BRITISH COLUMBIA

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September 19, 2007

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District of Mission
8645 Stave Lake Street
Box 20
Mission BC V2V 4L9

Attention: Mike Younie
Environmental Services Manager

Dear Mr. Younie :

Re: SEACOR Final Report: Neighbourhood level environmental work plan 2007 Silverdale Urban Residential Area, Mission BC.

It was originally our understanding that the Environmental Agencies would have an opportunity to review and provide comment on this document prior to its adoption by Mission Council. This request was discussed and agreed to by the District of Mission (DOM) at our meeting on July 18th 2007, when we first learned about the existence of the document. However, at our subsequent meeting on August 22nd 2007, we were informed that it had already received adoption through DOM Council on August 7th 2007. As we were not made aware that this document was going in front of Council for their consideration for adoption on August 7th, the document was adopted in absence of Agency input.

In order to avoid future misunderstanding, we would request that the DOM provides clarification on project timelines, associated milestones or deliverables as needed.

We are pleased to provide the DOM with Provincial advice in support of the vision in the LAN.48 document which sets forth an ideal of sustainability principles for the development of Silverdale Urban Residential Area (SURA). The Neighborhood Level Environmental Work Plan is intended to identify environmentally sensitive areas up front so as to preclude them from development, thus providing the necessary background information required to implement the LAN.48 vision. As the work plan states that it has been developed with continuous improvement in mind, it is in that spirit that we offer the following review comments.

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LAN.48 / Work Plan Inconsistencies

The Work Plan as presented is inconsistent with Appendix 1(i) of LAN.48.

LAN.48:

- "The primary objective of environmental studies at the smaller neighbourhood plan area level, shall be to further identify and protect additional sensitive areas."
- "the overall intent of the environmental studies is to identify environmentally sensitive areas up front so as to preclude them from development"
- "the terms of reference for specific environmental issues such as assessing species and ecosystems at risk shall be based upon the MoE guidelines as identified within the working draft attached as schedule 1 to the neighbourhood plans terms of reference policy"

However, the work plan states that it "deals only with field surveys and data collection, and not specifically with reporting or use of the data to identify environmentally sensitive areas, conservation areas, priority habitat areas for management, for developing guidelines to implement as part of the Neighborhood process, or for adopting Best Management Practices for listed species conservation."

Given the above, we would request clarification as to the purpose of this work plan.

Timeline

As an environmentally responsive development, it will be important to ensure that standards, goals, frameworks, and indicators are adjusted as new ecological insights are gained. It will be necessary to be iterative, adaptive, and responsive to change and uncertainty as systems are complex and can change frequently.

It is very important that *ecosystem* time scales are acknowledged and factored into field studies as well as planning processes. This is a point of concern as it has been suggested in DOM correspondence that the potential consideration of adoption of an Official Community Plan and zoning for Neighborhood One may occur as early as July 2008, less than one year from now. A condensed (political) time will undermine the ability to complete the necessary environmental assessments, and thereby create process inconsistencies between the neighbourhood work plan and the sustainability principles of the LAN.48 document.

ISMP

Stormwater management within relatively undeveloped areas about to, or currently undergoing conversion to urban uses is notoriously challenging to design and implement without compromising the ecological integrity of the receiving environment. From an Integrated Stormwater Management Planning (ISMP) perspective, it is typically optimal to utilize natural boundaries such as topography, catchment basins or watershed.

Figure 1 illustrates that the neighbourhood one study area boundary captures several headwater segments draining to the south, and this has ISMP implications for reaches downstream from that study area. We would appreciate clarification as to how the environmental studies and hydrological studies within the boundaries integrate with the overall ISMP.

ISMP implementation and transportation corridors will require extensive infrastructure that will essentially form a matrix across the affected landscape. Efforts must be made to develop systems that minimize physical and biological stress, staying within the assimilative and regenerative capacities of ecosystems and respecting the habitat requirements of other species. This is a key principle for sustainability. It is important that this principle is captured in the transportation and ISMP terms of reference for neighbourhoods as well as the overall SURA. Linear developments such as Municipal infrastructure have implications for ecosystem integrity well beyond the boundaries of any one neighbourhood.

Transparency

The expectation is that studies will be undertaken as laid out in the various Provincial and Federal assessment methods, unless scientifically-defensible reasons are presented by a qualified professional. Reasons for varying from these methods should be documented with a convincing, factual argument for the adoption of alternative methods, with references to supporting literature. All judgments, assumptions and uncertainties in data and interpretations need to be made clear.

Specific Comments

1.1.2 Centreline Survey / 1.2.2 Database

Instead of a hybrid stream survey method, we recommend utilizing SHIM methods, as it comes with a data dictionary and data management procedures. The SHIM methodology and deliverables are detailed at: http://www.shim.bc.ca/methods/SHIM_Methods.html

If RISC cards are used, the site card data should be transcribed to the Provincial FDIS data capture, storage and reporting system, in addition to DOM's database.

For clarification regarding Provincial inventory and data management, contact Rob Knight in Region 2 office Surrey.

2.3 Methods For Sampling Benthic Communities

We recommend the following changes:

- annual sampling occurs in late August through mid September.
- minimum of 4 replicates per stream for Surber sampling.

- collect samples from reference streams that are not affected by any development

2.4 Methods for Analyzing Benthic Community Data

We have significant concerns with the proposed methods and recommend that the data be assessed to the lowest level by experienced invertebrate taxonomists. For a detailed discussion, please see attached e-mail string.

