

COMMISSION REPORT

TO: CHAIR AND MEMBERS
PARKS, RECREATION & CULTURE
COMMISSION

DATE: 2019 Nov 01

FROM: DIRECTOR - PARKS, RECREATION &
CULTURAL SERVICES

FILE: 61100-20

**SUBJECT: REMEDIATION AND RESTORATION OF CAPITOL HILL
CONSERVATION AREA – UNAUTHORIZED BMX TRAIL
CONSTRUCTION**

PURPOSE: To provide a remediation and restoration plan for Capitol Hill
Conservation Area due to unauthorized BMX trail construction.

RECOMMENDATION:

1. **THAT** staff undertake the remediation of Capitol Hill Conservation Area as outlined in this report.

REPORT**1.0 INTRODUCTION**

Capitol Hill Conservation Area was created in 1972 to minimize the chance of slope failure and damage to property. The Conservation Area boundaries prevent development on or adjacent to the area where there is a risk of ground instability, preserving the area within the boundaries as a naturally forested area. Capitol Hill Conservation Area is an unmanaged natural area that preserves a vibrant ecosystem to provide wildlife habitat, and contribute to water run-off management and clean air.

In Burnaby, mountain biking and BMX riding is a continued popular recreational sport. Burnaby has well managed mountain bike trails and skills areas. Unauthorized development of technical trail features in open space and woodland areas in Burnaby Parks is an ongoing challenge. Parks staff remove unauthorized wooden trail structures and dirt jumps on a regular basis in various parks throughout the community. These structures and trails may not be safe, may create conflict with other park users and they impact sensitive woodland or creek areas. Restoration of these unauthorized development areas involves assessment of the damage caused by the construction and use of the structures, removal of the constructed features, and restoration of the site, back to pre-damaged condition, or better.

This report discusses the history of Capitol Hill Conservation Area and the recent discovery of significant unauthorized BMX activity in Capitol Hill Conservation Area. The report provides a damage assessment and a remediation and restoration plan. It also discusses potential upgrades to Burnaby's Mountain Air Bike Skills Park to include BMX components as a way to channel this activity to places in Burnaby that are best suited to accommodate it.

2.0 POLICY SECTION

The project is aligned with the City of Burnaby's Corporate Strategic Plan, supporting the following goals and sub-goals of the Plan.

- A Safe Community
 - Transportation safety –
Make City streets, pathways, trails and sidewalks safer
 - Community amenity safety –
Maintain a high level of safety in City buildings and facilities for the public and City staff
- A Healthy Community
 - Healthy life –
Encourages opportunities for healthy living and well-being
 - Healthy environment –
Enhance our environmental health, resilience and sustainability
- A Dynamic Community
 - City facilities and infrastructure –
Build and maintain infrastructure that meets the needs of our growing community

3.0 BACKGROUND

A. Capitol Hill Conservation Area

The City's early vision to acquire and preserve lands for park and conservation purposes throughout the city included the establishment of Harbourview, Scenic and Stratford Parks at the crest and on the steep north slopes of Capitol Hill in 1928. Through ensuing park site studies conducted in the 1960's, the retention of steep municipally owned lands as hillside conservation parks was recommended to control soil erosion and to buffer residential areas from adjacent industrial lands. In 1972, Council established the Capitol Hill Conservation Area designating additional city lands on Capitol Hill as conservation parklands and proposing the acquisition of the remaining private lands for conservation park purposes. The intent was to set aside an area of undeveloped lands in its natural environment and to control development on or close to an area of steep land recognized as having sensitive or unstable slopes.

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In the mid 1980's there was a review of the Conservation Area boundaries based on further geotechnical and site servicing needs assessments which resulted in further adjustment of the Capitol Hill Conservation Area boundary and development restrictions were set in place for private lands along the edge of the conservation area. Since the establishment of the Capitol Hill Conservation Area in 1972, the City has acquired fifteen additional properties for a total conservation parkland area of 95.26 acres/38.55 hectares. The most significant property acquisition was the 1994 purchase of the 7.98 acre/3.23 hectare Goodwin Johnson site where the unsanctioned BMX trails encroachment was recently discovered.

