



March 30, 2023

Municipality of Brighton
Planning and Development
67 Sharp Road
Brighton, ON
K0K 1H0

Attention: Ron Warne, Manager of Approvals

**Re: Technical Peer Review - Elgin Street Condominium
Preliminary Servicing and Stormwater Management Report
Elgin Street, Municipality of Brighton
D.M. Wills Project No. 81077**

D.M. Wills Associates Limited (Wills) has been retained by the Municipality of Brighton to complete a Technical Peer Review of the proposed development to be located east of the terminus at Elgin Street, Municipality of Brighton.

The scope of this Technical Peer Review is limited to the following reviewed documents:

- Preliminary Servicing and Stormwater Management Report, prepared by Ainley Group, dated May 2022

The proposed 2.64 ha development will consist of the following:

- Eight (8) buildings with 4 (four) residential units per building
- 7m wide paved laneway
- One (1) vehicular entrance and one (1) pedestrian access

Comments

1. General

- 1.1. It is unclear why the Report is titled 'Preliminary', considering that it is also stated in the Report that the FSR was prepared in support of Site Plan Approval for the proposed condominium development. As such, the FSR is missing a detailed Site Servicing Plan for water, wastewater, and stormwater infrastructure.
- 1.2. In addition to the noted Policies and Design Guidelines, the Report should be prepared in accordance with the Municipality of Brighton Engineering Design Guidelines and the Lower Trent



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Region Conservation Authority (LTC), since the subject site is regulated by LTC. The LTC should also be circulated for review and approval of the proposed storm water management infrastructure.

- 1.3. The Traffic Impact Study (TIS) section should be removed from the FSR as this information is irrelevant to the water and wastewater site servicing design.
- 1.4. Clarification is required if the proposed water and wastewater infrastructure and laneway network will be privately owned by the condominium corporation or by the Municipality of Brighton.

2. Proposed Development

- 2.1. Indicate street names and labels on Figure 1: Site Plan Location.
- 2.2. The 2 proposed site accesses from Price Street East are unclear. Which access is for vehicular and which for pedestrian use? Are the accesses proposed through external private property? Please submit the Architectural Site Plan to undertake a detailed review.
- 2.3. The topographical and legal survey is required to undertake a detailed review.

3. Water Servicing

- 3.1. The FSR is significantly lacking in qualitative and quantitative description of the existing vs. proposed conditions for external and internal water servicing. Watermain sizing calculations are provided with little context to understand the proposed internal distribution network, including the proposed pumps/reservoirs.
- 3.2. Summary tables should be included in the report clearly outlining the existing vs. proposed flows, pressures, minimum required, etc.
- 3.3. The FSR is missing a 'Design Criteria' section that clearly outlines the Municipality's and MOECC's design criteria utilized to compare with the proposed development's water demand and fire flows. All assumptions, values from the MOECC design criteria, and FUS calculations should be clearly explained and supported, especially if the Municipality's design criteria were not utilized.
- 3.4. Based on the Municipality's draft Water Distribution Network Model, dated December 15, 2021, existing watermain sizes in Zone 5 are shown as 150mm in diameter, not 200mm as indicated in the FSR, confirmation/clarification is required.

- 3.5. Confirmation/explanation is required if the Municipality's water distribution model was used to analyze the proposed development's water distribution network.
- 3.6. It is unclear if a fire hydrant flow test was completed on the nearest external hydrant to confirm the distribution system pressures and fire flows available for the proposed development. If completed, the test results and report should be appended to the FSR.
- 3.7. Based on the Municipality's draft Water Distribution Network Model, dated December 15, 2021, the Brighton Water Treatment Plant has a limited capacity. As such, a WTP capacity analysis should be undertaken to determine that sufficient capacity is available.
- 3.8. Figure 3 is unacceptable as it does not illustrate a detailed watermain design, including but not limited to the following elements:
 - 3.8.1. Proposed pipe size/material, internal and external to the site, are not shown on the plan.
 - 3.8.2. Existing municipal watermain and proposed connection details are not shown on the plan.
 - 3.8.3. It is unclear how the proponent intends to keep the private watermain and fire hydrants separated from the municipal water supply network, including but not limited to installing valve boxes, valve chambers, bulk metering, and backflow prevention, etc. at the property boundary.
 - 3.8.4. Servicing connections to individual buildings are not shown on the plan. Per Brighton's Engineering Design Guidelines, the minimum size for service connections shall be 19mm diameter, or 25mm diameter if the building setback exceeds 30m from the main.
 - 3.8.5. Typical engineering practice requires placing a fire hydrant for flushing dead end watermains to eliminate potential stagnant water quality issues. Alternatively, consider and analyze a 50mm copper water line, installed beyond the fire hydrant, to service the 4 units in Building 7.
 - 3.8.6. It appears that the fire hydrant locations and spacing is inadequate for the site, per the Municipality's maximum permitted hydrant spacing.

4. Sanitary Servicing

- 4.1. The FSR is missing a 'Design Criteria' section that clearly outlines the Municipality's and MOECC's design criteria utilized to analyze the proposed wastewater flows. All assumptions and/or values from the MOECC design criteria should be clearly explained and supported, especially if the Municipality's design criteria were not utilized.
- 4.2. The Municipality's most up to date Sanitary Sewer Design Sheet should be reviewed to ensure that the downstream sanitary sewer has sufficient capacity to accept the proposed flows up to the Harbor Street trunk sewer.
- 4.3. Figure 3 is unacceptable as it does not illustrate a detailed sanitary sewer design, including but not limited to the following elements:
 - 4.3.1. Redline markups are unacceptable, remove all markups and resubmit the proposed detailed design.
 - 4.3.2. Pipe lengths from MH to MH should be shown on the plan.
 - 4.3.3. Service connections should be shown on the plan.
- 4.4. The Municipality of Brighton Wastewater Treatment Plan has a current rated capacity of 4,600 m³/day in accordance with the Brighton Lagoon EA Addendum Report, prepared by J.L. Richards, dated December 22, 2022. The wastewater treatment plant residual capacity should be reviewed to ensure that the proposed flows can be accommodated in the current rated capacity.
- 4.5. The Sanitary Sewer Design Sheet residential flow rate is not consistent with the Municipality's design criteria.

5. Stormwater Management

- 5.1. A detailed Stormwater Management Report should be submitted under separate cover to the satisfaction of the Lower Trent Region Conservation Authority (LTC) and the Municipality, that includes a detailed qualitative and quantitative analysis of:
 - 5.1.1. Existing and Proposed Hydraulic Parameters
 - 5.1.2. Quantity Control Requirements (where applicable)
 - 5.1.3. Quality Controls Requirements (pre-treatment, infiltration, etc.)
 - 5.1.4. Groundwater and Infiltration
 - 5.1.5. Phosphorous Loading



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5.1.6. Water Balance

- 5.2. The geotechnical and Environmental Impact Study sections should be removed from the FSR and included in the SWM Report in support of the detailed SWM design.
- 5.3. The submission is missing detailed design drawings, including a detailed Grading Plan and a detailed Erosion and Sediment Control Plan.

We trust that this information is suitable for your purposes at this time. We request that responses to comments be referenced to the comments as set out in the letter for ease of review.

Please contact our office if you have any questions or require clarification.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Peter Turezki'.

Peter Turezki, P.Eng., PMP
Senior Project Manager

AD/

Enclosed: None