4.0 Tree Management and Protection Approach

We request clarification as to the technical rationale behind the various limited criteria chosen to identify significant versus insignificant stands. For individual trees, how was 90cm dbh chosen as the threshold for significance? Is it being suggested that individual trees under 90cm dbh have no significance?

We recommend that the Provincial Wildlife Tree Classification System be utilized for wildlife tree assessment (attached). We also recommend that a wildlife tree identification program be implemented (ie: wildlife tree signage/database).

8.0 Update on Hydrology Studies (Water Quantity)

8.1 - This is a critical activity that will advise the ISMP process which will ultimately affect ecological integrity. To avoid ambiguity in this section of the work plan, we recommend that the data collection (RISC standards, standards criteria, sampling methodology, site selection, measurement of discharge, extending the rating curve, deliverables, best practices) discussed in the attached Land and Water BC Hydrological Guidelines for Water Power Projects 2004 be utilized.

The LWBC document is not prescriptive, as it is the responsibility of hydrological consultants to customize both the data collection program and the data analysis methods in order to obtain *quality* hydrological data and *reliable* hydrological estimates. Please note that these guidelines are also utilized by the Water Stewardship Division in consideration of water licensing in Region 2.

10.0 Update on Vegetation and Habitat Studies

10.0 - The work plan does not specify or reference the methods that have been and will be used to provide vegetation and habitat data.

10.1.2 - The rating scale that SEACOR proposes to develop is of great interest to MoE and we would request the opportunity to review the development of that rating scale. We would also advise that not only CDC red and blue listed ecosystems receive the highest ranking, but that rare element occurrences also receive that rank

10.1.3 - We are concerned that ecosystem protection priorities will be based on the practicability of relocation and compensation, contrary to core principles of Sustainability. Compensation should be regarded as a last resort, and is not appropriate for species or ecosystems at risk.

11.0 Update on Wildlife Studies

11.1 - The proposed protocols do not reference current provincial standards.

We recommend that this section also include habitat modeling for Pacific Water Shrew (PWS) following Craig 2006 (attached), and that surveys for rare vascular plants follow the advice found in E-Flora BC (attached). E-Flora BC, electronic atlas of the plants of BC can also be accessed through their website at: http://www.eflora.bc.ca/

12.0 Update on Special Status Species Assessment

This section is of heightened interest and concern to the Province. Please utilize the January 2007 Working Draft of the Provincial Guidelines for Dealing with Development Effects on Species and Ecosystems at Risk on the South Coast of British Columbia (attached).

Reasons for varying from these methods must be documented with a convincing, factual argument for the adoption of alternative methods, with references to supporting literature. All judgments, assumptions and uncertainties in data and interpretations need to be made clear.

13.0 Wildlife Corridor Issues

The function of a wildlife corridor is to connect multiple habitat areas in order to reduce or moderate some of the impacts of habitat fragmentation. It will be important to identify the habitat areas the corridors are designed to connect. It is expected that corridors and habitat areas will extend into existing habitats beyond the SURA boundaries, will include uplands, and not be restricted to riparian and ravine areas only.

16.0 Watershed Management Plan

Please provide clarification as to the intent of Task 16 and a more detailed description of the methods.

20.0 Special Status Species Protection Plan

The methods do reference Provincial BMPs and Species Recovery Plans, however, we recommend that the MOE be consulted when developing these plans.

21.0 Environmental Protection Plan

21.2 - Public access to conservation lands must be appropriate to the sensitivity of the conservation land. Human activities can overload the environment's finite capacity to absorb waste, physically modify or destroy habitats, and use resources more rapidly than they can be regenerated or replaced.

Please note that it is not appropriate to introduce public access in identified Species-at-Risk habitat: these areas should be protected from the public, domestic pets and encroachment.

22.0 Environmental Monitoring Program

The Province is involved in monitoring the health of ecosystems in the urbanizing landscape and is working towards partnership with the DOM in order to facilitate a monitoring program that accomplishes both municipal and provincial objectives.

We recommend that the following additional criteria be included in the monitoring deliverables:

- Stream-flow monitoring including discharge and volume
- Water quality monitoring should be continuous
- Stream biota monitoring methods should be specified (eg. B-IBI or CABIN)
- Wildlife / Rare plant monitoring plans should be species-specific and should involve clear criteria and benchmarks based upon pre-development studies.

Monitoring data should be shared with all interested parties, including but not limited to the DOM, MoE, DFO and the Conservation Data Centre (CDC).

In closing, MoE is committed to using science-based information and knowledge in setting clear environmental standards and performance expectations, and ensuring compliance through monitoring, auditing and public reporting. The Ministry emphasizes shared stewardship and encourages its partners to accept a greater role in environmental stewardship to protect and restore local environments.

Ultimately, the stewardship of British Columbia's natural resources depends upon us all.

Yours truly:

Sylvia Letay
Ecosystems Officer
Environmental Stewardship Division
Ministry of Environment

Cc: Monica Pearson, Ecosystem Biologist – MoE
Scott Barrett, Ecosystem Biologist - MoE
Lisa McDonald, Habitat Biologist – DFO

List of Attachments:

e-mail string: Peer review comments on work plan for Silverdale neighbourhood one – benthic community sampling and analysis.
Wildlife Tree Management in British Columbia
Hydrological Guidelines for Water Power Projects, October 2004
Draft Best Management Practices for Pacific Water Shrew in Urban and Rural Areas
E-Flora protocols for Rare Vascular Plant Surveys
Draft Guidelines for Dealing with Development Effects on Species and Ecosystems at Risk on the South Coast of British Columbia