

2002 JUNE 20

**TO:** CITY MANAGER  
**FROM:** DIRECTOR PARKS, RECREATION AND CULTURAL SERVICES  
**SUBJECT:** BARNET MARINE PARK  
**PURPOSE:** To request Council to bring down a Capital Reserves Expenditure bylaw for the additional work to complete the Barnet Marine Park Master Plan.

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**RECOMMENDATION:**

1. THAT a Capital Reserves Expenditure Bylaw in the amount of \$130,000 (inclusive of 7% GST) be brought down to undertake additional work to complete the Barnet Marine Park Master Plan.

**REPORT**

At its meeting of 2002 June 19, the Parks, Recreation and Culture Commission received the above noted report and adopted the three recommendations contained therein.



Kate Friars  
DIRECTOR PARKS, RECREATION  
AND CULTURAL SERVICES

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Attachment  
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cc: Director Finance  
Director Engineering  
Director Planning  
City Solicitor

**SUBJECT: BARNET MARINE PARK**

**RECOMMENDATIONS:**

1. THAT the design concept for the west pedestrian/bicycle CPR overpass and shoreline connector in Barnet Marine Park be approved in principle, subject to review at a future public meeting.
2. THAT approval be given for the expenditure of \$125,000 (including net GST rebate) from the 2002 Capital Budget to undertake additional work necessary to complete the Barnet Marine Park Master Plan.
3. THAT Council be requested to bring down a Capital Reserves Expenditure Bylaw in the amount of \$130,000 (inclusive of 7% GST) to undertake additional work necessary to complete the Barnet Marine Park Master Plan.

**REPORT**

**BACKGROUND**

In 1999 Spring, Commission approved the preliminary design of a Master Plan for the central and western portion of Barnet Marine Park, between Simon Creek to the east and Bayview Drive to the west. Also approved at that time was the hiring of a consultant team to complete detailed studies, designs and specifications for the Master Plan, for review and approval of the Vancouver Port Authority (VPA). Work had proceeded with detailed survey, site analysis, and preliminary design of a pedestrian overpass east of the Kask property. However, subsequent geotechnical data indicated that the slopes in this vicinity were within a slide hazard area and not suitable for an overpass location. The consultant team recommended relocating the overpass to the West end of the park. This new location provided spectacular views and the opportunity for an extended foreshore experience along a piled walkway.

On 23 May 2001, following a tour of the site, Commission approved an addition to the contract for consulting services, to include an evaluation of the opportunity for pedestrian and bicycle access into the park west of Kask via a railway overpass and foreshore connector. This report will summarize this work, provide a general project update, and identify next steps.

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**WEST FORESHORE ACCESS: CPR OVERPASS WEST OF KASK AND URBAN TRAIL LINKAGE**

With Commission approval to expand the focus of the study, Consultants proceeded with a thorough analysis of the west overpass and beach connector concept. Three possible beach connectors - a filled walkway, intertidal boardwalk and floating boardwalk - were reviewed and evaluated according to engineering and geotechnical constraints, safety, environmental and visual impacts. The shoreline fill option was not possible due to geotechnical concerns regarding toe of slope stability, potential environmental impacts and the alignment of a City forcemain along the shoreline. A floating boardwalk was also not possible due to the shallow slope of the beach and the location of the walkway far from the shore, next to the Harbour headline.

The preferred walkway design is a mid-tidal piled walkway approximately 230 metres long by 3 metres wide, with large lookouts at an intermediate point and both ends (Attachments 1-3). It is a piled structure located over beach at low tide and over water at high tide, with viewing interest provided by changing conditions beneath the walkway as the tide varies. Potential environmental impacts will be mitigated with the use of steel decking to reduce shading and concrete pillars to avoid the leaching of harmful substances into the water. The pillars also offer replacement habitat in the productive low to mid intertidal zone for the growth of barnacles, rockweed and green algae, representing a net increase in habitat at a ratio of 13:1.