B. Unauthorized BMX Activity

Over several years, unsanctioned BMX bike trails were constructed at Capitol Hill Conservation Area on the unstable north-facing sloped land, upland from the Burrard Inlet. City staff recently discovered the activity and took action to immediately close the area due to environmental destruction and public safety concerns. The approximate area in which the structures were constructed is shown in **Attachment 1** and the location of the activity in the context of North Burnaby parkland is shown in **Attachment 2**.

Since the unauthorized park use was discovered the following has occurred:

- 2019 June 27, representatives from a group calling themselves the “Kush Woods Bike Trail Society” came forward, claiming responsibility for the unsanctioned bike trail activity in Capitol Hill Conservation Area.
- 2019 July 11, Parks met with representatives from the Society to discuss the unsanctioned activity, share concerns, and consider potential/future outcomes.
- 2019 July 23, a delegation from Kush Woods Bike Trail Society appeared before Parks, Recreation and Culture Commission to provide information regarding the unauthorized BMX Trails. The Commission expressed concerns with the safety and liability to the City and the unauthorized BMX Trails being incompatible with the conservation area. Staff were instructed to investigate the impact to the conservation area, and to advise on a remediation plan.

4.0 DAMAGE ASSESSMENT AND REMEDIATION PLAN

The City retained a consultant (Core6 Environmental Ltd.) to conduct a baseline site assessment and develop a remediation and restoration plan for the main area impacted by the unsanctioned BMX activity.

The consultants confirmed that the unauthorized construction activities resulted in the generation of debris/waste, drums filled with unknown liquids, and potential soil contamination. The assessment involved a detailed survey and inventory of park features, surficial soil sampling, water sampling, geotechnical assessment, tree risk assessment and an invasive species assessment.

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- There were 124 features (jumps, ramps, etc.) identified that are composed of an estimated 1,100 cu.mt. of soil. Debris observed at the site included but is not limited to: tarps, drums, water totes, wood debris, pails, rakes, shovels, brooms, PVC pipes, a gas powered water pump and gas cans.
- There were twenty-four (24) water drums and two (2) water totes with an estimated 2,650 litres of standing water at the time of the investigation.
- Of particular concern, four (4) steel drums had attached labels "Genyk Thermal Green Resin", this compound contains Tris (1-chloro-2-propyl) phosphate (TCPP) which is a regulated compound under the BC Contaminated Sites Regulation.
- Water samples were collected from different drum locations, and the samples were submitted for potential contaminants of concern (PCOCs) metals, anions, biological oxygen demand (BOD) and chemical oxygen demand. Soil samples were collected from locations distributed across the park and one (1) background location. The samples were submitted for analysis of PCOCs metals and sodium chloride.
- A conservative screening method for TCPP in soil was applied and possible concentrations above standards were identified in eight (8) samples taken from the southeast quadrant of the unauthorized construction area identified in Attachment # 1.
- The geotechnical assessment performed by Matthew Janes (P.Eng.) suggested that the site is considered to be low risk from a geotechnical perspective due to the relatively gentle slope, high amounts of vegetation, and high competency of native till soils.
- Diamond Head Consulting Ltd. performed a tree risk assessment and invasive species assessment at the site. Ten (10) hazardous trees were identified to be removed prior to restoration work being completed at the site, because they present a significant safety risk to workers and the public who may use the park.
- Identified invasive species at and around the site included small flowered touch-me-nots, Himalayan Blackberry, English Holly. Japanese Knotweed was identified near the access trail; however, this may have been caused by soil deposition unrelated to the unauthorized bike park.

