REGIONAL DISTRICT OF NANAIMO

ELECTORAL AREA PLANNING COMMITTEE
TUESDAY, SEPTEMBER 9, 2008
6:00 PM

(RDN Board Chambers)

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

3-6 Minutes of the regular Electoral Area Planning Committee meeting held July 8, 2008 and the Special Electoral Area Planning Committee meeting held July 22, 2008.

BUSINESS ARISING FROM THE MINUTES

UNFINISHED BUSINESS

PLANNING

DEVELOPMENT PERMIT APPLICATIONS

7-34 Development Permit Application No. 60828 and Request for Cash-in-Lieu of Park Land – Marshall – 6614/6618 Island Highway West – Area 'H'.

35-55 Development Permit Application No. 60830 – Delesalle – 121 Kinkade Road– Area 'G'.

56-66 Development Permit Application No. 60831 and Request for Frontage Relaxation – Whitta – 2545 Edwards Road – Area 'E.'

67-90 Development Permit Application No. 60835 and Request for Frontage Relaxation – Atkinson – Jameson Road – Area 'C.

DEVELOPMENT VARIANCE PERMIT APPLICATIONS

91-97 Development Variance Permit Application No. 90811 – Phillips – 1999 Woodridge – Area 'A'.

98-112 Development Variance Permit Application No. 90812 – Alexander/Christo Kuun Design & Construction Ltd. – 5093 Seaview Drive – Area 'H'.

ADDENDUM

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

IN CAMERA

ADJOURNMENT

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE ELECTORAL AREA PLANNING COMMITTEE
MEETING HELD ON TUESDAY, JULY 8, 2008, AT 6:00 PM
IN THE RDN BOARD CHAMBERS

Present:

Director G. Holme	Chairperson
Director J. Burnett	Electoral Area A
Director M. Young	Electoral Area C
Director J. Stanhope	Electoral Area G
Alternate	
Director D. Heenan	Electoral Area H

Also in Attendance:

M. Pearse	Senior Manager, Corporate Administration
P. Thorkelsson	General Manager, Development Services
N. Tonn	Recording Secretary

CALL TO ORDER

The Chairperson welcomed Alternate Director Heenan to the meeting.

MINUTES

MOVED Director Stanhope, SECONDED Director Heenan, that the minutes of the Electoral Area Planning Committee meeting held June 10, 2008 be adopted.

CARRIED

PLANNING

DEVELOPMENT PERMIT APPLICATIONS

Development Permit Application No. 60630D & Consideration of Park Land – Dave Scott on behalf of BCIMC Realty Corporation & 3536696 Canada Inc. No. A48904 (Fairwinds) – Rockcliffe & Bonnington Drive – Area E.

MOVED Director Burnett, SECONDED Director Stanhope, that Development Permit No. 60630D submitted by Dave Scott, on behalf of BCIMC Realty Corporation, Inc. No. A41891 & 3536696 Canada Inc., Inc. No. A48904 (Fairwinds) for the property legally described as Lot 1, District Lot 78, Nanoose District, Plan VIP83117 and designated within the Sensitive Ecosystem Protection Development Permit Area, be approved subject to the conditions outlined in Schedules No. 1 to 7 of the corresponding staff report, and the notification procedures pursuant to the *Local Government Act*.

CARRIED

MOVED Director Burnett, SECONDED Director Stanhope, that the park land requirement pursuant to section 941 of the *Local Government Act* be calculated from the existing Fairwinds park land surplus.

CARRIED

ADJOURNMENT

MOVED Director Stanhope, SECONDED Director Young, that this meeting terminate.

CARRIED

TIME: 6:05 PM

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CHAIRPERSON

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE SPECIAL ELECTORAL AREA PLANNING COMMITTEE MEETING HELD ON TUESDAY, JULY 22, 2008, AT 6:30 PM IN THE RDN BOARD CHAMBERS

Present:

Director D. Bartram	Chairperson
Director J. Burnett	Electoral Area A
Director M. Young	Electoral Area C
Director G. Holme	Electoral Area E
Director L. Biggemann	Electoral Area F
Director J. Stanhope	Electoral Area G

Also in Attendance:

P. Thorkelsson	General Manager, Development Services
D. Trudeau	Gen. Mgr., Transportation & Solid Waste Services
T. Osborne	General Manager, Recreation & Parks Services
G. Garbutt	Manager of Current Planning
N. Tonn	Recording Secretary

PLANNING

DEVELOPMENT PERMIT APPLICATIONS

Development Variance Permit Application No. 90810 – J & C Biggs (BC Auto Wrecking)/Carolyn Jahnke – Schoolhouse & Balsam Roads – Area A.

