patersongroup **memorandum**

consulting engineers

re: **Groundwater Review**
Proposed Residential Development
Brazeau Pit - Borrisokane Road - Ottawa

to: Caivan Communities - **Mr. Andrew Finnson** - afinnson@caivan.com

date: October 2, 2019

file: PG4504-MEMO.07 Revision 1

Paterson Group (Paterson) has prepared the current memorandum report to provide clarification on the development impact on the local groundwater flow direction for the aforementioned site. It is understood that the Trail Road Landfill facility is concerned that groundwater flow direction may become influenced by the potential stormwater collection of groundwater discharged to ground surface at a nearby proposed development. The subject site is located approximately 500 m southeast of the Trail Road Landfill and the site is located approximately 500 m south of the nearby development where collection of the surface discharged groundwater is being proposed.

The groundwater table at the borehole locations within the proposed development was encountered at elevations ranging between 97.5 to 95.5 m. Based on the current grading plans, the design underside of footing elevation for the proposed buildings is located well above the groundwater levels encountered. **Therefore, the proposed development will not have any impact on the local groundwater flow direction.**

Based on the recovered water levels from the field investigation, it is expected that the local groundwater flow direction trends to the **north** towards the Jock River, located approximately 1.4 km north from the north property boundary of the Drummonds Pit. This is corroborated by the groundwater divide separating the Jock Downstream Reach subwatershed and the Mud Creek subwatershed located at the southern boundary of the Brazeau Pit. **Therefore, the development of the subject site is not connected to the Trail Road landfill groundwater pumping operation and potential influence from the north neighbouring site.**

We trust that this information satisfies your requirements.

Best Regards,

Paterson Group Inc.

Mike Killam, P.Eng.

David J. Gilbert, P.Eng.