

TO: MUNICIPAL MANAGER 1992 September 09
FROM: ACTING DIRECTOR PLANNING & BUILDING
ACTING CHIEF PUBLIC HEALTH INSPECTOR Our File: 15.711.4

SUBJECT: CARIBOO HEIGHTS, COLDICUTT RAVINE
RISK ASSESSMENT AND REMEDIATION WORKS

PURPOSE: To advise Council of the results of the environmental assessments undertaken for the Cariboo Heights, Coldicutt Ravine landfill and of the intention to proceed with minor remediation works.

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RECOMMENDATION:

1. THAT Council receive this report for information purposes.

R E P O R T

1.0 BACKGROUND

As part of the technical considerations arising out of the development of the Cariboo Heights project, Council commissioned a consultant to undertake a site contamination audit of an old refuse dump at the head of the Coldicutt Ravine adjacent the Group Housing Site 7d (see Figure 1 attached). The consultant reviewed remediation options and concluded the most effective option is to manage any contaminants on site. Prior to proceeding with implementation of remediation, it was recognized that a risk assessment needed to be conducted and a detailed remediation plan prepared using the approach specified in the Ministry of Environment, Lands and Parks Criteria for Managing Contaminated Sites.

These criteria, while not legal requirements, establish an acceptable level of contamination depending on the site's existing and future use. Level C is applicable to industrial and commercial property. Level B is applicable to residential, recreational and agricultural property. Since the Coldicutt Ravine will be maintained as park, Level B has been selected as the appropriate criteria level for the subject site.

2.0 ENVIRONMENTAL ASSESSMENT

Envirochem Special Projects Inc., which was commissioned to undertake this additional work, has submitted its final summary report and copies have been provided to Council with their agendas. Copies are also available for review by others in the Planning & Building Department.

While it is not intended to duplicate this information in this report, it is important to note that it brings together the pertinent information from the various environmental studies undertaken of the landfill. Their purpose has been to define its nature and extent and to evaluate the existing and potential environmental concerns that may exist at the site. Since the area in the vicinity of the ravine will be subject to residential development, it is the Corporation's desire to take the necessary remedial steps to alleviate any potential problems for future residents.

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Envirochem obtained samples from surface soils, subsurface soils and groundwater which were analyzed for various chemical parameters to provide a clear understanding of various chemical contaminants, their stratification in the landfill and their potential to leach out into the environment. The number of samples and the locations were selected on the basis which would provide a clear picture of any potential problem.

Minor contamination in excess of Level B was found in surface soils while the subsurface samples exhibited higher levels and frequencies.

Several contaminant parameters in the groundwater samples were found to be in excess of the standards for the protection of aquatic biota. However, surface water samples taken upstream of the landfill, at the toe and downstream of the landfill found that only iron was in excess of the standards. This high iron content and the accompanying 'rusty' staining of the stream has no impact on the environment but will continue to be an aesthetic nuisance.

It is important to note that, although portions of the landfill are in excess of the criteria levels for contaminated properties, the landfill as a whole is not having any impact on Coldicutt Creek or on other areas of the receiving environment. The detailed risk assessment found that the site (including the portions of the landfill which exceed the Level B criteria) does not pose a risk to human health or the environment and that further remedial steps are unnecessary.

The Risk Assessment and Summary Report has been reviewed by the Ministry of Environment, Land and Parks and we have been advised that they agree that there are minimal environmental impacts from the site and with the proposed remedial action plan. Burnaby, in conjunction with the Ministry, has agreed to initiate and continue a monitoring program to ensure that the environmental quality of the ravine is maintained over time.

3.0 REMEDIAL ACTION PLAN

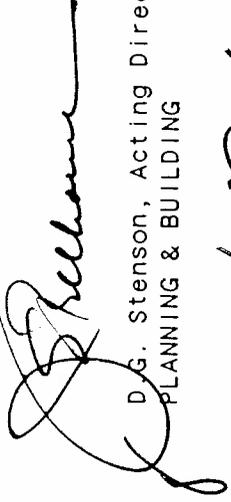
Given the results obtained in the study, very little action is proposed for the site. In order to return the ravine to its natural state, it will be necessary to remove the remaining large debris. To rehabilitate the creek bed in the ravine, it is intended that the top 6 inches to 1 foot of native and organic material be removed from the creek bed in the vicinity of the toe of the landfill and replaced with 1 to 2 feet of clean, free draining gravel or drain rock. Placement of this material will allow the free flow of groundwater into the creek bed under all conditions and will maintain the free drainage nature of the fill and slopes.

