



# City of Port Moody

## Report to Finance Committee

Date: July 3, 2020  
Submitted by: Environment and Parks Department – Parks Division  
Subject: Alfred Howe Trail – Geotechnical Repairs

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### Purpose

To seek Finance Committee authorization to allocate funding to fund urgent slope repair work for an area of slope instability on Alfred Howe Trail.

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### Recommended Resolution(s)

**THAT a capital project be established with a total budget of \$85,000 funded from the Asset Reserve – Parks Envelope for completion of urgent slope repairs as recommended in the report dated July 3, 2020 from the Environment and Parks Department – Parks Division regarding Alfred Howe Trail – Geotechnical Repairs.**

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### Background

In April 2020, staff retained Thurber Engineering Ltd. (“Thurber”) to complete a geotechnical assessment of an area of bank instability located about 120m northwest of the intersection of Washington Drive and Princeton Avenue, where there is a mid-trail connection from Washington Drive to Alfred Howe Trail. During routine trail inspections in 2018, staff noted an area of slope erosion at the site and continued monitoring. Inspection this spring lead to the identification of significant slope erosion that will require remediation.



## Discussion

Alfred Howe Trail is an important connecting trail 1,050m in length that links the Trans Canada Trail ("Great Trail") to Westhill Park and is located within an Environmentally Sensitive Area. It was originally identified in the 1994 Master Bike and Trail Plan and the 2004 Master Transportation Plan, and was constructed in 2008-2009 with funding from a BC LocalMotion Grant.

The City inspections of the trail include photographs from April 2018, January 2020, and February 2020 that depict an area of slope erosion. The photographs show that some erosion had occurred between April 2018 and January 7, 2020. However, significant erosion occurred between January 7 and February 3, 2020, likely as a result of heavy rainfall. To ensure the Alfred Howe Trail remains open and safe to use, staff engaged Thurber Engineering Limited as a consultant to conduct site reconnaissance for geotechnical observations of the slope conditions, provide recommendations for slope repair, and provide a high-level Type D cost estimate.

The area of slope erosion is shown in photos 1 and 2 below. The site area has dense sand with some gravel and cobbles. The area of slope that has eroded has resulted in an exposed, near vertical face that is 4-5m high and about 4m wide (photo 2). The geotechnical engineer made a series of recommendations in the draft report to mitigate the area of erosion, including a redirecting of surface runoff from the erosion site through a re-grading of a section of the trail, a reinstated ditch above the site, and the backfilling of the eroded section with a geotextile and granular product that will be more resistant to future erosion.



Photo 1: Looking east from the base of the eroded slope.



Photo 2: Looking at eroded slope with person for scale.

As a result of these geotechnical concerns, staff have undertaken some minor improvements to redirect water flow down the trail to mitigate further erosion, and have installed temporary fencing to restrict pedestrian access near the top and bottom of the erosion site. Staff continue to inspect the site for public safety concerns and have deemed that the trail can safely remain open at this time. Based on the assessment, the slope repair work is recommended to be undertaken by a qualified contractor before the winter months to prevent additional erosion and to ensure that the trail connection remains safe for continued public use.

Based on the consultant recommendations, and noting that it is a high-level Type D budgeting cost estimate and a site with additional mobilization considerations, staff are requesting additional funding of \$85,000 from the Asset Reserve – Parks Envelope to allow for the repair work to be undertaken.

The High-Level Type D Cost Estimate includes:

<b>Task</b>	<b>Cost Estimate</b>
Path Re-Grading and Drainage Improvements	\$27,900
Re-grading the Site, including geotextile, fill, and revegetation	\$35,400
Project Management (10%)	\$6,330
Additional contingency (20%)	\$12,660
<b>Total Cost Estimate</b>	<b>\$82,300</b>

#### Schedule

The optimal time for construction is late August through September. Staff will be seeking to expedite final design and construction to meet this timeline.

It is anticipated that the trail will be closed for approximately two to four weeks. The closure would be planned for September, following the summer school holiday season and associated higher recreational use of trails.

#### **Other Option(s)**

Should work not be undertaken within this time frame, it likely would be necessary (from a public safety perspective) to close and restrict access to that portion of Alfred Howe Trail until the eroding slope is repaired.

#### **Financial Implications**

As this work is unanticipated, it was not included in the 2020 Capital Plan. The estimated cost to undertake the repairs is \$85,000. Staff are requesting that this amount be allocated from the Asset Reserve – Parks Envelope. This reserve is currently overdrawn in the 2020-2024 Five-Year Financial Plan. While adding the additional project in 2020 can be facilitated, it will require project re-prioritization during preparation of the 2021-2025 capital budget.

Due to the urgent nature of this project, costs would be monitored closely and only expended on an as-needed basis. Any remaining unused funds would be returned to the reserve.

#### **Communications and Civic Engagement Initiatives**

As this work would have a significant but temporary impact to local trail users, Communications staff would be engaged to assist with providing updates and communications to the public (signage, web updates, etc.).

Construction scheduling and trail closures will be planned to avoid the summer season as best as possible. During the work, the trail connection is expected to be closed. The work should be planned prior to the winter season.

## Council Strategic Plan Objectives

This project aligns with the Council Strategic Plan Objective of Excellence in Service Delivery.

## Attachment(s)

1. Draft Slope Stability Assessment Report dated May 22, 2020 from Thurber Engineering Ltd.

## Report Author

Julie Pavey-Tomlinson  
Manager of Parks

## Report Approval Details

Document Title:	Alfred Howe Trail - Geotechnical Repairs.docx
Attachments:	Attachment 1 - Draft Slope Stability Assessment Report dated May 22, 2020 from Thurber Engineering Ltd.pdf
Final Approval Date:	Jul 15, 2020

This report and all of its attachments were approved and signed as outlined below:

Lesley Douglas, General Manager of Environment and Parks - Jul 10, 2020 - 6:09 PM

Dorothy Shermer, Corporate Officer - Jul 13, 2020 - 10:11 AM

Jeff Moi, General Manager of Engineering and Operations - Jul 13, 2020 - 5:13 PM

Rosemary Lodge, Manager of Communications and Engagement - Jul 14, 2020 - 10:34 AM

Paul Rockwood, General Manager of Finance and Technology - Jul 14, 2020 - 6:17 PM

Tim Savoie, City Manager - Jul 15, 2020 - 1:43 PM