

THE CORPORATION OF THE
CITY OF WHITE ROCK
CORPORATE REPORT



DATE: August 14, 2023

TO: Mayor and Council

FROM: Jim Gordon, P.Eng., Director of Engineering and Municipal Operations

SUBJECT: Hump Maintenance Update

RECOMMENDATIONS

THAT Council receive the corporate report dated August 14, 2023, from the Director of Engineering and Municipal Operations, titled "Hump Maintenance Update" for consideration; and

1. Approve reallocation of \$35K from the \$75K previously allocated for a detailed report on Hump replanting plans to the project to remediate areas A, B and C as described in this report or
 2. Limit further vegetative maintenance works to trimming the blackberries and undergrowth immediately adjacent to the Marine Drive sidewalk.
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EXECUTIVE SUMMARY

Further to Council direction on October 3, 2022, and during the 2023 Financial Plan discussions, a contractor was hired to do vegetation maintenance works on Burlington Northern Sante Fe Railway (BNSF) lands south of Marine Drive and between Martin and Cypress Streets (Hump). This work prompted concerns from some residents that included maintenance potentially affecting slope stability, and others indicating not enough was done to mitigate the deterioration of ocean views and vantage points by vegetative growth.

This report and the attached appendices provides background information on recent Hump maintenance and seeks Council direction moving forward.

PREVIOUS COUNCIL DIRECTION

Motion # & Meeting Date	Motion Details
2022-401 October 3, 2022	THAT Council recognizing that White Rock's waterfront and views constitute a defining feature of our city and that the City has committed (in OCP policies, goals and objectives) to preserving and enhancing the beauty of this asset, including the sidewalks and landscape along Marine Drive: 1. Proceed with the cutting of shrubs and bushes on the relatively level (non-sloped) land along Marine Drive, between the sidewalk

	<p>and sloped area, to a height and at a frequency that improves views of the water and pier.</p> <p>2. Establish, as part of the City’s Operational Plan for Parks, a long-term plan and ongoing program for the management of vegetation on BNSF lands. This plan will provide for the stratification of the area to allow for a variety of strategies and planned outcomes to accommodate factors such as invasive species control, natural tree growth and height, erosion control, and views consistent with:</p> <ul style="list-style-type: none"> a. Maintaining the area in a relatively natural state consistent with Canadian Landscape Standard Level of Care Levels 4 to 5 and City Policy 611 concerning the cutting of trees. b. Implementing sustainable design principles and guidelines, using vegetation that is resilient to climate change, encouraging native plants and removing or decreasing invasive species. {This site could be used as a demonstration project for removal of invasive species in other City parks.} c. Allowing for the cutting of tree shoots that does not endanger the health of the root system or stability of the slope, and allowing for the removal of tree stumps only if other trees provide sufficient slope stability. d. Maintaining the area to provide for views of the water and pier from the level of a pedestrian on the sidewalk along substantial areas of the Hump on Marine Drive. e. Considering also the views of the vegetation from below along the promenade. <p>3. Ensure that all foregoing activities are funded on an ongoing basis as part of the Parks Management operating budget, without decreasing or detracting from resources currently committed to existing Parks Management operations.</p> <p>AMENDING MOTION Motion Number: 2022-402 It was MOVED and SECONDED THAT Council direct staff to include in the 2023 budget funds to address the recommendations, in regard to vegetation control on the hump, as provided by the Environmental Advisory Committee. Motion.</p> <p style="text-align: right;">CARRIED</p> <p>Question was called on the Main Motion as Amended.</p> <p style="text-align: right;">CARRIED</p>
<p>2022-229 May 30, 2022</p>	<p>THAT Council:</p> <ul style="list-style-type: none"> 1. Receive the corporate report dated May 30, 2022, from the Director of Engineering & Municipal Operations, titled “Vegetation Control on the Hump” providing information on the feasibility of bringing maintenance of the Hump greenery to pre-2019 levels; and

