Welcome!
City of Kitchener
Biehn Drive Extension
Class Environmental Assessment

Thank you for participating in the Online Public Information Centre (PIC) for the City of Kitchener’s Class Environmental Assessment (EA) for the extension of Biehn Drive and the sanitary trunk sewer.

At the present time, the Province of Ontario has implemented restrictions on public gatherings to deal with the COVID-19 pandemic. As a result, this Public Information Centre is relying on web-based communications. Should you have any questions regarding the study, please contact the City or Consultant Project Managers.

There is an opportunity at any time during the Class EA process for interested persons to provide written input. Any comments received will be collected under the Environmental Assessment Act and, with the exception of personal information, will become part of the public record.

Comments can be submitted by emailing stevenj.taylor@bteng.ca and/or eric.riek@kitchener.ca by May 4, 2021.
Introduction

The City of Kitchener has initiated a Class Environmental Assessment (EA) Study for the extension of Biehn Drive and the sanitary trunk sewer from the current terminus of Biehn Drive (approximately 60 m west of Spencer Court) southerly to the future Robert Ferrie Drive Extension.

This Study will complete the planning and preliminary design steps of the Municipal Class EA by conducting a transportation needs assessment, generating and evaluating planning alternatives, and proactively involving the public in defining a recommended plan for improvements.

This Study is being completed as a Municipal Schedule C Class EA undertaking based on the range of anticipated effects. A Draft Study Design Report describing the study process has been made available for agency and public comments and is available on the City’s website.
This study is being initiated as a Municipal Schedule C project as defined by the Municipal Class Environmental Assessment (MCEA). Consultation is a key component of the Class EA process. The goal of consultation is to provide stakeholders and affected individuals opportunities to make their interests and concerns known to the project team throughout the EA process. The early identification of issues and concerns allows the project team to investigate with the goal of, if possible, resolving the concern.

At the completion of the EA process, an Environmental Study Report (ESR) will be produced. The Report will document key components of the study: need and justification; the range and types of consultation; natural and socio-economic environmental inventories; evaluation of alternatives; selection of the recommended alternative; and supporting reports produced for the project. Upon the completion of the ESR, the public and interested stakeholders will be made aware of 30-day public review of the Report.

If, after viewing the future ESR and having made your concerns known to the project team, you still have concerns during the 30-day review period, you have rights under the Environmental Assessment Act. These rights will be outlined in the public notice advising of the 30-day public review period.

The Municipal Class EA process is illustrated on the following exhibit.
Municipal Class EA Process

**PHASE 1**

1. **Identify Problem or Opportunity**

**PHASE 2**

1. Identify Alternative Solutions to Problem or Opportunity
2. Inventory Natural, Social, and Economic Environment
3. Identify Impact of Alternative Solutions on the Environment and Mitigation Measures
4. Evaluate Alternative Solutions, Identify Recommended Solutions
5. Consult Review Agencies & Public Problem or Opportunity and Alternative Solutions
6. Select Preferred Solution & Project

**PHASE 3**

1. Identify Alternative Design Concepts for Preferred Solution
2. Detail Inventory of Natural, Social, and Economic Environment
3. Identify Impact of Alternative Designs on the Environment and Mitigating Measures
4. Evaluate Alternative Designs, Identify Recommended Design
5. Consult Review Agencies & Previously Interested & Directly Affected Public
6. Select Preferred Design

**PHASE 4**

1. Complete Environmental Study Report (ESR)
2. Environmental Study Report (ESR) Placed on Public Record
3. Opportunity to Request Minister Within 30 Days of Notification to Request an Order
4. Discretionary Public Consultation on to Review Preferred Design
5. Preliminary Finalization of Preferred Design
6. Select Preferred Design
7. Preliminary Finalization of Preferred Design

**PHASE 5**

1. Complete Contract Drawings and Tender Documents
2. Proceed to Construction and Operation
3. Monitor for Environmental Provisions and Commitments