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A Restoration Plan has been developed based on the results of the assessment, which includes:

- Removal of high risk trees before ground works begins.
- Earthworks to re-grade the site to natural contours.
- Protection of existing healthy trees.
- Management of invasive plants including removal and disposal off-site.
- Replanting with 400 native shrubs and 1300 trees to restore the site to prior conditions. **Attachment # 3** provides detail on the need for this replanting program.

In addition, staff noted damage along the access trail from the road. Along this 375 metre route, additional trees and shrubs were impacted, as well as invasive plants, which would not have been there otherwise.

The remediation plan will be executed sequentially, starting with tree management, water disposal, and then earthworks and invasive species management. The entry route to the site will be restored as the last phase of the restoration works. Core6 Environmental Ltd. will complete a final Restoration Report once the restoration of the site is complete. The remediation work is expected to cost \$170,000 and will be undertaken by Parks maintenance staff. There is sufficient funding within the existing operations budget in Parks grounds maintenance to cover the cost.

Follow-up monitoring and maintenance will occur to ensure slopes remain stable through seasonal changes, with proper flow and drainage of water through the site. Staff will also check that replanted material is surviving and invasive plants are not regenerating. Follow-up maintenance will be based on site-specific needs to guarantee the restoration is successful in returning the site to a resilient conservation area.

5.0 FEASIBILITY ASSESSMENT FOR POTENTIAL INCLUSION OF BMX TRAILS AT MOUNTAIN AIR BIKE SKILLS PARK

In acknowledgement of requests to upgrade Burnaby's Mountain Air Bike Skills Park, staff will endeavour to work with stakeholders within the BMX and trail biking community, including the Kush Woods Trail Society, to expand the Mountain Air Bike Skills Park to include additional BMX features.

The City retained a consultant (Dillon Consulting Limited) to conduct a feasibility assessment for the proposed redevelopment of the Mountain Air Bike Skills Park located at the base of Burnaby Mountain on Barnet Highway. Staff's goal is to both modernize and upgrade the park to attract riders of all ages and abilities. The feasibility study will evaluate natural assets within the potential expansion areas and identify development considerations including potential constraints, environmental limitations and opportunities for future expansion.

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As shown in **Attachment # 4**, the field investigation will focus on three areas identified for potential expansion:

- Area surrounding the existing Mountain Air Bike Skills Park, primarily to the east.
- Area west of the existing Park and immediately west of the parking lot.
- Area west of the existing Park south of the constructed sump on Simon Creek.

The field assessment is meant to provide a high-level overview of development constraints and opportunities within each of the proposed expansion areas. Dillon Consulting Ltd. will prepare a brief feasibility study report documenting the biophysical character of each of the assessment areas, and provide recommendations and suggestions regarding park development /redevelopment in each assessment area for City staff consideration.

6.0 SUMMARY

In response to unsanctioned BMX trail building activity discovered at Capitol Hill Conservation Area on 2019 February 07, Commission instructed staff to assess and look at ways to remediate the impacted lands due to environmental and public safety concerns. Staff retained a consultant to conduct a Baseline Assessment and create a Restoration Plan based on the findings of the assessment. The Restoration Plan will be implemented immediately, with a follow-up monitoring and maintenance plan executed to ensure successful return to the site's previous state. As well, the feasibility of including BMX features at Mountain Air Bike Skills Park is being pursued.