	2. Refer the corporate report to the City's Environmental Advisory Committee in order to comment on the topic and additionally that the Geotechnical Engineer noted in the report be available at the Committee meeting when they review the report. CARRIED
2022-055 February 28, 2022	THAT Council directs staff to report back on the feasibility of bringing maintenance of the hump greenery to pre-2019 levels including compliance to new policies in place as well as budget implications. CARRIED
2019-311 July 22, 2019	THAT Council: 1. Receives for information the corporate report dated July 22, 2019 from the Acting Director of Engineering and Municipal Operations titled "Marine Drive "Hump" Vegetation Management Plan"; 2. Directs staff to maintain the vegetation of the blackberry bushes; however, exclude the trimming of the trees; 3. Endorses the amended Marine Drive "Hump" Vegetation Management Plan as outlined in this corporate report; CARRIED
2019-278 July 8, 2019	THAT Council directs staff to bring forward a corporate report that will outline what level of work can be done in regard to trimming / cutting along Marine Drive (maintaining vegetation on the Hump). CARRIED

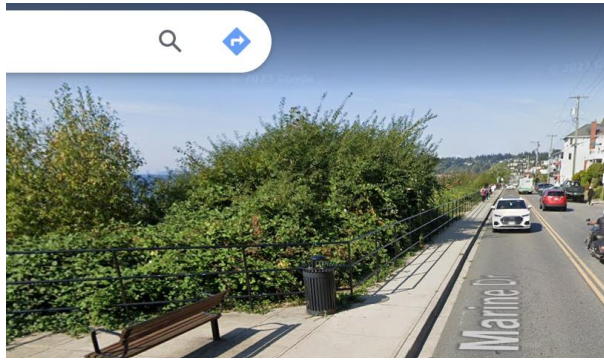
INTRODUCTION/BACKGROUND

There is a long history related to vegetative growth and trees on the Hump and its maintenance. A review of historical photos shows more larger trees prior to 2010; however, subsequent annual photos mainly show fewer large trees, regrowth of shrubs, overgrown brambles, and small trees. Vegetation encroached onto the sidewalk for some years, while other years it was cut back affording clear views for pedestrians and motorists. From the photos, it shows there was considerable year to year variation in maintenance strategies.

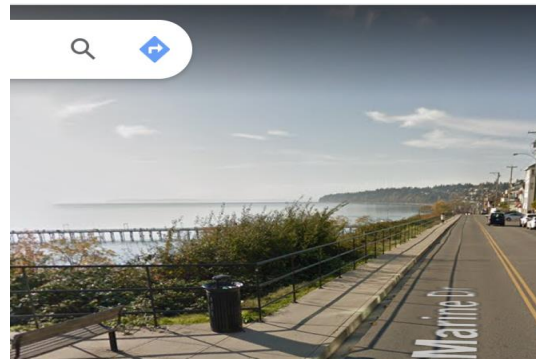
White Rock's spectacular ocean views are important to visitors and residents travelling along Marine Drive roadway and sidewalk. These views are also appreciated by nearby residents and those visiting the viewpoints. However, maintenance of vegetation along the south side of the Hump needs to be approached with careful consideration of the stability of the slopes above the BNSF railway.

Recent History

The following sequence of photos show a thicket of bitter cherry to the west of the viewpoint. In 2011, the thicket rose above the sidewalk and was subsequently removed to ground level sometime around 2015. Then in 2018, the regrowth is evident at railing level and then much higher in September 2022. This pattern of regrowth is consistent with arborists opinions of the viability of the bitter cherry when cut leaving the supporting root structures intact.



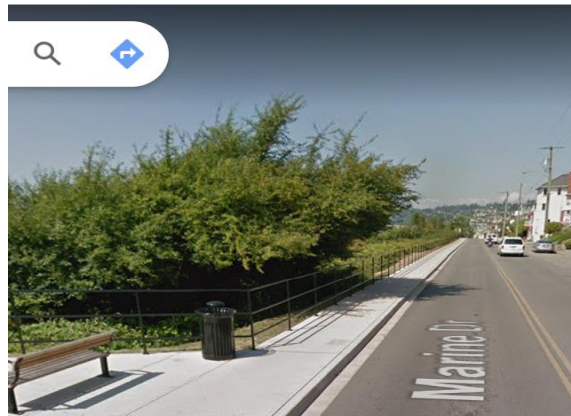
September 2022



October 2018



September 2015



August 2011

Previous Plan

Following is an excerpt from the May 30, 2022 Council report attached as Appendix A.

A maintenance plan proposing regular blackberry bushes trimming three times per year and trimming of the tree shoots every three years was discussed in 2019. It was suggested that this would allow the stumps to remain alive and yet the tree shoots would not grow to the extent that they would block views.