Director Burnett noted the following addition to Schedule No. 1 to Development Variance Permit Application No. 90810:

Conditions of Approval:

"3. That following the installation of all landscape materials and final inspection to the satisfaction of the Regional District of Nanaimo, landscape bonding in the amount of 25% of the original deposit shall be held for a period of 12 months from the date of final inspection."

MOVED Director Burnett, SECONDED Director Young, that Development Variance Permit Application No. 90810, submitted by Carolyn Jahnke on behalf of J & C Biggs (BC Auto Wrecking) in conjunction with the development of the parcels legally described as Lots 2 and 6, Both of Section 12, Range 7, Cranberry District, Plan 27070, be approved subject to Schedule Nos. 1 (as amended) and 2 as outlined in the corresponding staff report and to the notification procedure pursuant to the *Local Government Act*.

CARRIED

OTHER

Electoral Area 'A' Official Community Plan Review – Terms of Reference.

MOVED Director Burnett, SECONDED Director Young, that the staff report on the Electoral Area 'A' Official Community Plan Review Terms of Reference be received.

CARRIED

MOVED Director Burnett, SECONDED Director Young, that the Electoral Area 'A' Official Community Plan Review Terms of Reference (Schedule No. 1) be endorsed by the Board.

CARRIED

MOVED Director Burnett, SECONDED Director Young, that the Board adopt a resolution that no applications to amend the Electoral Area 'A' Official Community Plan be accepted while the Official Community Plan is under review except where an application is consistent with the policies of current land use designation under "Electoral Area 'A' Official Community Plan Bylaw No. 1240, 2001".

CARRIED

Electoral Area 'H' Village Planning Project – Terms of Reference.

MOVED Director Stanhope, SECONDED Director Burnett, that the staff report on the Area 'H' Village Planning Project Terms of Reference (Schedule No. 1) be received.

CARRIED

MOVED Director Stanhope, SECONDED Director Burnett, that the Area 'H' Village Planning Project Terms of Reference (Schedule No. 1) be approved.

CARRIED

NEW BUSINESS

Landscaping and Landscape Security.

MOVED Director Burnett, SECONDED Director Young, that staff be directed to prepare a report on the landscaping and provision of landscape security including environmental best practice, security holdback and bylaw amendments for implementation.

CARRIED

ADJOURNMENT

MOVED Director Stanhope, SECONDED Director Biggemann, that this meeting terminate.

CARRIED

TIME: 6:39 PM

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CHAIRPERSON

REGIONAL DISTRICT OF NANAIMO

RDN REPORT		
CAO APPROVAL		
EAP	✓	Sept 9/08
COW		
SEP 02 2008		
RHD		
BOARD		

MEMORANDUM

TO: Geoff Garbutt, Manager, Current Planning **DATE:** August 27, 2008

FROM: Susan Cormie, Senior Planner **FILE:** 3060 30 60828, 3320 20 27349

SUBJECT: **Development Permit Application No. 60828 & Request for Acceptance of Cash-in-Lieu of Park Land**
Steve Marshall & Donna Marshall
Electoral Area 'H' – 6614 / 6618 Island Highway West

PURPOSE

To consider an application for a Development Permit in conjunction with the creation of a 5-lot bare land strata subdivision within the Environmentally Sensitive Features Development Permit Area and to consider a request for acceptance of Cash-In-Lieu of park land on property in Electoral Area 'H'.

BACKGROUND

The parent parcel, legally described as Lot 2, District Lot 85, Newcastle District, Plan 6267 Except That Part in Plan 19744, is located at 6614 / 6618 Island Highway West in Electoral Area 'H' (*see Attachment No. 3 for location of parent parcel).*

Surrounding lands uses include Island Highway No. 19A and residentially zoned parcels to the north, residentially zoned parcels to the east and west, and the E&N Railway Corridor to the south.