A number of potential overpass types were reviewed, including cable-stayed, frame, arch, truss, and girder structures. Options that required a vertical support within the railway right-of-way were eliminated due to construction access, geotechnical impacts, and safety and design requirements near the railway. A preference for the frame type overpass was identified as being easier to construct, economical, meeting site constraints, and with the visual impact to mark the terminus of the park, and an important new pedestrian connection. The straight angled frame has geotechnical advantages to a circular frame in terms of creating superior downward forces to counteract slope instability. The overpass and foreshore walkway will offer numerous opportunities and benefits to park users, including spectacular views of Burrard Inlet from the trail head adjacent to the overpass and the overpass structure itself. The joining of the existing foreshore trail to the proposed upland Urban Trail will extend the linear waterfront experience, as well as complete a portion of the City's Urban Trail System that links to surrounding neighbourhoods and to the trail network in the Burnaby Mountain Conservation Area. An area of the park which has been virtually inaccessible and remote can become part of the overall park circulation plan, providing increased use and improved surveillance. Although wheelchair/ accessible ramped access to the overpass was initially considered, it was not realized due to geotechnical concerns related to the negative impacts of creating an extensive system of ramps and retaining walls on extremely steep, sloped, loose soils.

Upland trail access to the overpass will come from both an Urban Trail connection to the west, and an east trail connection to a small parking area located on the east side of the Kask site.

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### THE BURRARD ENVIRONMENTAL REVIEW COMMITTEE (BERC)

On 9<sup>th</sup> January 2002, Consultants and staff held a pre-application meeting with BERC to present the preliminary design for the proposed west overpass and shoreline connector. The agencies responded positively on the plan's response to environmental concerns. In April a meeting and tour of the park took place with Fisheries and Oceans Canada (FOC) and VPA, and again, their comments were favourable and supportive of the proposed west access. The next step by the Consultants is to provide environmental assessments, engineering and landscape drawings, and specifications for the park, including the west overpass and shoreline connector. These works were not included in the original contract.

Given the industrial history of the site and the potential for soil contaminants to be present and potentially effect the inlet and development opportunities, VPA/BERC required a preliminary soils investigation at the former site of the Texaco Oil bulk fuel storage facility. The soil investigation was completed as part of the original contract. Results indicate that under current soil standards there are some areas which require further analysis. With Commission approval, a detailed soils investigation of specific areas of soils and groundwater will proceed.

Estimated costs for additional design contract works for the west overpass and shoreline connector, including additional survey and geotechnical assessment, and detailed soil investigation of the former Texaco Oil site are \$130,000 inclusive of GST.

It should be noted that the level of design detail is to be at the 40%-60% working drawing stage, sufficient for BERC approval. Additional design work will be required to complete the detailed construction drawings and specifications at some future date.

### PUBLIC CONSULTATION

In 1999 March a very successful open house was undertaken by Commission to present a preliminary concept plan for Barnet Marine Park. At that time the plan did not include access into the park west of Kask, and the public indicated that greater access to the foreshore was a priority, as were linkages from the park's foreshore trail system south to the proposed Barnet Escarpment Urban Trail.

Parks staff are preparing for two more public open houses for Barnet Marine Park. The next public open house is tentatively scheduled for October of this year, with presentation of a revised Master Plan including west overpass and foreshore connector, and questionnaire seeking responses to the preliminary plans. The third open house is expected to be held early in 2003, to review the final detailed design plans. These initiatives will complement the BERC project review process, which requires public consultation as part of the application process.

A formal application to VPA/BERC would be made soon after the final Public Open House.

Final approval of the park master plan and west overpass will entail an extensive review process involving BERC, the Canadian Pacific Railway, and any other groups such as First Nations which the agencies identify as having potential interest in the site. BERC staff indicate that after receiving an application, the typical review period for a project of the size and complexity of the Barnet Marine Park project is 90 days or longer.

