevents them from making use of the City's facilities.

Next Steps

The City of Burlington Cycling Master Plan Update will invite the public to participate in Round 2 Engagement in the next phase of the project process.