While a final estimate for the cost of these works has not been prepared they are not expected to exceed \$15,000. Sufficient funding is provided in the 1992 Capital Budget.

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Once they have been completed, the Corporation will be in a position to offer the adjacent Site 7d for lease for group housing development.



D.G. Stenson, Acting Director
PLANNING & BUILDING



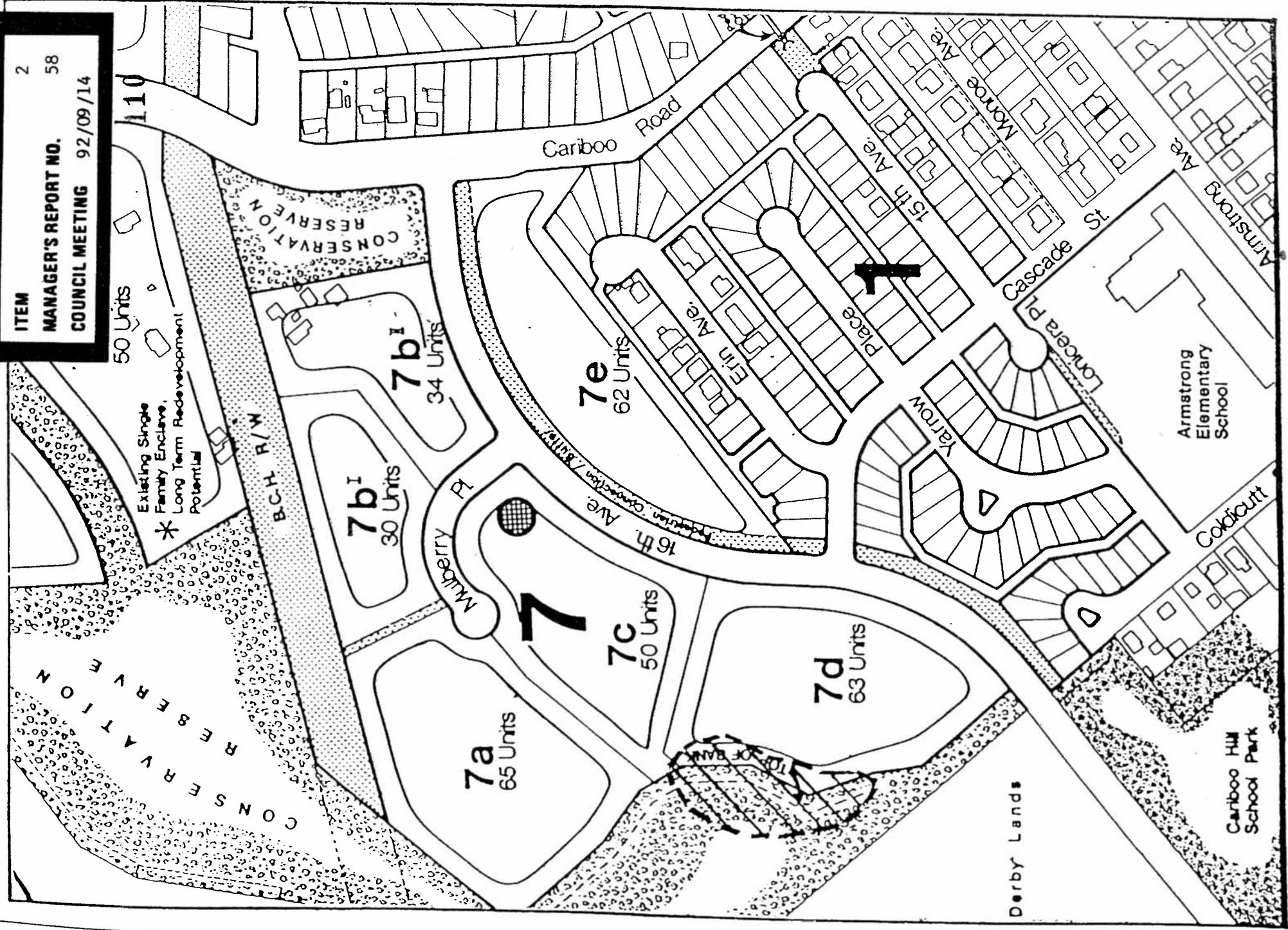
K.C. Johnston, C.P.H.I.(C)
ACTING CHIEF PUBLIC HEALTH INSPECTOR

 PB/db

Attachments

cc: Director Administrative & Community Services
Director Engineering
Director Finance
Municipal Solicitor

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Date 07 SEPT 92
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BURNABY
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 Department



NORTH

 APPROXIMATE AREA OF REFUSE SITE

FIGURE 1