

Date: 21 February 2023

Document(s) Reviewed:

Hydrogeological Review

Address: Baldwin East Aerodrome Project; 7818 and 7486 Old Homestead Road, Georgina

APID: 206237 and 195762

#	Drawing/Section:	Page:	Comments:
H1			<p>The site is mapped as being largely within a significant groundwater recharge area and an ecologically significant groundwater recharge area. Policy 6.40-DP of the Lake Simcoe Protection Plan is applicable to this site. "Outside of the Oak Ridges Moraine area, an application for major development within a significant groundwater recharge area (SGRA) shall be accompanied by an environmental impact study that demonstrates that the quality and quantity of groundwater in these areas and the function of the recharge areas will be protected, improved or restored."</p> <p>Please demonstrate how this policy will be satisfied.</p>
H2			<p>The site is mapped as being partially within a highly vulnerable aquifer and a significant groundwater recharge area, as defined by the Clean Water Act (2006) and the South Georgian Bay Lake Simcoe Source Protection Plan.</p> <p>Please demonstrate how the quality and quantity of the groundwater will be maintained.</p>
H3			<p>Please provide a Thornthwaite-Mather water balance for the pre-development and the post-development scenarios. Demonstrate how the quantity and quality of the groundwater will be maintained in the post-development scenario. Note: The post-development infiltration volume is to match the pre-development infiltration volume.</p>
H4			<p>The property is host to "Provincially Significant Wetlands". Demonstrate how the quality of these wetlands will be maintained in the post-development scenario.</p> <p>A feature-based water balance is required to demonstrate that the wetlands will not be negatively impacted through changes to hydrology and hydrogeology. It is unclear from the information provided whether the wetland is groundwater or surface water fed or both. Please assess and explain</p>

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			how the wetlands will be maintained in the post-development scenario.
H5			<p>Septic systems are proposed for the site. Note that the quality and quantity of the groundwater is to be maintained.</p> <ul style="list-style-type: none"> • Since the proposed sewage systems will be designed for more than 10000 L/day, the Reasonable Use Concept guidelines are to be met prior to effluent being discharged into any existing water course or wetland or property boundary. (Nitrate loading is to be ≤ 2.5 mg/L). • The highly vulnerable aquifer is to be protected from contamination from the effluent from the various septic systems. • LSRCA is not supportive of any septic system being situated within the significant groundwater recharge areas, nor within the area of the highly vulnerable aquifer. • Please demonstrate how the above will be achieved.
H6			The site is mapped as being outside a settlement area, and that new sewage treatment plants are required, an environmental assessment will be required as per policy 4.1-DP of the Lake Simcoe Protection Plan.
H7			Please demonstrate that the proposed non-municipal sewage treatment plant(s) will not add phosphorus loadings to the Lake Simcoe Watershed as per Policy 4.4-DP of the Lake Simcoe Protection Plan.
H8			Please demonstrate that the proposed large subsurface sewage disposal systems will be situated at least 100 m away from any permanent stream as per policy 4.15-DP of the Lake Simcoe Protection Plan. Note: these systems should also be located outside of any wetland and the associated buffer zone.
H9			<p>It is proposed to import 1.2 million tonnes of fill to the site. Any fill that is imported to the site should be in compliance with Ontario's Excess Soil Regulation (O.reg 406/19).</p> <p>Please demonstrate how the quality of the fill will be maintained such that will be no negative impact on the quality and quantity of the groundwater in the area as per LSPP 6.40-DP.</p>

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H10			Please provide a deicing plan that demonstrates that the surface water and groundwater will not be negatively impacted by de-icing compounds.
H11			Pumping tests will be required to assess the potential for the local water supply aquifer to be able to provide a sufficient volume of water without negatively impacting the private water supply wells of the surrounding properties.
H12			Dry ponds and soakaway pits are proposed for the development. Please demonstrate that there is a minimum of 1 m separation between the invert of the facility and the seasonal high groundwater levels. Without this separation infiltration is not permitted and the facility is to be lined with an impermeable membrane.

Resubmission Requirements:
A cover letter which includes a detailed response outlining how each of the comments above have been addressed with reference to applicable reports/drawings (i.e. specific sections/pages/details or tab identifiers).
The cover letter is to also include a summary of any additional changes to the design (i.e. in addition to those not identified in the detailed response to comments, and includes changes to reports, drawings, details, facility design, etc.).
All drawings are to be folded (8.5 x 11).
Reports and engineering drawings/details are to be signed and sealed by a Professional Geoscientist or a Professional Engineer as applicable.
All submissions/reports are to include applicable technical components which achieve the minimum requirements outlined in the LSRCA Hydrogeological Submission Guidelines, June 2013.