

File #: 1791
Date: January 31, 2017

Mr. Gavin Watson, Manager of Development Engineering
Town of Bradford-West Gwillimbury
P.O. Box 419, 305 Barrie Street, Unit 2
Bradford, Ontario, L3Z 2A9

Dear Mr. Watson:

Re: **Preliminary External Servicing Investigation and Financial Review
Bradford Highlands Golf Club Redevelopment
Town of Bradford-West Gwillimbury, Ontario**

SCS Consulting Group Ltd. has been retained by Bradford Highlands Joint Venture to review the external servicing requirements and financial implications for a proposed residential development located at 23 Brownlee Drive and 2820 Line 5, in the Town of Bradford-West Gwillimbury.

As shown in **Figure 1**, the site is located on the west side of Simcoe Road, south of Line 6.



Figure 1 – Site Location

As per **Figure 1**, the existing site area is approximately 59.57 hectares (147.20 acres) and consists of an existing 18-hole golf course with a cart shed, maintenance building, and a residential dwelling. There are agricultural lands to the west (west of the existing estate residential lands), residential lands to the north (on the north side of Line 6), residential lands to the east, and the North Canal of the West Holland River to the south. It is our understanding that the proposed development will consist of a maximum of 800 residential units with a population of 2,000 people (i.e., assuming 2.5 persons per unit).

The investigation was based on the following information:

- ➔ County of Simcoe Interactive Mapping (Viewed on March 7, 2016);
- ➔ Water Supply and Wastewater Servicing Master Plan Update prepared by C.C. Tatham & Associates Ltd., dated March 31, 2011;
- ➔ County of Simcoe Water and Wastewater Visioning Strategy prepared by Greenland Consulting Engineers Ltd., dated February 29, 2012;
- ➔ Town of Bradford-West Gwillimbury Wastewater Treatment Plant Annual Report for 2014, dated March 20, 2015;
- ➔ Lakeshore Water Treatment Plant Expansion Environmental Study Report prepared for Town of Innisfil prepared by AECOM Canada Ltd., dated March 2011;
- ➔ Bradford Water Pollution Control Plant Class EA (Phases 3 & 4) Public Information Centre Presentation, dated June 22, 2011;
- ➔ Town of Bradford-West Gwillimbury's Capital Plan 2016 – 2024 Construction Figure, dated November 10, 2015;
- ➔ Town of Bradford-West Gwillimbury Water Pollution Control Plant Environmental Study Report (Phases 3 and 4) prepared by Ainley & Associates and Black and Veatch, dated March 2012;
- ➔ Town of Bradford-West Gwillimbury's February 4, 2013 Development Charge Background Study; and,
- ➔ Town of Bradford-West Gwillimbury's Servicing Allocation Policy, dated September 8, 2009.

Sanitary Treatment

The Bradford Water Pollution Control Plant (WPCP) facility is located east on Dissette Street and discharges tertiary effluent to the Holland River which drains into Lake Simcoe. In 2012, the Bradford WPCP was re-rated from 17,400 m³/day to 19,400 m³/day. The 2012 re-rating was undertaken to accommodate both the current Bradford Urban Area and a portion of the Official Plan Amendment (OPA) No. 15 and 16 lands.

Based on the 2011 C.C. Tatham & Associates Ltd. report, the Bradford WPCP needs to be expanded to accommodate the Bradford Urban Area, including OPA 9, with a projected population of 38,800, OPA No. 15 with a projected employment population of 15,000, and OPA No. 16 with a projected residential population of 4,500 for a total projected equivalent population of 58,300. The estimated future average and peak wastewater flows from the projected residential population and employment lands in the serviced area is 23,300 m³/day and 53,400 m³/day respectively. The projected wastewater flows for the serviced areas exceed the capacity of the expanded Bradford WPCP (19,400 m³/day) by 3,900 m³/day.