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Legend:
- Indicates Possible Events
- Indicates Mandatory Events
- Discretionary Public Contact Points
- Indicates Probable Events
- Optional
- GEA: Canadian Environmental Assessment Act
- We Are Here
- Schedule C EA Process

Note: This flowchart is modified from the Province of Ontario's Municipal Engineers Association Municipal Class Environmental Assessment dated June 2000 and approved by the Minister of the Environment 4 Oct. 2000.
Background

Since the mid-2000’s, the road network and municipal servicing for the Doon South and Brigadoon areas in the City of Kitchener have been planned to accommodate area development and evolving transportation needs. Several planning documents including the City’s Official Plan and Transportation Master Plan (TMP) have identified the need to extend Biehn Drive westerly to the Robert Ferrie Drive extension. The Biehn Drive Extension would be a major collector road, as identified in Schedule B of the City of Kitchener’s Official Plan. This link would accommodate vehicles to and from the Brigadoon community, and would help mitigate cut-through traffic on local streets within the community. A collector road collects traffic from local roads within the community and provides connectivity to arterial roads including Strasburg Road.

Legend

<table>
<thead>
<tr>
<th>Street Network</th>
<th>Existing</th>
<th>Planned</th>
<th>Proposed Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provincial Highway</td>
<td></td>
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<tr>
<td>Regional Road</td>
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<tr>
<td>City Arterial Street</td>
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<tr>
<td>Major Community Collector Street</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Minor Neighbourhood Collector Street</td>
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<tr>
<td>Local Street</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Heritage Corridor</td>
<td></td>
<td></td>
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<tr>
<td>Multi-Use Pathway and On Road Connection Network</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Primary Multi-Use Pathway/Connection (Type 1)</td>
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<td></td>
</tr>
<tr>
<td>Secondary Multi-Use Pathway/Connection (Type 2)</td>
<td></td>
<td></td>
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<tr>
<td>Transit Corridor</td>
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<tr>
<td>Light Rail Transit Corridor Public Transit Right-of-Way</td>
<td></td>
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<tr>
<td>Adapted Bus Rapid Transit Corridor</td>
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</tbody>
</table>

Biehn Drive Extension as identified in the Official Plan (Integrated Transportation System)
Problem and Opportunity Statement

Future development within the Doon South and Brigadoon communities requires a defined alignment for the extension of Biehn Drive to Robert Ferrie Drive as part of the area road network. In order to determine the road alignment, this Study will consider the natural, social environments and the future land use in the Study Area. The extension of Biehn Drive is required to accommodate municipal servicing, and safely and reliably accommodate all modes of transportation including vehicular, pedestrians, cyclists and trucks. By defining the future road and municipal servicing plans, the subsequent land use plans can be completed by developers.

The Study will provide the opportunity to: improve accessibility to the local community by providing additional network links; define a multi-modal transportation plan to support travel within the local neighbourhoods; and allow development to proceed on lands that currently require the roadway to be defined prior to developing the land use plan.
Study Considerations

- **Existing Community**
  - Changes in sound levels
  - Changes in traffic volumes on Biehn Drive
  - Potential mitigation may include traffic calming measures, pedestrians/cyclist facilities, and mitigation of noise impacts.

- **Natural Environment**
  - Potential for Species at Risk (SAR) in woodlots and the Strasburg Creek Provincially Significant Wetland (PSW)
  - Two cold-water systems: Strasburg Creek (immediately north of the Study Area) and Blair Creek (900 m south of the Study Area).
  - Minimize footprint within, and impacts to, the Strasburg Creek system.

- **Transportation**
  - Improvements are required to address long-term traffic operations.

- **Active Transportation:**
  - Active modes of transportation will require separated facilities to service all ages and abilities as identified in the Cycling and Trails Master Plan.
  - This could include multi-use pathways, sidewalks, buffered bicycle lanes and/or raised cycle tracks.
Assessment of Alternative Planning Solutions

Alternative Planning Solutions (Alternatives to the Undertaking) represent alternative ways or methods of addressing the problem to be solved by the project. In determining the preferred undertaking for the City, the following Planning Solutions were evaluated:

- **Do Nothing:** This alternative would maintain the existing road network and would not extend Biehn Drive.

