

re: Hydrogeological Response to Stantec's Peer Review Comments
Residential Subdivision Application
122 Old Mill Lane - Appleton - Ontario

to: Southwell Homes Ltd. – John Southwell

date: February 21, 2024

file: PH4398-MEMO.02

Further to your request and authorization, Paterson Group (Paterson) prepared the following memorandum to provide responses to the hydrogeological related comments from Stantec's peer review of the following report:

- PH4398-REP.01 - Hydrogeological Assessment and Terrain Analysis – Proposed Residential Development – 122 Old Mill Lane, Appleton, Ontario dated August 23, 2022

Stantec's hydrogeological peer review is dated December 4, 2023 with file number 122170312 Task 200 and titled Peer Review of a Hydrogeological Assessment and Terrain Analysis - Proposed Residential Development - 122 Old Mill Lane, Appleton, ON. The hydrogeological peer review comments can be found attached to this memo.

This memorandum should be read in conjunction with Paterson Hydrogeological Report PH4398-REP.01-REV.01 dated February 21, 2024.

Paterson Group personnel met with Stantec's hydrogeological peer reviewers and Lanark County's senior planner to discuss the hydrogeological peer review comments on January 9, 2024.

Hydrogeological Comments

Comment 1:

Stantec is of the understanding that the contamination issues have been investigated and partially addressed through extensive investigation and a significant amount of remediation and that remedial plans for remaining environmental impacts are in progress. The report should be revised to reflect the current status of site remediation. In addition, the report should demonstrate that the proposed development footprint is situated within lands that have been completely remediated as evidenced by peer-reviewed documentation by a Qualified Professional.



Paterson Response:

The environmental impacts are assessed and addressed through the environmental studies. For this site in particular, extensive environmental work has been completed. At the time of writing this report, an Environmental Action Plan Supplemental Groundwater Sampling Program (EAPSGSP) had recently been released (Paterson report PE1114-LET.03 dated March 1, 2023). The EAPSGSP specifically stated that, *based on the findings of the groundwater sampling programs, it is our opinion that the groundwater has not been impacted by past on-site activities*. Groundwater sampling for the parameters of concern was completed in the onsite potable supply test wells as part of the Environmental Assessments. No impacts were observed in the groundwater aquifer underlying the site.

Any environmental impacts must be remediated prior to building permit approval. As such, any proposed development footprint which may have been situated within lands that may have had environmental impacts will have been completely remediated. This is a requirement of the environmental assessments, and as such, is not a concern of the Hydrogeological Assessment unless the property cannot be remediated. At that time, in the extremely unlikely chance that this occur, the development approval process will not be successful, thereby negating the need for the Hydrogeological Assessment. As the Environmental Assessments have already concluded that environmental impacts are not present in the groundwater underlying the site, further action is not required.

The Hydrogeological report should not be updated every time a new environmental study is completed. Rather, it should only be updated when substantial information from an environmental report has concluded that environmental impacts are observed in the groundwater. As such, we have included the following statement in the Hydrogeological Assessment Report:

A review of the most recent Environmental Assessment was completed. Paterson recently released a report titled Remedial Action Plan (RAP) with report number PE1114-LET.04R dated February 14, 2024 which summarises the onsite environmental activities. Paterson's Hydrogeological Assessment report should be read in conjunction with the RAP. The RAP consists of excavation and disposal of impacted soils at an approved waste disposal facility to be undertaken in conjunction with the redevelopment of the subject site. The report further states that *Based on the Phase II ESA, the groundwater beneath the subject site meets the selected MECP Table 6 and Table 8 standards*. Should an environmental assessment identify potential contamination in the underlying groundwater aquifer, then this Hydrogeological Assessment report will need to be updated. As the Environmental Assessments have already concluded that environmental impacts are not present in the groundwater underlying the site, further action is not required.



Comment 2:

The groundwater quality data is dated and Stantec recommends that the test wells be sampled again for general chemistry, anion and metals analysis in addition to potential contaminants of concern to confirm that the groundwater quality has not changed since 2021. It is recommended that this sampling event occur after the Site has been completely remediated.

Paterson Response:

Groundwater geochemical samples were collected to support the Hydrogeological Assessment from the onsite test wells in July of 2015 and December of 2021. During the 6 year period between the two samples, none of the parameters which were tested were recorded to have any notable changes. Furthermore, the application was submitted to the Township by September 28, 2022 (less than one year after sample collection), and it has taken the Township up until this point in time to get the report reviewed.

Paterson completed a Phase II Environmental Site Assessment (ESA) under separate cover, titled PE1114-3 – Phase II – Environmental Site Assessment, 116-122 Old Mill Lane, Appleton, Ontario dated June 14, 2023. The Phase II ESA concluded that all of the onsite groundwater results complied with the selected Ministry of the Environment, Conservation and Parks (MECP) standards, and that any environmental impacts were only found in specific locations in the fill material onsite. Should any potential contaminants of concern be identified in the groundwater by any additional environmental works, and not be addressed by said environmental assessments, then additional sampling may be warranted. Until environmental concerns are observed in the groundwater, additional sampling of the onsite potable water supply test wells is not considered to be justified.

Comment 3:

A pre- and post-development water balance needs to be completed to assess the infiltration deficit and identify appropriate mitigation measures to maintain pre-development infiltration rates.

Paterson Response: As per Paterson's discussion with the Stantec peer reviewers, a pre- and post-development water balance is not required as part of a rural development Hydrogeological Assessment and Terrain Analysis.





Comment 4:

The report needs to comment on whether the Site is situated within a Source Protection Vulnerable Area and if there are any Source Protection Policies that may impact the proposed development.

Paterson Response:

The Site is not located in a source protection area. The report has been updated.

We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.

Erik Ardley, P.Geo

