

ITEM	8
MANAGER'S REPORT NO.	2
COUNCIL MEETING	94/01/17

TO: CITY MANAGER

FROM: DIRECTOR PLANNING AND BUILDING OUR FILE: 15.601

SUBJECT: **ENVIRONMENTAL PROTECTION/ENHANCEMENT MEASURES, NORTH ARM OF FRASER RIVER**

PURPOSE: To provide Council with information regarding the completion of a study on environmental protection and enhancement measures in the Big Bend area on lands adjacent to the Fraser River.

RECOMMENDATION:

1. **THAT** Council authorize the Director Engineering to finalize arrangements to provide consulting services as outlined in this report for the completion of the study on environmental protection and enhancement measures in the Big Bend area lands adjacent to the Fraser River.

R E P O R T

1.0 BACKGROUND

Council, on 1993 June 7, received a report regarding proposed partnership funding for the Fraser River Dyking and Fisheries Enhancement Program between Boundary Road and Kaymar Creek. Subsequently arrangements were made with the North Fraser Harbour Commission (NFHC) and the Department of Fisheries and Oceans (DFO) to proceed with these works.

Arising out of Council's consideration of the foregoing, a motion was adopted "THAT staff provide an overall plan which would locate specific areas for enhanced environmental protection and that certain environmental improvements be developed in relation to stream side vegetation".

On 1993 September 20 a further report was submitted updating the work undertaken in this regard. It identified the area which contains the recently acquired Burnaby Fraser Foreshore Terminus Park as a prime candidate for significant environmental protection and enhancement measures. Council was advised that, as part of staff's review, a letter had been forwarded to DFO advising that, with the acquisition of the 40 acre parcel, an opportunity is available to advance further habitat enhancement programs under the auspices of the Green Plan, Fraser River Action Plan. If it was determined that funding could be made available in addition to the works underway between Boundary Road and Kaymar Creek, Council was advised that we would review potential habitat enhancement projects in conjunction with the Parks and Recreation and Engineering Departments leading to the submission of recommendations to Council.

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In order to establish priorities and costs, and prepare recommendations for specific sites and programs in the Big Bend area, Council was advised that it is considered necessary to engage a consultant to provide technical assistance. In this regard, Kerr Wood Leidal Associates Ltd. (KWL) has prepared several reports on matters affecting the Big Bend area including the Design Report for Big Bend Dyking and Fisheries Enhancement Program. It is this report which provided the basis for the habitat restoration works east of Boundary Road.

In order to be in a position to advance this matter, Council was advised that it was proposed to expand the terms of reference for the work undertaken to date by Kerr Wood Leidal Associates. Staff was requested to submit a further report regarding this proposed extension.

2.0 **PROPOSED FISH HABITAT RESTORATION PROTECTION PROJECT, BURNABY FRASER FORESHORE PARK**

As noted previously, staff have contacted Fisheries and Oceans to determine if funding could be made available. Several additional meetings have occurred with the result that DFO has confirmed its interest in participating in a second fish habitat restoration project in Burnaby within the estuarine area of the Terminus Park referenced on Figure 1 *attached*.

DFO has stated that this area is a prime candidate for habitat restoration noting that the estuary plays an important role in the life history and survival of many fish and wildlife species. Estuaries provide important rearing habitat for juvenile salmon. Salmon spend several weeks feeding and rearing in the tidal sloughs and channels before they migrate to the ocean. This estuarine feeding and rearing phase is essential to the survival of juvenile salmon. Other fish species use the estuary backwaters for nursing and rearing of juvenile stages. These fish habitat areas are also important for the production of fish food organisms which are washed into the estuary waters during outgoing tidal cycles and are made available to migrating and resident fish. Unfortunately, very little of this backwater type of fish habitat remains in the estuary, especially in areas such as the North Arm of the Fraser River where dyking has eliminated the intertidal sloughs and off-channel areas.