Dave Ellenwood
DIRECTOR - PARKS, RECREATION & CULTURAL SERVICES

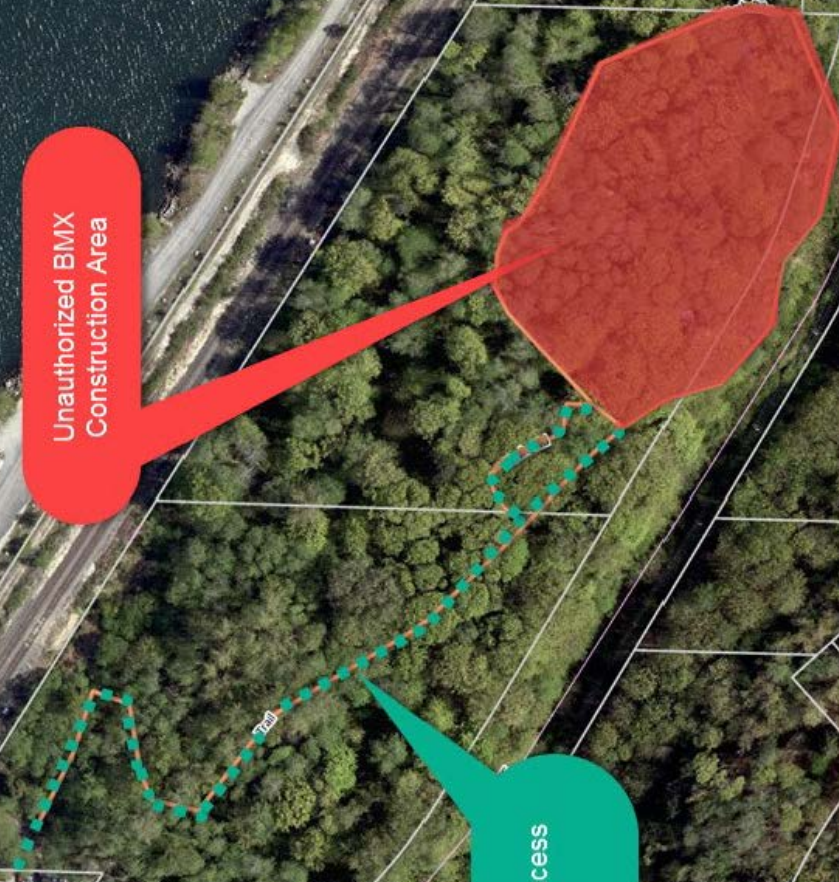
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Attachments (4)