**FUNDING**

Sufficient Capital Reserves are available and the Barnet Marine Park Master Plan is included under the 2002 Major Projects component of the 2002 -2006 Capital Program. It is recommended that Commission request Council to bring down a bylaw to appropriate \$130,000 (inclusive of GST) from Capital Reserves to undertake these extra works required in order to complete the master plan.

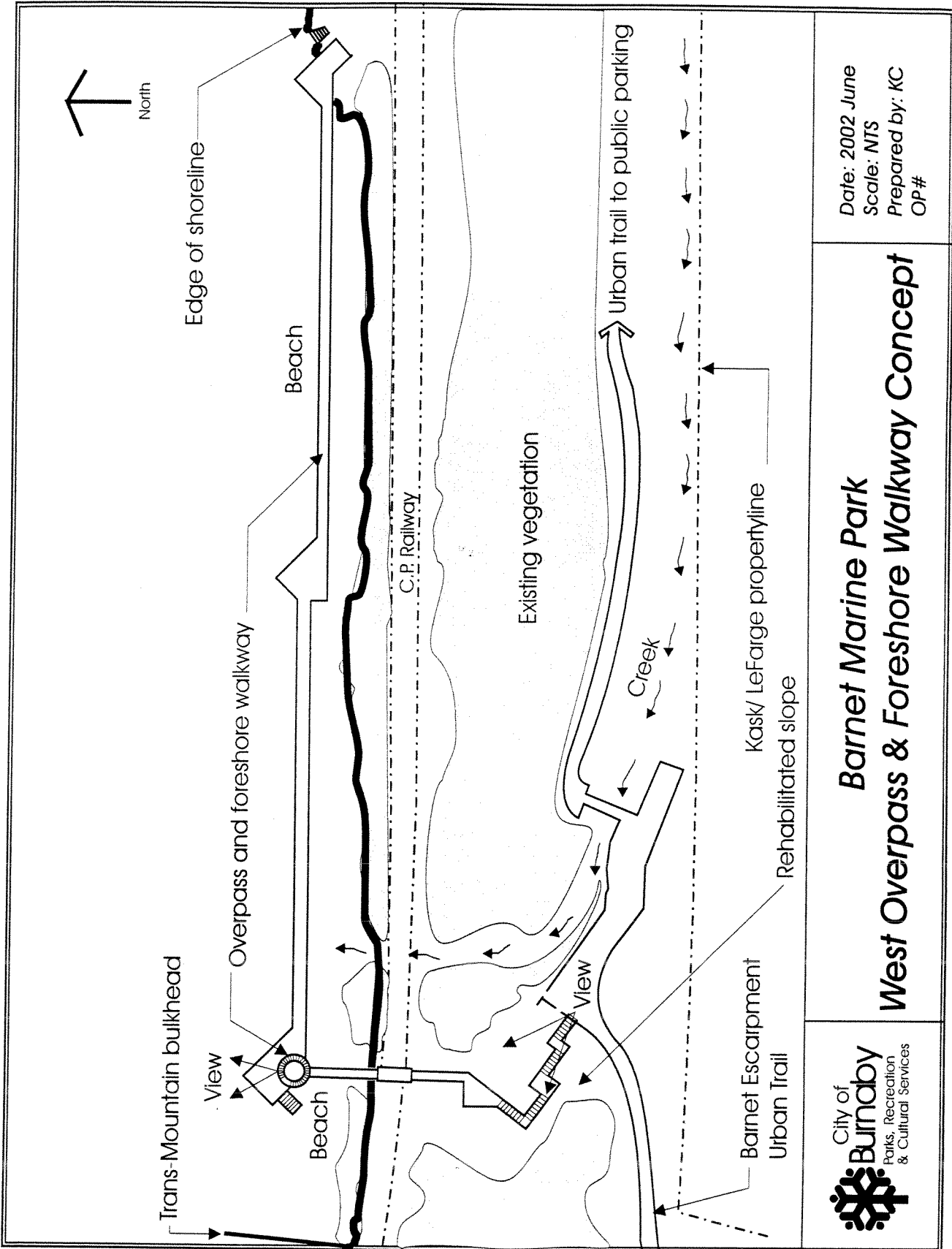
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Attachments(3)