In light of the above, the type of habitat that DFO would propose for a portion of the Burnaby Fraser Foreshore Park site would be the excavation of intertidal sloughs and channels in a portion of the property to restore estuarine processes to this section of the estuary. The site at present contains a land base with elevations ranging from intertidal areas to bottom land forest areas and therefore could be easily restored to estuary wetland. The mix of slough versus treed upland is yet to be decided and will depend on site topography and park requirements.

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In order to be in a position to fully develop a concept, DFO has agreed to undertake a topographical survey of the site as a first step in the proposed restoration project. They also propose, in conjunction with City staff, to identify and map the major tree stands on-site to ensure that the restoration design for the project protects existing stands of trees and shrubs. It is proposed to undertake this survey in January. Once the topographical drawings are completed, City and DFO staff will be in a better position to consider and amalgamate environmental enhancement initiatives in combination with other park objectives including passive recreation space and important trail linkages in the development of Terminus Park.

Contact has also been made with the North Fraser Harbour Commission and they have also expressed a willingness to review potential joint efforts involving the areas under its jurisdiction.

3.0 CONSULTING SERVICES FOR ENVIRONMENTAL/ENHANCEMENT REVIEW

In order to complete the study of Fisheries Enhancement and Environmental Protection for all of the Big Bend Foreshore and adjacent areas, KWL has provided an estimate of its fees. This estimate recognizes the fact that certain work will be undertaken by others (DFO's topographical survey and Glenlyon Business Park's relocation and enhancement of Sussex Creek). KWL has proposed that it provide "overview" assistance to the City and DFO in the development of a staged enhancement of the Terminus Park land.

In this component of the study, any development of fisheries enhancement features must be compatible with the development of the park. Consideration will be given to the development of portions of the park in a natural wetlands condition with trails, water features, rest and observation areas, boardwalks and interpretive sites. It is likely that the fisheries enhancement areas will include backwatered channels designed to suit existing tree and vegetation areas. Small ponds could be included in existing marsh areas to provide rearing opportunities for both fish and water fowl.

In addition to working with City staff and DFO on the foregoing, KWL will provide comments on fisheries enhancement opportunities for the remainder of the Big Bend area. The foreshore area between the CN Railway bridge and Wheaton Street will be inspected to determine if areas require stabilization similar to what was done between Boundary Road and Kaymar Creek.

The Parks and Recreation Commission received a report regarding the subject item on 1994 January 12 and adopted a recommendation endorsing the proposal to study environmental protection and enhancement measures in the Terminus Park.

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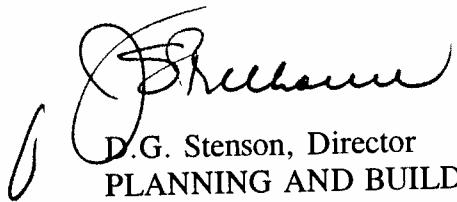
4.0 SOURCE OF FUNDING


The estimated cost of the work outlined herein is \$16,300. It is proposed that this facet of the study be funded under the existing work order (60 32 093) previously approved by Council for the Fraser River Dyking and Fisheries Enhancement Program.

5.0 SUMMARY

Sufficient information is now known to be in a position to proceed with the completion of the study on environmental protection and enhancement measures in the Big Bend area. Of particular significance is the opportunity to participate with the Department of Fisheries and Oceans in preparing a plan for the restoration of fish habitat areas which will be considered within the development objectives for the Terminus Park. As plans develop, there may well be an opportunity for other agencies and corporate sponsors to become involved as well.

It is proposed that technical assistance be provided by Kerr Wood Leidal Associates. Upon completion of the study, the City will be able to establish a program to implement specific projects over time, based on identified priorities. Funding sources can then be established and reflected in the City's Capital Budgeting process. Efforts to match outside funding sources will need to be continued based on the established implementation program.