The Town of Bradford-West Gwillimbury's 2013 Development Charge Background Study includes \$20 million for an additional upgrade to the plant to increase the capacity to 23,300 m³/day to accommodate the

approved OPA No. 15 and 16 Secondary Plans based on the populations noted above. This upgrade has yet to occur, but is planned in the DC Background Study for 2018. Based on recent discussion with Staff, the Town of Bradford-West Gwillimbury is on schedule and planning to release a Request for Proposal for the detailed design of the expansion in Early 2017.

It is our understanding, as per the 2011 C.C. Tatham & Associates Ltd. Report, that the design allowance for the Bradford WPCP includes 2,700 people, with an average daily flow rate of 675 m³/day, for intensification and infilling within the Bradford Urban Area. However, this appears to have been updated in Table 5.4 of the 2012 Ainley & Associates and Black and Veatch ESR to include an allowance of 4,200 people with an average daily flow rate of 1,050 m³/day for intensification and infilling within the Bradford Urban Area within the Bradford WPCP once the upgrades are complete. Therefore, this may provide for an opportunity for capacity for the subject lands subject to the Towns Servicing Allocation Policy and Council Approval.

Sanitary Servicing

As the site drains generally to the southeast, it may be preferable for the site to connect to the east (through the Green Valley community) or south (connect to the Line 5 forcemain) in order to utilize local gravity sewers throughout the development to the existing sanitary sewers. These two (2) options are further described below and require additional consultation with the Town of Bradford-West Gwillimbury.

Option 1: To the East (Project No. GV-SAN 1 & 2)

The Bradford Highlands Golf Club is located immediately west of the Green Valley community and the associated sewershed (i.e., OPA No. 19). The Green Valley lands are serviced by a gravity sewer, which we understand is sized to accommodate the Bradford Highlands lands, that heads east via a trunk sewer across Simcoe Road and north to the Green Valley Pumping Station that pumps the sewage to the Bradford WPCP located on Dissette Street ultimately out letting to the Holland River (refer to **Figure 3** below).

The design capacity of the Green Valley Pumping Station is 102.2 L/s. The Green Valley community is expecting a peak flow of 93.0 L/s into the Pumping Station; therefore, there is a residual capacity of 9.2 L/s. The Bradford Highlands lands itself could be serviced via a local sanitary sewer through the Bradford Capital subdivision located immediately east of the subject lands. The residual capacity of the Green Valley Pumping Station is not enough to accommodate the Bradford Highlands lands. For that reason, an expansion to the Green Valley Pumping Station would have to be investigated to include flows from the Bradford Highlands lands.

Option 2: To the South (Project No. OPA 15-FM 2)

The Town of Bradford-West Gwillimbury is currently in the process of constructing the OPA No. 15 Pumping Station. This system will pump flows from future OPA No. 15 and 16 developments via sanitary forcemain along Line 5, to Simcoe Road, to Line 6, to Walker Avenue, ultimately connecting to the forcemain under the proposed South East Arterial Road at Bridge and Holland Streets before connecting to an existing forcemain out letting to the Bradford WPCP located on Dissette Street (refer to **Figure 3** below).

