



re: Geotechnical Responses to MVCA Comments
Proposed Residential Development
122 Old Mill Lane – Appleton, ON

to: Southwell Homes Ltd. - **Mr. John Southwell** – johnsouthwell@rogers.com

date: November 10, 2023

file: PG6241-MEMO.02

Further to your request, Paterson Group (Paterson) has prepared the current memo to provide our responses to the Slope Stability Analysis comments in the letter from the Mississippi Valley Conservation Authority (MVCA) dated January 30, 2023, which relate to the proposed residential development at the aforementioned site. This memo should be read in conjunction with the revised Slope Stability Assessment report (Paterson Group Report PG6241-MEMO.01 Revision 1 dated November 10, 2023).

Slope Stability Report

Comment 6: *The slope stability study analyzed two cross-sections (A-A and B-B) as worst-case scenarios at the northwest portion of the site. However, a second slope area exists south of the B-B cross-section, within lots 4 through 7. Please discuss if this slope was considered in the stability analysis and the determination of the limit of hazardous lands.*

Response: In reviewing the topography of the site at the time the initial Slope Stability Assessment report was prepared, the slopes in the vicinity of Lots 4 through 7 were not considered sufficiently steep, and were setback adequately from the proposed homes and septic systems, such that a more detailed analysis was not considered to be required to confirm that there would be no conflict with any Limit of Hazard Lands.

Nonetheless, in response to the comment, an additional slope stability cross-section has been analyzed (Section C-C) to confirm that no stable slope allowance is applicable for Lots 4 through 11. Only a 1 m toe erosion allowance and 6 m erosion access allowance is applicable here, which does not conflict with the proposed homes or septic systems. This is shown on Drawing PG6241-1 – Limit of Hazard Lands Plan (Revision 1) included in the revised Slope Stability Assessment Report, referenced above.

Comment 7: *The slope stability report states that the existing ground surface across the site is generally level at an approximate elevation of 126 to 128 m. However, the contour lines in SWM plans show lots south of B-B cross-sections have an elevation difference of 5-6 m. Please review and correct as required.*





Response: The “Surface Conditions” discussion under Section 2.0 of the updated Slope Stability Assessment report, referenced above, now provides a more detailed description of the ground surface elevations across the site. This excerpt is provided below:

At lots 1 through 4, the existing ground surface is generally level at approximate geodetic elevation 126 to 128 m, but slopes downward moderately in the vicinity of the Mississippi River to approximate geodetic elevation 118 m. At lots 5 through 11, the ground surface slopes downward gradually at the northern portions of the lots, from approximate geodetic elevation 127 to 122 m, before reaching an approximately 10 to 40 m wide plateau, and then sloping downward more moderately in the vicinity of the Mississippi River from about geodetic elevation 122 to 118 m. At Lots 12 through 14, the ground surface is generally level at approximate geodetic elevation 128 m.

We trust that the current submission meets your immediate requirements.

Best Regards,

Paterson Group Inc.

Scott S. Dennis, P.Eng.