- **Transportation Demand Management (TDM):** Reduces vehicular traffic demand (encourages alternative work hours, work at home and active modes of transportation).

- **Greater Use of Local Roads:** Encourage the use of local roads to reduce the need to extend Biehn Drive. Local roads are generally not designed or maintained to accommodate high traffic volumes.

- **Limit Land Use Development:** Limit any new residential, commercial or industrial development and therefore reduce the generation of new trips.

- **Extend Biehn Drive:** Provides a long-term solution for improved traffic capacity, operations and safety.

Based on the preliminary review of Alternative Planning Solutions, “Transportation Demand Management” and “Extend Biehn Drive” are recommended. This Planning Solution addresses the problem statement by improving transportation service and safety.

The evaluation is documented on the following exhibit for public review and comment. All comments received will be reviewed and considered before proceeding with the Study and the evaluation of TDM (Active Transportation Improvements) and New Infrastructure alternatives.
## Assessment of Alternative Planning Solutions

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>Does not address forecast traffic demand. Results in increased volumes on local roads.</td>
<td>May reduce vehicular demand by mode shift or work at home but will not eliminate need for new or improved infrastructure.</td>
<td>Local roads not designed to accommodate increased volumes.</td>
<td>May reduce vehicular demand by reducing the number of trips generated by development but does not address existing demands and/or background growth.</td>
<td>Accommodates all modes of transportation.</td>
</tr>
<tr>
<td>Environmental</td>
<td>No impacts.</td>
<td>No or low impacts. Low impacts may be associated with active transportation projects/improvements (i.e. sidewalks, bike lanes).</td>
<td>Low impacts. Creates disruption to properties on local roads that would experience an increase in traffic.</td>
<td>No impacts.</td>
<td>Low to medium environmental effect possible with new corridor. Magnitude of effects is subject to environmental mitigation.</td>
</tr>
<tr>
<td>City Planning Objectives</td>
<td>Does not meet objectives/recommendations in City Planning documents.</td>
<td>Supports objective to encourage active transportation and alternate modes.</td>
<td>Does not meet objectives/recommendations in City Planning documents.</td>
<td>Does not meet objectives/recommendations in City Planning documents.</td>
<td>Supports the recommendations for the extension of Biehn Drive in OP and TMP.</td>
</tr>
<tr>
<td>Recommendations</td>
<td>Not recommended.</td>
<td>Recommended as a complementary solution.</td>
<td>Not recommended.</td>
<td>Not recommended.</td>
<td>Recommended to be carried forward.</td>
</tr>
</tbody>
</table>
Existing Conditions
Natural Environment

Potential SAR:
- Butternut (Endangered)
- Snapping Turtle (Special Concern)
- Eastern Meadowlark (Threatened)
- Bobolink (Threatened)
Existing Conditions
Well Head Protection Area

https://maps.grandriver.ca/web-gis/public/?theme=MYP&bbox=542091,4802909,545343,4804695
Preliminary Design Alternatives

Preliminary design alternatives for the extension of Biehn Drive were categorized into 5 groups:

<table>
<thead>
<tr>
<th>Alignment Alternatives</th>
<th>Intersection Alternatives</th>
<th>Sanitary Sewer Alignments</th>
<th>Cross Section Alternatives</th>
<th>Traffic Calming Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect to Robert Ferrie Drive east of Hydro Tower</td>
<td>Signalized</td>
<td>On Road Alignment</td>
<td>Urban Cross Section with sidewalk/ Separated Bike Facilities</td>
<td>Chicanes</td>
</tr>
<tr>
<td>Connect to Robert Ferrie Drive west of Hydro Tower</td>
<td>Unsignalized</td>
<td>New Alignment</td>
<td>Semi-Urban Cross Section with Separated Bike Facilities</td>
<td>Median</td>
</tr>
<tr>
<td>Connect to Strasburg Road</td>
<td>Roundabout</td>
<td></td>
<td></td>
<td>Narrower Driving Lanes</td>
</tr>
</tbody>
</table>

