



TECHNICAL MEMORANDUM

DATE October 18, 2023

Project No. 22517688

TO Nicole Sampogna MCIP, RPP Planner
ARG Group

FROM Christopher Davidson and David Dillon

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BRADFORD HIGHLANDS DEVELOPMENT SOURCE WATER PROTECTION SCREENING CHECKLIST AND THREATS AND ISSUES ASSESSMENT

1.0 INTRODUCTION

Bayview Bradford Highlands Joint Venture Inc. ('Bayview' or the 'Client') has retained WSP to produce geotechnical, hydrogeological and environmental reports in support of the Client's application for Draft Plan approval for the proposed redevelopment of the Bradford Highlands Golf Course in Bradford, Ontario (the 'Site'). As part of the application process to date the Township of Bradford West Gwillimbury (the 'Town') has provided comments on the various WSP reports and provided the Client with a list of the requirements for the Official Plan Amendment (OPA), Zoning By-Law Amendment (ZBA), and the Draft Plan approval process. The Town noted that as part of both the ZBA and Draft Plan approval a 'Source Water Protection Screening Checklist and Threats and Issues Assessment' was required. The purpose of this memorandum is to provide a response to the Town source water protection concerns.

2.0 BACKGROUND

The proposed residential development is located southeast of the intersection of Concession Road 6 and Brownlee Drive, in the Town of Bradford, Ontario. The 87.7 ha site was previously the location of the Bradford Highlands Golf Club; the proposed land use includes a residential development, parks, roads, and stormwater management block.

The water balance was previously completed for the site (WSP, 2023). The results showed a predicted 34% decrease in average annual infiltration between the existing (i.e., pre-development) and post-development (mitigated) condition with proposed infiltration features.

A review of publicly available information (Source Protection Atlas, 2023) indicates that the Site lies outside any mapped groundwater quality wellhead protection areas (WHPA; i.e., WHPA-A through WHPA-D), but does lie within groundwater quantity wellhead protection areas WHPA-Q1 and WHPA-Q2, falling within the 'South Georgian Bay Lake Simcoe Source Protection Plan'.

3.0 DISCUSSION

As noted above, the Site falls within the WHPA-Q1 and WHPA-Q2 zones, which encompass the Town and the surrounding area. WHPA-Q1 refers to an area where activities that take water without returning it to the same source may be a groundwater quantity threat, and the WHPA-Q2 refers to an area where activities that reduce recharge may be consider a groundwater quantity threat. Table 4 of the South Georgian Bay Lake Simcoe Source Protection Plan identifies 21 activities that have the potential to pose a threat to source protection. Of the 21 actives listed, only Threat #19 (*“an Activity that takes water from an aquifer or surface waterbody without returning the water taken to the same aquifer or source water body”*) is described as applying to Wellhead Protection Area Q1 areas.

As the Site will be fully serviced by the municipal water supply system, it is expected that no long-term groundwater taking will be required. As such, there expected to be no concerns in regard to the WHPA-Q1.

The proposed development is expected to result in a decrease in average annual infiltration for the Site, therefore falling under the WHPA-Q2 guidelines. This threat has been partially mitigated by the proposed use of infiltration features; furthermore the risk of reduced flows to takings identified in the Source Protection Atlas is considered “low” since the Site represents less than 0.1% of the WHPA-Q2 area and is separated from the nearest mapped takings by the Schomberg River (which is assumed the receiver of a portion of the site infiltration).

With regard to a Source Water Protection Screening Checklist, inquiries were made with the Lake Simcoe Region Conservation Authority, who indicated that no such checklist was available for areas under their purview. In the absence of such a checklist, we trust that the above assessment provides sufficient information to address the concerns raised by the Town.

Please contact the undersigned at your convenience should you have any questions or required additional information.

WSP Canada Inc.



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