



**re: Hydrogeological Review and Recommendations –
Groundwater Impact Assessment**

Proposed Residential Development

Wateridge Village, Blocks 22 and 23 – Codd's Road, Ottawa, Ontario

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Further to your request and authorization, Paterson Group (Paterson) has prepared this memorandum to provide hydrogeological recommendations pertaining to the previously completed Groundwater Impact Assessment prepared for Canada Lands Company (CLC). The current memorandum should be read in conjunction with Paterson Group Hydrogeological Investigation Report PH5006-1, dated February 21, 2025.

1.0 Hydrogeological Review

As part of efforts previously undertaken by CLC, Paterson was retained to complete a Groundwater Impact Assessment (GIA) for Phase 6 and 7 of the Wateridge Village residential development to confirm from a hydrogeological perspective if potential impacts existed to various receptors as a result of the proposed development.

The GIA completed for the subject site reviewed the geological and hydrogeological conditions against the details of the proposed development to identify the potential for impacts related to existing well users, adjacent structures and the surrounding natural environment.

Soils at the site generally consisted of topsoil or fill overlying silty sand, which in turn was occasionally underlain by glacial till. Refusal to auguring was encountered between 0.4 and 5.4 m below ground surface (bgs), while water levels were found to range from 0.9 to 4.1 m bgs. The groundwater flow direction in the area was expected to reflect local topography, while the regional flow direction was anticipated to trend northward towards the Ottawa River. Based on the aforementioned soil compositions, certain areas of the site may allow for some volume of recharge to be occurring, however the overall volume of recharge occurring within the site boundary was expected to be limited given the variety of materials encountered within the fill. With regards to discharge, neither the topographical nor the geological conditions are suitable for discharge to be occurring on a large scale at the subject site. Furthermore, no indication of discharge zones was identified during Paterson's field investigations.



While there were several monitoring well installations within 500 m of the site, there were no potable water supply wells found within this radius, which was understandable given the developed nature of the area. It was understood that domestic water supply wells exist within the Fairhaven community located south of the subject site, however these wells are located in excess of 500 m from the subject site and up-gradient with respect to groundwater flow direction. Furthermore, the theoretical radius of influence expected to develop as a result of dewatering activities during construction ranged from 10-38 m. As such, the potential to interfere with the water quality/quantity of existing well users in the area was considered negligible.

With respect to potential impacts to surrounding structures, the sandy soils and shallow bedrock found on-site were expected to exhibit minimal potential for compressibility, especially given the short-term nature of dewatering activities anticipated as part of construction for the proposed development. As such, any effects related to ground surface settlement due to dewatering activities were found to be negligible.

While there were several Records of Site Condition (RSC) noted within the area surrounding the site, no ongoing groundwater monitoring controls were noted in any of the files reviewed. Furthermore, no surface water features were identified within the theoretical radius of influence for the development, the closest feature being an unnamed drainage ditch located north of the site along the Sir George-Etienne Cartier Parkway approximately 190m away. As such, impacts to the natural environment from the proposed development were also expected to be negligible provided appropriate site Best Management Practices with respect to dewatering and sediment and erosion control were maintained.

2.0 Recommendations

To summarize the above noted hydrogeological review, at the time of report preparation, there were no impacts anticipated with regards to the various receptors investigated as part of the study.

Given the lack of development that has taken place in the vicinity of the subject site further to the completion of the original Groundwater Impact Assessment, it is Paterson's opinion that the conclusions and recommendations presented in that report remain valid for the purposes of the current development approval.



We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.



Michael Laflamme, P.Geo.