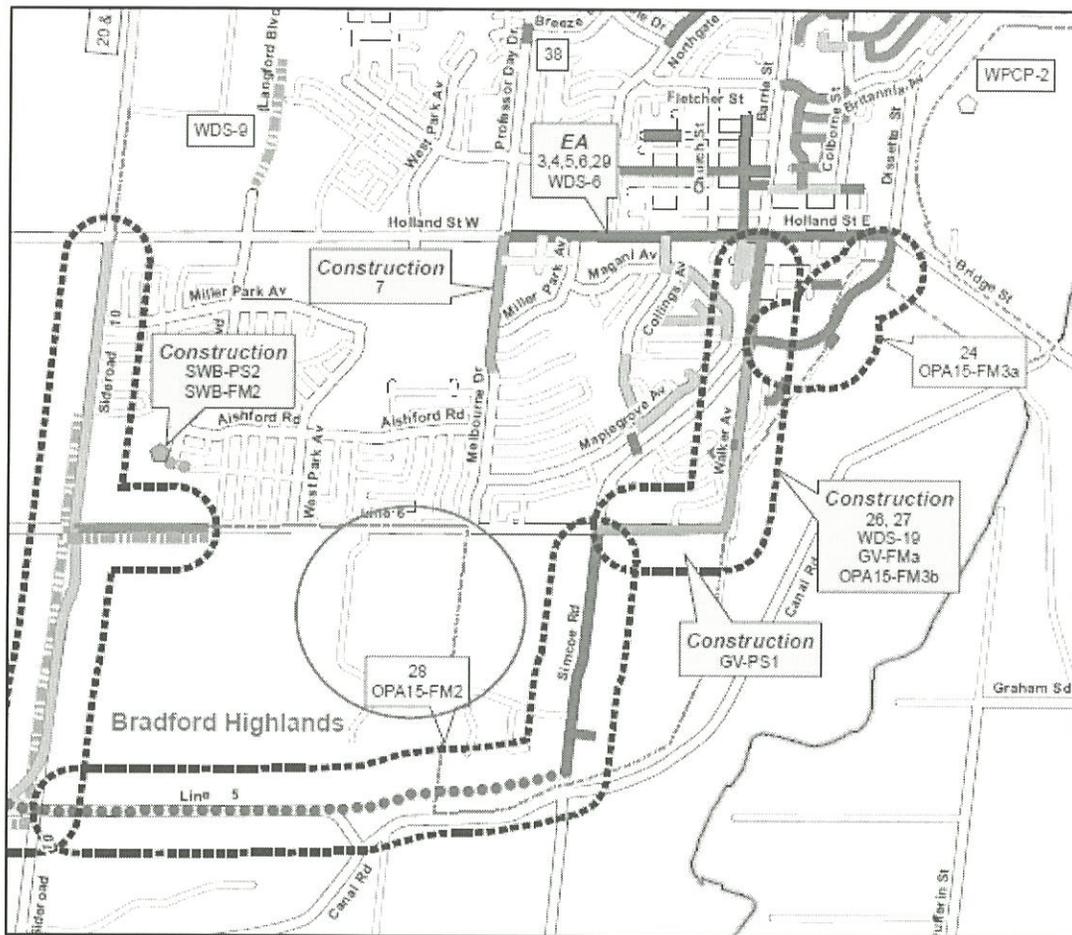


Figure 3 – Sanitary Servicing Options

As noted, the Town of Bradford-West Gwillimbury is in the process of constructing the forcemain works from the OPA No. 15 Pumping Station to the Bradford WPCP. The construction for the Pumping Station should take up to 18-months with completion anticipated for the end of 2017.

In this option, the Bradford Highlands Golf Course lands could potentially connect into the Line 5 forcemain via a local manhole style pump, forcemain and flange connection at the south of the site.

Water Servicing

As per the 2011 Water and Wastewater Servicing Master Plan Update, the Town of Bradford-West Gwillimbury current water supply capacity is 17,100 m³/day. 10,000 m³/day being provided by the BWG Groundwater System and 7,100 m³/day provided by the Lakeshore WTP in Innisfil.

The Town of Bradford West Gwillimbury Groundwater supply consists of seven (7) active groundwater wells as noted below:

- | | |
|------------------------|--|
| 1. Doane Well | 2. Church Well 2 |
| 3. Soda Pop Well | 4. Simcoe Street Well |
| 5. Church Well 1 | 6. 8th Line Well |
| 7. Bingham Street Well | 8. Simcoe Replacement Well
(currently not connected to this system) |

As noted in the Water Supply and Wastewater Servicing Master Plan, the Town of BWG were considering decommissioning and making some modifications to some of the wells noted above due to their age or poor water quality. Therefore, it was concluded that the groundwater system capacity would yield an actual capacity in the order of 10,000 m³/day.