These groups of alternatives are presented on the following exhibits.
Traffic Calming Alternatives

Traffic calming measures, to control speed and discourage through traffic, will be considered along the extension of Biehn Drive, and will further support future recommendations for the Biehn Drive Traffic Calming Study being completed to the north of the Biehn Drive extension. These may include:

- Speed Humps/Cushions or Raised Crosswalks
- Centre Median
- Chicanes
- Median Bulb-outs
Cycling and Trails Master Plan

- Identified Cycling Facilities on Biehn Drive to be for all Ages and Abilities.
- Proposed Separated Bicycle Lanes on Biehn Drive with Multi-Use Trails along Strasburg Road and the Hydro Corridor.
Types of Separated Bicycle Facilities

Accommodating all ages and abilities of cyclists along the proposed extension of Biehn Drive could consider a variety of alternatives. These may include:

- Boulevard Multi-Use Trails
- Buffered Bike Lanes
- Raised Cycle Tracks

Although Separated Bike lanes/Cycle Tracks were identified in the CTMP, consideration of Boulevard MUTs would be an extension of the facilities on Strasburg Road and along the Hydro Corridor and could transition to another type of future facility along existing Biehn Drive if necessary.
Alignment Alternatives

- WARDS POND
- EXISTING HYDRO TOWERS
- STRASBURG CREEK
- BIEHN DR
- ALT 2
- ALT 1
- STRASBURG RD
- ROBERT FERRIE DR
- ALT 3

(PRELIMINARY RECOMMENDATION NOT TO CARRY FORWARD)
## Alignment Alternatives
### Coarse Screening

<table>
<thead>
<tr>
<th>Screening Criteria</th>
<th>Alternative 1: Connect to Robert Ferrie Drive east of Hydro Tower</th>
<th>Alternative 2: Connect to Robert Ferrie Drive west of Hydro Tower</th>
<th>Alternative 3: Strasburg Road Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the approach result in significant impacts to the natural environment?</td>
<td>Minor impacts to the woodlot/PSW (~0.3 ha).</td>
<td>Minor impacts to the woodlot/PSW (~0.3 ha).</td>
<td>Significant impacts to the woodlot/wetland (~1.3 ha).</td>
</tr>
<tr>
<td>Is the approach affordable for the City to implement?</td>
<td>No significant difference.</td>
<td>No significant difference.</td>
<td>Higher cost - requires an intersection onto Strasburg Road (arterial).</td>
</tr>
<tr>
<td>Does this alternative comply with the recommendations of the City’s planning documents (i.e., TMP, OP, KGMP)</td>
<td>This alternative complies with the recommendations of the City’s planning documents.</td>
<td>This alternative complies with the recommendations of the City’s planning documents.</td>
<td>Does not comply with the recommendations of the Official Plan or Growth Management Plan. Based on the previous design and construction of the Strasburg Road and roundabout within the Study Area, this previous alternative is no longer considered feasible.</td>
</tr>
<tr>
<td>Recommendation:</td>
<td>Carry forward for further evaluation</td>
<td>Carry forward for further evaluation</td>
<td>Do not carry forward</td>
</tr>
</tbody>
</table>

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Intersection Alternatives
Sanitary Trunk Sewer Extension Alternatives

The trunk sanitary sewer will extend from the existing Biehn Drive cul-de-sac to the future Robert Ferrie Drive Extension. The trunk sewer will serve the area shown.
Sanitary Trunk Sewer Extension Alternatives

Three alternative alignments will be considered. They are shown schematically in the figure.
Potential Cross Section Alternatives

Could include but not be limited to:

- Urban with multi-use path and sidewalk
- Urban with sidewalk and buffered bike lanes
- Semi-urban with multi-use path and paved shoulder

The planned extension of Biehn Drive is proposed to:

- Not provide direct driveway access. This will improve safety for cyclists and pedestrians,
- Not permit on-street parking.