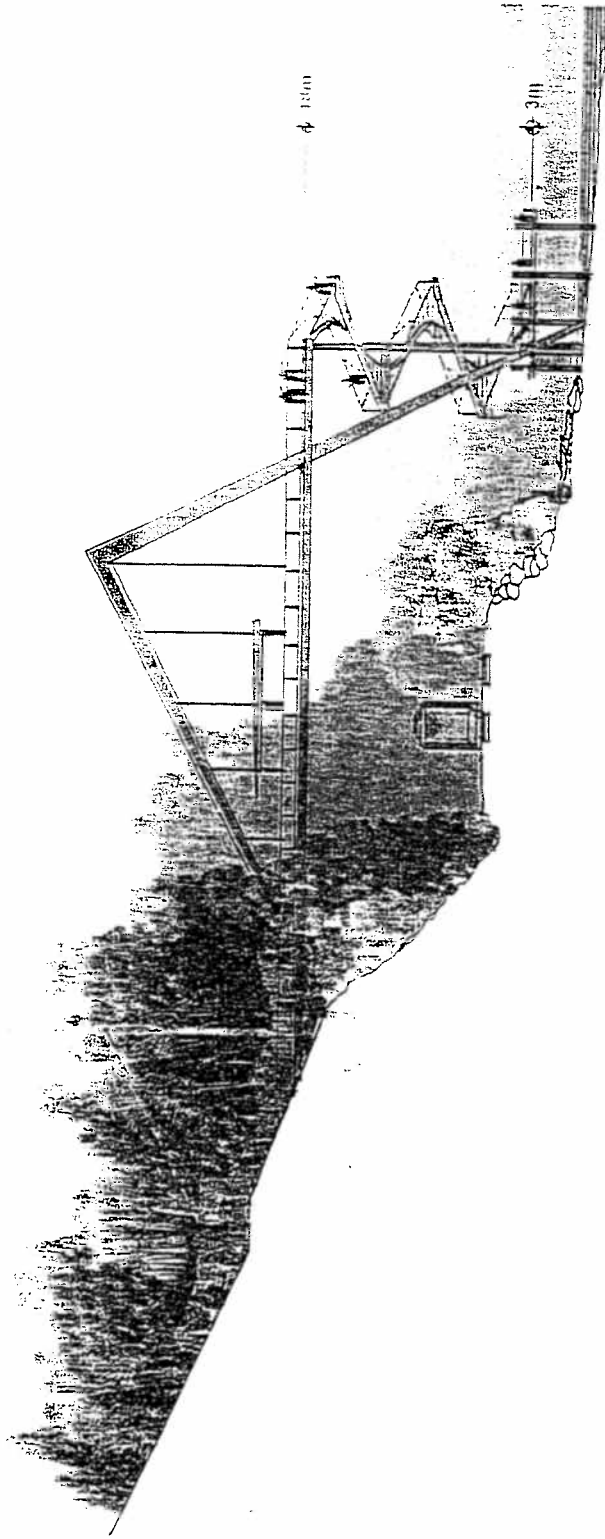
cc: Director Finance  
Director Engineering  
Director Planning  
City Solicitor