The property, which totals 1.67 ha in size, is currently zoned Residential 2 (RS2) and is within Subdivision District 'M' *(2000 m^2 minimum parcel size with community water service connections)* pursuant to the "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987". The applicant is proposing to construct 5 bare land strata lots varying in size from 1600 m^2 to 4277 m^2 with community water service connections from Bowser Water Works District and a common facility septic disposal system *(see Schedule No. 2 for proposed subdivision layout).* The proposed bare land strata lots will be able to meet the parcel averaging provisions of the ***Bare Land Strata Regulation***.

The parent parcel is designated within the following development permit areas pursuant to the Electoral Area 'H' Official Community Plan Bylaw No. 1335, 2003:

- The Environmentally Sensitive Features Development Permit Area, in this case for the protection of the aquifer; and
- The Fish Habitat Protection Development Permit Area for the purposes of protecting riparian areas and for the protection of fish habitat. The subdivision application will meet the exemption provisions of the development permit.

As the applicant is proposing to subdivide the land, a Development Permit concerning protection of the aquifer is required. As part of the application submission requirements, the applicant provided an Aquifer Protection Assessment prepared by a professional engineer.

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist". The applicant has provided an aquifer protection assessment report as part of his application.

The parent parcel, which currently supports a number of buildings and structures, is situated outside of an RDN Building Services Area.

Park Land Requirements

Where an official community plan contains policies and designations respecting the location and type of future parks, the local government may determine whether the owner must provide land or cash or a combination of both. In this case, the OCP specifies that park land dedication may be considered at the time of subdivision subject to meeting the preferred park land criteria set out in the Plan. Pursuant to the ***Local Government Act***, the maximum amount of park land that the Regional District may request for this property is 834 m^2 (5% of the total area).

Park Land Proposal

The applicants are proposing to pay Cash-In-Lieu of dedicating park land.

The Cash-In-Lieu of park land proposal was referred to the Electoral Area 'H' Parks and Open Space Advisory Committee on August 13, 2008 and presented at a Public Information Meeting held on August 26, 2008.

ALTERNATIVES

1. To approve Development Permit Application No. 60828, as submitted, subject to the conditions outlined in Schedules No. 1 and 2 and to accept the offer of Cash-In-Lieu ofpark land.

2. To approve the Development Permit as submitted, subject to the conditions outlined in Schedules No. 1 and 2 and to not accept the offer to provide 5% cash-in-lieu of park land and instead require the applicant to dedicate 5% park land.

3. To deny the Development Permit as submitted and provide staff with further direction and to not accept the offer of Cash-In-Lieu of park land and instead require the applicant to dedicate 5% park land.

DEVELOPMENT IMPLICATIONS

Development Permit / Environmental Implications

With respect to the Development Permit Guidelines for protection of the aquifer, the submitted Aquifer Protection Assessment concludes that the local aquifer (Nile Creek Aquifer) has a low vulnerability in relation to the proposed development as it is well protected from potential sources of surface or shallow ground water contamination. With respect to septic disposal impacts, the report concludes that provided the disposal system is constructed to a Type 3 standard, the zone in which sewerage byproducts are expected should be relatively shallow and no additional measures are expected to be required for protection of the aquifer. In keeping with the Development Permit Guidelines, it is recommended that the Development Permit Conditions of Approval include this septic disposal standard *(see Schedule No. 1 for Conditions of Approval).*

Building Implications

There are a number of existing buildings on the parent parcel. Buildings and structures that do not meet the zoning requirements, whether existing or proposed will be required to be removed or relocated as part of the subdivision review process *(see Schedule No. 1 outlining Conditions of Approval)*.

Site Servicing Implications

The applicant has applied for septic disposal approval to the Central Vancouver Island Health Authority.

The Ministry of Transportation and Infrastructure is responsible for the storm drainage related to this proposal. As part of the subdivision review process, the Regional Approving Officer will examine the storm water management of the parent parcel and impose conditions of development as required.

The applicant's agent has indicated that community water service will be provided by Bowser Waterworks District.

Official Community Plan Implications

The Electoral Area 'H' Official Community Plan Bylaw No. 1335, 2003 contains park land related policies which stipulate that park land is desirable for community recreation, nature preservation, linear connections, greenbelt, and access to the waterfront. In this case, the applicants are offering to pay Cash-In-Lieu of park land. As there are no park land related policies applicable for this application, the proposal for Cash-In-Lieu of park land will meet the preferred criteria set out in the OCP.

