



November 7, 2023

Raad Akrawi
Project Manager
Heafey Group
768 Boulevard St-Joseph, Bureau 100
Gatineau, Quebec J8Y 4B8

Re: OTT-00263154-A0 Percolation Tests at 37 Wildpine Court, Stittsville site

Dear Mr. Akrawi:

EXP Services Inc. (EXP) is pleased to present you with the results of percolation tests at the 37 Wildpine Court site on November 2, 2023. The tests were performed at two (2) locations suggested by Bobby Pettigrew of JL Richard Associates.

We understand that this was completed to address City of Ottawa comment about the previously performed percolation test. The test on November 2, 2023 was performed using Guelph Permeameter. The test locations are presented in Figure 1. Three (3) tests were performed (two at Location 1 and one at Location 2). Guelph Permeameter (GP) was used for the tests.

The result of the test is summarized below:

Test Location	Soil Type tested	Percolation Rate in cm/sec	Percolation Rate in mm/hour
Location 1 <ul style="list-style-type: none">• Test 1• Test 2	Up to 40 cm depth silty sand with organics, cobbles with some gravels	6.48 x 10 ⁻⁴ 2.26 x 10 ⁻⁴	28.3 8.1
Location 2	Up to 25 cm depth silty sand with organics, cobbles with some gravels	7.52 x 10 ⁻⁵	2.7

Based on the above rate estimates Location 1 appears to be marginally suitable for bioretention infiltration basins as the native soil has a percolation rate of 28.3 mm/h. Location 2 with a percolation rate of 2.7 mm/hr is not suitable and infiltration enhancing measures may have to be considered to potentially increase the percolation rate.

As an example, considering a bioretention cell of 40 m length and 2 m width at Location 1 and hypothetical storm water volume of 50 m³ with an estimated percolation rate of 28.3 mm/hr it will take about 2 days to infiltrate the stored 50 m³ storm water. Typical percolation rates and soil types are provided in Table 4.4 (of the Stormwater Management Planning and Design Manual, MOE March 2003 [195-stormwater-planning-and-design-en.pdf \(ontario.ca\)](#)). Table 4.4 should be used as a screening tool to determine if a site may be suitable for an infiltration basin.

*Percolation Test
37 Wildpine Court, Stittsville, Ontario
OTT-00263154-A0
November 7, 2023*

To increase infiltration at the site some engineering measures may further be explored such as rain garden, bioswales, rain barrels etc.

Feel free to contact the undersigned if you have questions or concerns.

Sincerely,

EXP Services Inc.

A handwritten signature in blue ink, appearing to read 'Delwar Ahmed', with a stylized flourish at the end.

Delwar Ahmed, P.Geol.
Senior Hydrogeologist
Earth and Environmental Services

FIGURE 1

37 Wildpine Court site
Percolation Test Locations

Legend

■ Location