Access to residential lots and on-street parking would be provided along local roads within the adjacent community.

The preferred cross section will consider LID measures for stormwater management within the ROW.
Analysis and Evaluation

Alternatives will be evaluated following this Public Information Centre. The following long list of evaluation criteria (factor groups and subfactors) is being considered for the assessment of the alternatives:

<table>
<thead>
<tr>
<th>Natural Environment</th>
<th>Social and Cultural Environment</th>
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</thead>
<tbody>
<tr>
<td>Air quality</td>
<td>Historic archaeological potential</td>
</tr>
<tr>
<td>Species at Risk (SAR)</td>
<td>Prehistoric archaeological potential areas impacted</td>
</tr>
<tr>
<td>Cold / cool / and warmwater fish habitat impacted</td>
<td>Built heritage sites impacts</td>
</tr>
<tr>
<td>Water quality – stormwater runoff</td>
<td>Cultural landscape features</td>
</tr>
<tr>
<td>Migratory bird nesting impact/loss of existing vegetated areas</td>
<td>Noise impacts</td>
</tr>
<tr>
<td>Provincially significant natural areas and habitat (i.e. Provincially Significant Wetlands)</td>
<td>Vibration impacts</td>
</tr>
<tr>
<td>Regionally significant natural areas and wildlife habitat (i.e. woodlots, non provincially significant wetlands, fauna and flora)</td>
<td>Excess materials management</td>
</tr>
<tr>
<td>Natural habitat impacted (e.g. specimen trees removed)</td>
<td>Water wells impacted</td>
</tr>
<tr>
<td>Groundwater</td>
<td>Lighting and visual impacts</td>
</tr>
<tr>
<td>Climate change</td>
<td>Economic environment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Land Use and Property</th>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property required (Residential)</td>
<td>Traffic operations - delays</td>
</tr>
<tr>
<td>Property required (Agricultural)</td>
<td>Safety - collision potential</td>
</tr>
<tr>
<td>Property required (Commercial)</td>
<td>Safety – design consistency</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Capital cost</td>
<td>Movement of goods</td>
</tr>
<tr>
<td>Future life cycle cost</td>
<td>Pedestrian access</td>
</tr>
<tr>
<td>Utility relocation</td>
<td>Ability to accommodate cyclists</td>
</tr>
<tr>
<td></td>
<td>Emergency vehicle access</td>
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</tbody>
</table>
Next Steps

Following this meeting we will:
- Review all comments
- Carry out environmental inventories and technical investigations
- Complete the analysis and evaluation of alternatives
- Hold Public Information Centre No. 2

We want to hear from you!
- Please provide comments by filling out the comment form or by contacting the City’s representative or the consultant below:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>EA Project Manager</td>
<td>City Project Manager</td>
</tr>
<tr>
<td>BT Engineering Inc.</td>
<td>City of Kitchener</td>
</tr>
<tr>
<td>509 Talbot Street</td>
<td>200 King Street West</td>
</tr>
<tr>
<td>London, Ontario N6A 2S5</td>
<td>Kitchener, ON N2G 4G7</td>
</tr>
<tr>
<td>Tel: 519-672-2222</td>
<td>Tel: 519-741-2200 ext. 7330</td>
</tr>
<tr>
<td>Email: <a href="mailto:stevenj.taylor@bteng.ca">stevenj.taylor@bteng.ca</a></td>
<td>Email: <a href="mailto:eric.riek@kitchener.ca">eric.riek@kitchener.ca</a></td>
</tr>
</tbody>
</table>

Please provide your comments on or before **May 4, 2021**.

Thank you for your participation in the study.
- To receive updates on the project, request that your name/e-mail be added to the mailing list.
- Your input into this study is valuable and appreciated.

All information is collected in accordance with the *Freedom of Information and Privacy Act*. 