Electoral Area 'H' Parks and Open Space Advisory Committee

The Electoral Area 'H' Parks and Open Space Advisory Committee supports the Cash-In-Lieu of park land proposal as submitted *(see Attachment No. 1 for Advisory Committee comments)*.

SUSTAINABILITY IMPLICATIONS

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist" however; there is no sustainability implication related to this proposal.

PUBLIC CONSULTATION IMPLICATIONS

A Public Information Meeting (PIM) was held on August 26, 2008. Three members of the public attended this meeting and no issues were raised with respect to the proposal for cash-in-lieu of parkland. *(see Attachment No. 2 for Minutes of Public Information Meeting)*.

FINANCIAL IMPLICATIONS

The subject property has an assessed land value of $254,000.00 according to the 2008 assessment. The valuation of the property for the proposed 5% Cash-In-Lieu of park land will be based on a certified appraisal of the land at the time of preliminary subdivision approval (PLA). Therefore, it is anticipated that the appraised market value would result in an approximately $12,700.00 contribution (based on 5 %) to Electoral Area 'H' community parks fund.

VOTING

Electoral Area Directors – one vote, except Electoral Area 'B'.

SUMMARY

This is a subdivision application that involves a Development Permit and a request to accept a Cash-In-Lieu of park land dedication for the property located adjacent to the Island Highway No. 19A in Electoral Area 'H'.

The parent property is designated within the Environmentally Sensitive Features Development Permit Area pursuant to the Electoral Area 'H' OCP specifically for the purposes of ensuring protection of the aquifer. The Development Permit, which includes measures for protection of the aquifer, is consistent with the applicable guidelines concerning protection of the aquifer outlined in the Environmentally Sensitive Features Development Permit Area *(see Schedule No. 1 for Conditions of Development).*

The Cash-In-Lieu of park land proposal, as submitted by the applicant, was referred to the Electoral Area 'H' Parks and Open Space Advisory Committee (POSAC). The POSAC indicated that it supports this Cash-In-Lieu of park land as proposed by the applicant.

A Public Information Meeting was held on August 26, 2008 with respect to the Cash-In-Lieu of park land proposal and no issues were raised by the three members of the public in attendance at the meeting.

Given that the Electoral Area 'H' Parks and Open Space Advisory Committee supports the Cash-In-Lieu of park land proposal as proposed by the applicant; there were no park land related issues raised at the Public Information Meeting; the proposal is in keeping with the OCP land use designation, and as the applicable development permit guidelines will be able to be met, staff recommends approval of the development permit subject to the conditions outlined in Schedules No. 1 and 2 of this staff report and to accept Cash-In-Lieu of park land dedication related to the subdivision.

RECOMMENDATIONS

1. That Development Permit Application No. 60828 submitted by Steve Marshall and Donna Marshall, in conjunction with the subdivision of the parcel legally described as Lot 2, District Lot 85, Newcastle District, Plan 6267, except Plan 19744 and designated within the Environmentally Sensitive Features Development Permit Area pursuant to OCP Bylaw No. 1335. 2003, be approved subject to the conditions outlined in Schedules No. 1 and 2 of the corresponding staff report.

2. That the applicant be required to pay Cash-In-Lieu of park land pursuant to section 941 of the ***Local Government Act***.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

COMMENTS:

Schedule No. 1
Development Permit No. 60828
Conditions of Development

The following sets out the conditions of approval in conjunction with Development Permit No. 60828:

1. Subdivision

The subdivision of the lands shall be in substantial compliance with Schedule No. 2 (to be attached to and forming part of this Permit).

2. Hydrological Report / Correspondence

The recommendations as set out in the Aquifer Protection Assessment prepared by Ground Control Geotechnical Engineering Ltd. and dated May 27, 2008 (to be attached to and forming part of this Permit as Schedule No. 3) shall be followed, including the septic disposal system be built to a Type 3 standard. Applicants' professional engineer to provide written certification that the recommendations as set out in these reports have been completed and a Type 3 standard septic disposal system has been installed.