Through a joint water agreement with Innisfil, the Town of Bradford-West Gwillimbury has negotiated for a maximum 13,000 m³ per day of water from the Alcona Lakeshore Water Treatment Plant (WTP) to meet its immediate growth needs. 7,100 m³/day is currently provided based on the Phase 2 Lakeshore WTP Upgrade and the remaining 5,900 m³/day shall be provided by the Phase 3 expansion. The upgrades are underway and being administered by the Town of Innisfil. Once these are complete the total water supply capacity shall be 23,000 m³/day.

It is our understanding that the design allowance for the Bradford water system includes the equivalent of 2700 people with an average daily demand of 810 m³/day for intensification and infilling within the Bradford Urban Area.

With respect to the Surface Water Supply, water transmission mains convey treated water from the Lakeshore WTP to BWG along 8th Line & 10th Sideroad. These mains are designed to convey 13,000 m³/day to BWG with a design factor of 1.2 if additional flow is required in the future. The Town of BWG is in the process of preparing a request for proposal for the detailed design of the twinning for the secondary supply main, and is anticipating tendering the working in the summer of 2016 for construction in 2018.

The Town of Bradford-West Gwillimbury's water distribution system has three (3) pressure zones. All groundwater systems feed directly into the Pressure Zone 1 water distribution system, which covers Bond Head and parts of Bradford. Pressure Zone 2, which is generally located in the north west of Bradford, is serviced by a booster pumping station at Standpipe No. 2. Pressure Zone 3, at the south east of the Bradford Urban Area (i.e., the Green Valley area), is fed from Pressure Zone 1 through pressure reducing/sustaining valves. The Bradford Highlands lands itself are located within the Pressure Zone 3.

It our understanding that the site will be serviced via a local watermain, sized to accommodate the site, through the Bradford Capital subdivision located immediately east of the subject lands. In addition, there is a trunk

main located on Line 6 that will be able to accommodate for looping of the proposed watermain system. Further investigation through means of a watermain modeling analysis will be required.

Storm Water Management

Stormwater management will be provided for the site in accordance with MOECC, LSRCA and Town design criteria as well as in accordance with the Lake Simcoe Protection Plan and the South Georgian Bay Lake Simcoe Source Protection Plan.

Water quantity control will be required to control post development flows to pre-development levels for the 2 through 100 year storm as a minimum, or to the capacity of the downstream storm sewer system for any areas of the site outletting to an existing storm sewer system.

Water quality control will likely be required to Enhanced Level criteria which targets 80% Total Suspended Solids removal. Erosion control requirements will be based on the greater of 40 m³/ha per MOECC criteria or based on attenuation of the 25 mm storm for a minimum of 24 hrs per the current LSRCA criteria. Water balance control will be to maintain existing infiltration volumes to the extent possible in accordance with the Lake Simcoe Protection Plan and LSRCA design criteria. Provision of Quality, Erosion and Balance controls will be achieved through a detailed review of site soils and groundwater characteristics as well as the overall site layout to identify opportunities for Low Impact Development techniques which maximize at source reduction of rainwater runoff.

Stormwater conveyance will be provided through a combination of a municipal storm sewer sized to convey the 10 year storm and an overland flow system along municipal right of ways and easements if necessary. The conveyance systems are anticipated to drain toward a stormwater management pond(s), which together with any suitable upstream LID's will provide the required stormwater management control.

The storm drainage system will be required to accommodate any external drainage which currently flows through the site. On-site control however will likely only be sized for the site itself. The larger tributary draining through the south-west corner of the site may be piped separately through the site to avoid any impact on the local drainage and SWM control system. Conveyance of emergency spill from the external lands through the site will have to be addressed through the grading design and lot layout prepared as part of the draft plan studies to ensure an adequate drainage path is maintained.

The details of the stormwater management system will be confirmed through completion of a stormwater management report through the draft plan process.