A review of this plan from a stump health perspective was conducted by the former Manager, Parks and is included in Appendix E. A selection from the review follows:

A program of cutting back vegetation every three years will not have a negative effect on the health and vigor of this plant community. Woody plants will produce 1 m – 5 m of regrowth each year after having been cut back. Allowing 2-3 years of regrowth will allow plants to continually support a healthy root system.

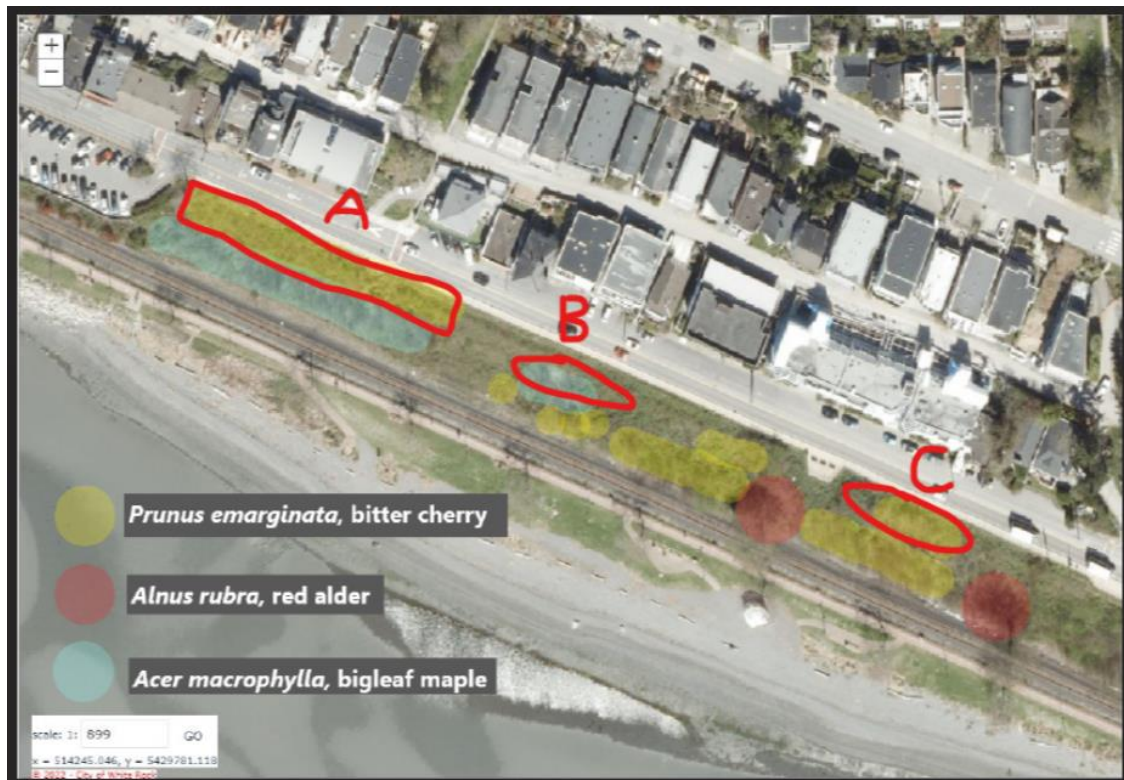
This plan is also consistent with the May 22, 2022 report of GeoWest Engineering, geotechnical engineers. A selection follows:

The majority of the Hump is inclined at or near its angle of repose. The vegetative cover provides a vital role in maintaining its stability by way of root reinforcement and by controlling surface water and groundwater pore pressures. Deeper rooting tree species provide the greatest mechanical root reinforcement benefit, but taller growing trees can become a destabilizing windthrow hazard and would also block views from Marine Drive.

Current Situation – Potential Remedial Works

There has been minimal maintenance of the vegetation along the south side of the Hump since 2018. If Council decides to implement a long term maintenance plan as outlined above, remedial works need to be carried out this year in some areas to establish a base from which regular maintenance can be done on an annual basis. The works that were recently undertaken were implemented based on the October 3, 2022 resolutions of Council and 2023 Financial Plan discussions.

The easterly sections of the Hump do not need remedial works prior to plan implementation as they are either steeper or have had recent reconstruction. Details for the three areas of potential remediation are described below.