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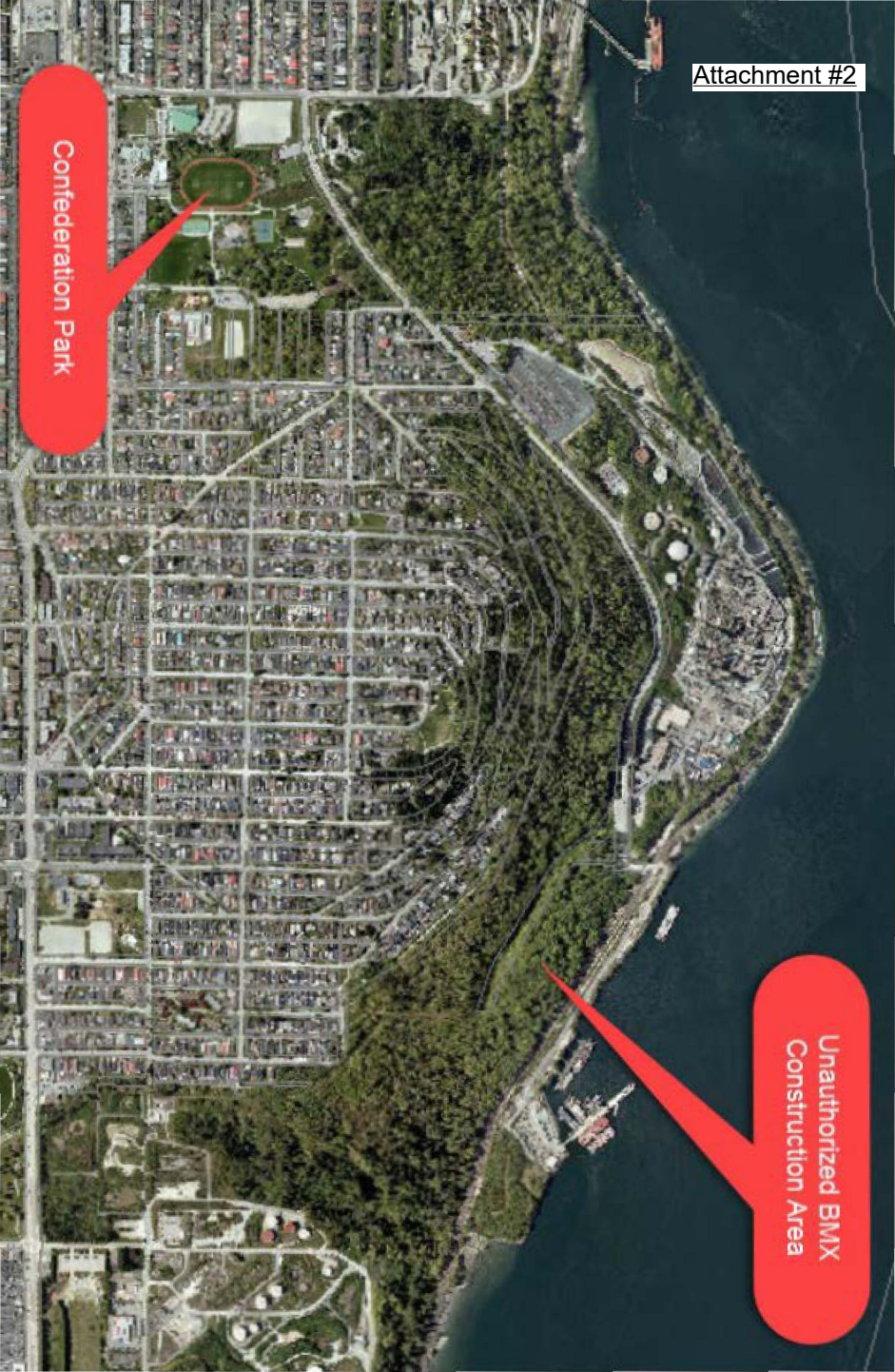
Unauthorized BMX
Construction Area

Unauthorized Access
Route



Confederation Park

Unauthorized BMX
Construction Area



Capitol Hill Conservation Area

Bike Track Re Forestation

Locations: 5741 Penzance Dr (Capitol Hill Conservation Area)

: 5863 Penzance Dr (Capitol Hill Conservation Area)

Impacts

The unauthorized development of the bike track in question has damaged an area approximately 7500 Sq Meters in size starting from the road access point at Adrian St and Glasgow Ave and extending eastward roughly 375 meters.

This section of the Capitol Hill Conservation Area consists of primary forest plant and tree species such as Red Alder, Big Leaf Maple, Wild Cherry, Salmon Berry, and Sword Fern, along with many others. The role of these plants and trees is to utilize the nutrient poor soils, grow fast, and put down vast quantities of leaf litter to create the type of soils required for secondary forest species to establish. This process further builds the soil structure and environment which enables climax forest species to take hold.

Due to the activities of the individuals who constructed the bike track the above mentioned cycle has been disrupted, they have removed all leaf litter, disrupted all of the natural water flow, and damaged vast numbers of trees root systems via excavation. The net effect of these activities will be tree hazards, tree and plant mortality, sediment runoff, and the introduction and quick establishment of invasive species. It would be reasonable to say that if no further activities were to take place and no remediation of the land was undertaken this location will lose most of the trees that have been damaged within ten years.

Forestry's perspective regarding this site is that with support we could not only remediate the damage that has occurred but leave the location in better condition than what it was originally, thus giving this section of the Capitol Hill Conservation Area a stronger environmental benefit to the City of Burnaby and its residences. The following information is a cost estimate derived from the information known at this time to complete the forest restoration for the land that has been damaged.

G.A.Waine Nov 5 2019