Date: 2002 June  
 Scale: NTS  
 Prepared by: KC  
 OP#

**Barnet Marine Park**  
**West Overpass & Foreshore Walkway Concept**

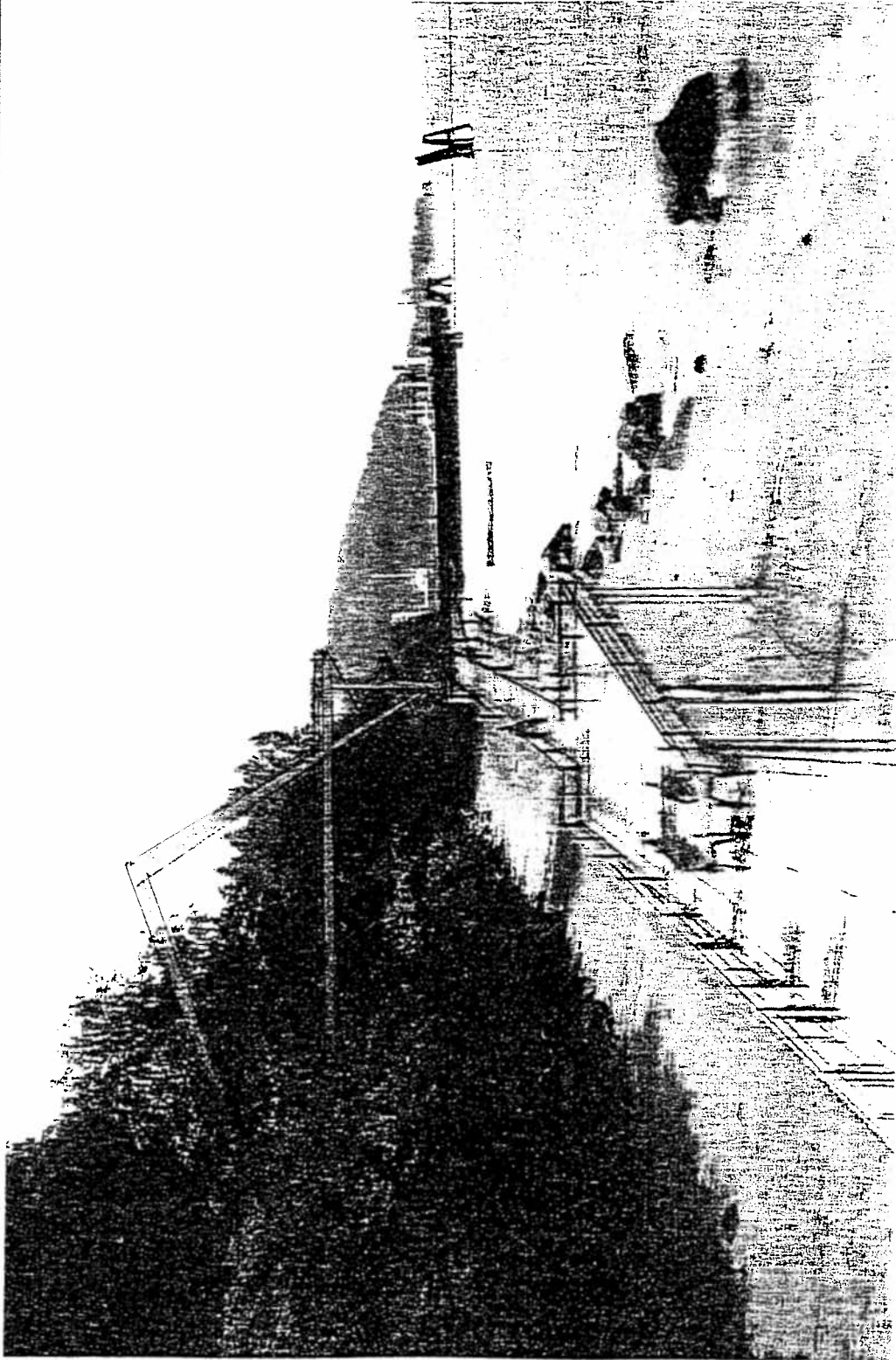




**Barnet Marine Park  
Proposed C.P.R. Overpass**

Date: 2002 June  
Scale: NTS  
Prepared by: KC  
OP#





Date: 2002 June  
Scale: NTS  
Prepared by: KC  
OP#

**Barnet Marine Park  
Proposed Shoreline Connector**