Area A

Area A, immediately east of the parking area is comprised of a thicket of bitter cherry adjacent to the sidewalk and bigleaf maple near the lower reaches of the slope. The bitter cherry can be removed and some of the smaller shoots of big leaf maple near the top of the slope; however, the big leaf maple in the lower reaches is either too established or too far downslope to be trimmed. These will grow and eventually take from the view, but the upper areas near the sidewalk can be opened up and regularly maintained.

Area B

Shoots of big leaf maple near the top of the slope can be removed and maintained; however, the big leaf maple in the lower reaches is either too established or too far downslope to be trimmed and will grow larger over time.

Area C

The bitter cherry thicket to the east of the viewpoint can be removed in the upper reaches of the slope.

The estimated costs for the work in areas A plus B is \$25K. The estimated cost for the work in area C, east of the viewpoint is \$10K. Operating funding of \$75K is included in the 2023 Financial Plan – this was originally intended for a comprehensive study of the entire Hump leading to a replanting and maintenance plan.

If these works are completed, regular maintenance of blackberries and small plants can be scheduled for 2024 at an estimated cost of \$15K. Tree shoots to be trimmed every three years.

Alternative Plan

There are those in the community that have expressed concerns about vegetation control and slope stability on the Hump and the potential effects of slides including rail safety. Although the expert opinions outlined in Appendix A support a plan of maintenance, there are no guarantees in consideration of changes in extreme weather patterns experienced over the years due to climate change. However, it is also not certain that the current practice of minimal slope maintenance will guarantee slope stability.

An alternative plan may be to maintain the blackberries manually to the extent that they do not encroach on the sidewalk – this was essentially the plan the last few years until recent works were carried out.

FINANCIAL IMPLICATIONS

If Council directs that remedial works be carried out, the estimated one-time costs as discussed above would be \$35K. Funds can be redirected from the \$75K previously allocated for a detailed report on Hump replanting plans. Future annual maintenance would be approximately \$15K with a larger amount every three years of approximately \$30K.

If Council directs that maintenance be limited to trimming regrowth away manually to the extent that they do not encroach on the sidewalk, the annual maintenance costs are estimated at \$5K.

LEGAL IMPLICATIONS

The land south of Marine Drive between Martin and Cypress Streets belongs to BNSF. Approval from BNSF is required for any maintenance activities.

COMMUNICATION AND COMMUNITY ENGAGEMENT IMPLICATIONS

Staff will communicate all proposed work plans with BNSF. Staff will carry out work as directed by Council at a public Council meeting.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS

The Finance and Engineering Departments will work together with respect to funding arrangements.

ALIGNMENT WITH STRATEGIC PRIORITIES

Vegetative maintenance of the Hump aligns with the Council Strategic Priorities:

Waterfront – We support a prosperous and vibrant waterfront – Revitalize waterfront public spaces to be more inviting.

Community – We foster a livable city with connected residents enjoying distinctive places and activities - Encourage positive community gathering by designing and implementing inviting public spaces and beautification projects.

OPTIONS / RISKS / ALTERNATIVES

Council may decide not to adopt the formal Hump maintenance plan described in this report and leave the Hump in its current regrowth state. This would likely allay the fears of those concerned about slope stability, although, due to changing climate patterns this is not a guarantee that a slide in the future may not occur, however:

- This could increase fire hazard risk if the regrowth becomes too overgrown close to the sidewalk and roadway.
- Also, as noted in the Geowest Report of April 22, 2022 included in Appendix A, there is the potential that “taller growing trees can become a destabilizing windthrow hazard”.
- Views and vantage points from the sidewalk would be lost for residents, motorists, pedestrians and tourists.

CONCLUSION

White Rock residents are passionate about the growth and trees on the Hump, including views, the natural environment and slope stability. Current staff are advised that the Hump was “clearcut” on or around 2015. Pictures from that time show an area that was completely cut down using heavy machinery.



2015



2023

The two pictures shown above show the difference in scope between the 2015 and 2023 works; however, increased community engagement with the city generated from the vegetation and tree removal in 2015 remains, with some residents expressing strong concerns about the recent maintenance works.

The potential remedial works identified in this report followed by annual maintenance is a more modest approach compared to the scope undertaken in 2015. Staff seek Council's direction with respect to the remedial works and maintenance plan for the Hump.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jim Gordon', written over a faint, light-colored rectangular stamp.

Jim Gordon, P.Eng.,
Director of Engineering and Municipal Operations

Comments from the Acting Chief Administrative Officer

I concur with the recommendations of this corporate report.

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Anne Berry,
Acting Chief Administrative Officer