Financial Implications

Several Landowners within the Bradford Urban Area and OPA No. 15 and 16 have entered in to Early Payment Agreement No. 3 with the Town of Bradford-West Gwillimbury. This agreement facilitates the up-front financing of the Benefit to Existing and Non-Residential Share of key infrastructure projects required to facilitate the development of both OPA No. 15 and 16, and the balance of the Bradford Urban Area. In addition, the Early Payment Agreement No. 3 provides for a pre-payment of a portion of the Water Development Charge, as well as a contribution to the Innisfil No. 3 Water Treatment Plant Expansion required to service Innisfil. In the interim, the Town of Bradford-West Gwillimbury have assigned borrowed water allocation to landowners that have entered into the Early Payment Agreement No. 3. The borrowed water allocation has only been assigned to a portion of their lands. The agreement was executed in early 2013 and the owners have and will continue to make substantial contributions to the infrastructure on a yearly basis in accordance with the Approved Capital Plan Budgets.

As a result of Early Payment Agreement #3, the Town of Bradford West Gwillimbury has significant financial obligations to satisfy with respect to the Innisfil Water Treatment Plant Upgrades and the Non-residential Share of the up-fronted works. Effective December 31st 2018 the Town is required to fully reimburse \$11.73 million to the EPA#3 Participating owners for their contribution to the Innisfil 3 WTP Upgrades. As of December 1st, 2025 the Town is required to have fully reimbursed the entire non-residential share of the works not recovered through development charges up to approximately \$66 million to the EPA #3 participating owners. The addition of Development Charges generated by the future Bradford Highlands development could significantly assist the Town in satisfying these obligations.

It is our understanding that the Bradford Highlands lands would not be a party to the Early Payment Agreement No. 3. However, the development will generate Development Charge funding to the Town of Bradford-West Gwillimbury to allocate towards the Town's current infrastructure improvements as well as assist in alleviating the Towns EPA #3 cash-flow obligations.

It is our opinion that the development of the Bradford Highlands site would require minimal capital infrastructure investment as it could potentially utilize the works currently planned for within the vicinity of their site. If any additional infrastructure projects are identified throughout the planning stages to service the Bradford Highlands site, the owners would entertain pre-payment or up-fronting agreement arrangements to facilitate their design and construction.

It is our understanding that the lands located in Community Plan Area 5 (CPA #5) at the north limits of the Bradford Urban Area are significantly constrained due to the Towns desire to reserve the lands for the proposed 400/404 link, and as a result the infrastructure required to service the lands have been scheduled out to 2021 in the recent Capital Plan and not accounted for in the 2017 10 Year Capital Plan. The Development Charges generated by the Bradford Highlands Development could also assist the Town of Bradford West Gwillimbury with their cash-flow as a result of these lands not being able to proceed as originally anticipated.

Based on the 2017 Development Charge rates the Town of Bradford West Gwillimbury will be short on their collection of DC's from CPA #5 for approximately 296 units, which equates to approximately \$11.6 million in Town DC's, whereas with the addition of approximately 800 units on the Bradford Highlands site the DC's could potentially generate just over \$31.5 million.

In summary, the Bradford Highlands property can be developed with both sanitary and water servicing with modest improvements as identified above and with no significant infrastructure costs to the municipality and with the potential of assisting in the significant cash-flow requirements of the Town. With a maximum of 800 single family units and based on the current DC rates, the Bradford Highlands Development could potentially provide an additional \$23.6 million in development charge funding towards roads, water and wastewater infrastructure alone with an addition \$7.9 million to other municipal wide services.

Please contact the undersigned if you have any questions or require any additional information.

Sincerely,

SCS Consulting Group Ltd.



Julie Bottos, A.Sc.T.
jbottos@scsconsultinggroup.com

Attachments: Capital Plan 2016 – 2024 Construction Figure prepared by the Town of Bradford-West Gwillimbury, dated October 11, 2015
Figure 3 - Water Supply Alternatives prepared by C.C. Tatham & Associates Ltd., dated January 2010
Town of Bradford-West Gwillimbury's Servicing Allocation Policy, dated September 8, 2009

c. Mr. Don Given, Malone Given Parsons Ltd.

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