D.G. Stenson, Director
PLANNING AND BUILDING


PB/jp:db

Attachment

cc: Director Engineering
Director Recreation & Cultural Services

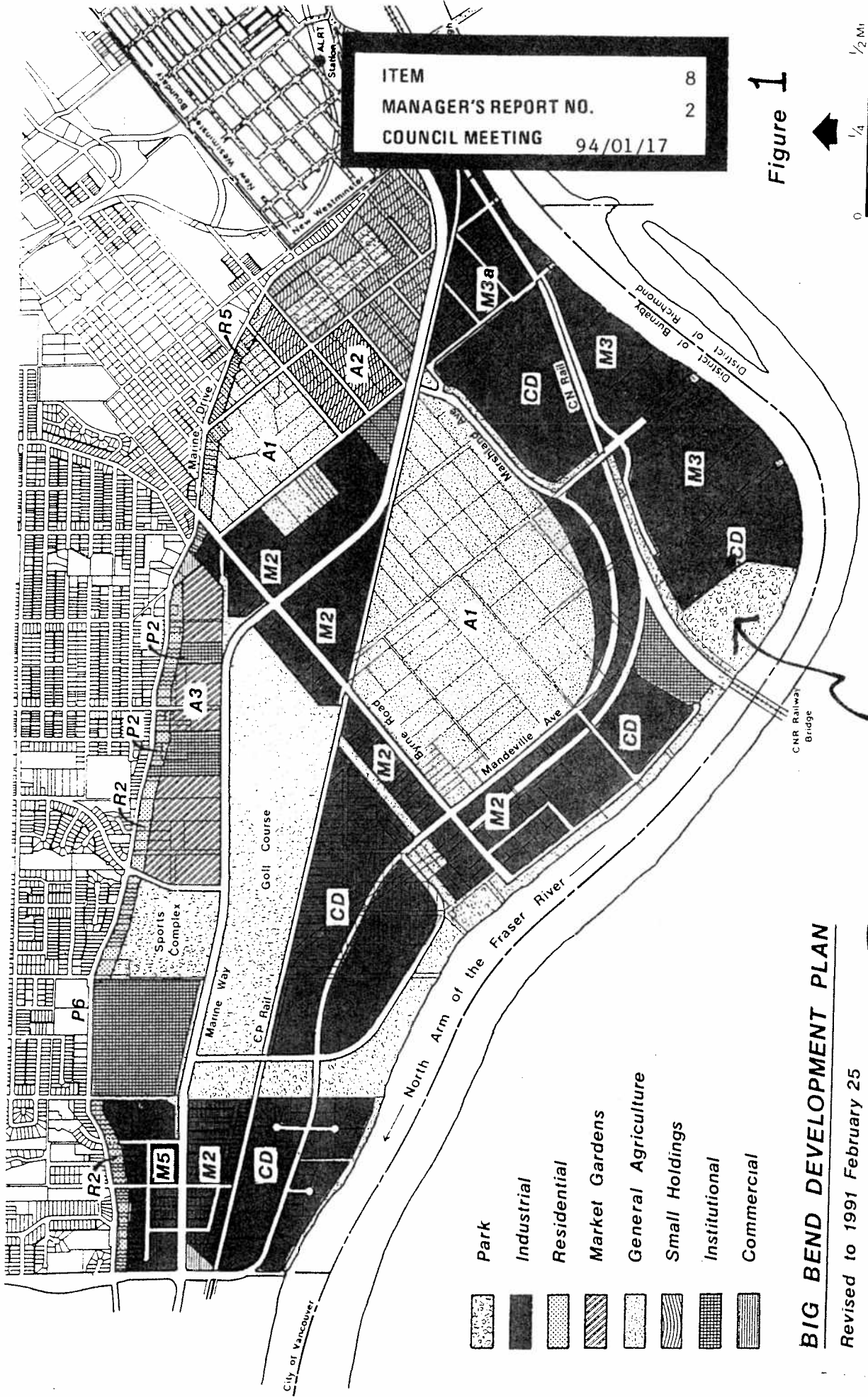


Figure 1



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BURNABY FRASER FORESHORE
TERMINUS PARK

- Park
- Industrial
- Residential
- Market Gardens
- General Agriculture
- Small Holdings
- Institutional
- Commercial

BIG BEND DEVELOPMENT PLAN

Revised to 1991 February 25