3. Protection of Aquifer / Sediment and Erosion Control

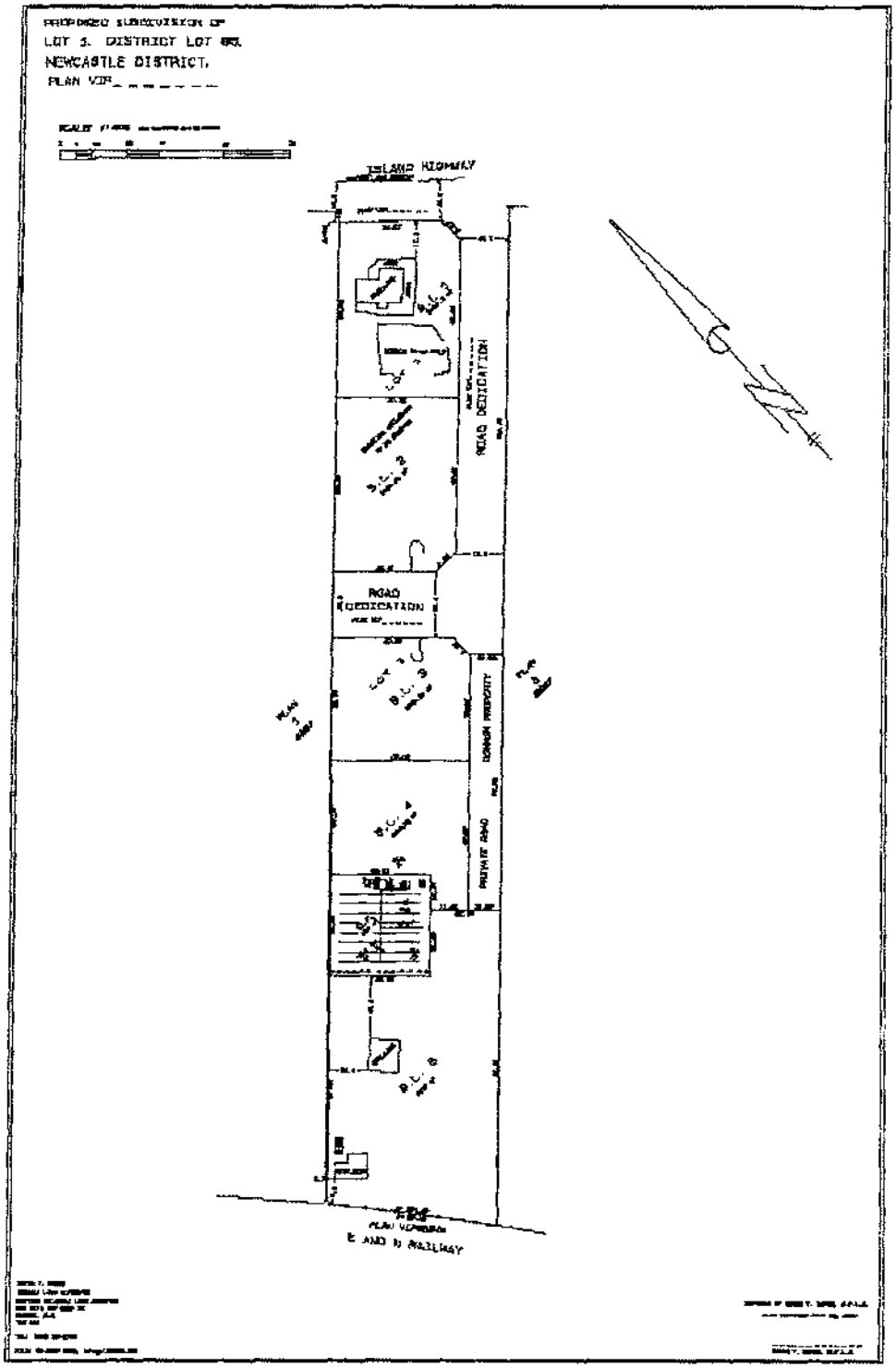
During construction, the following applies:

a. All machines on site must be in good working order and no fuels, lubricants or construction wastes are permitted to enter the environment.
b. A spill kit shall be on-site to prevent the introduction of any fuels in the event of a spill. If a spill occurs, the Provincial Emergency Program must be contacted.
c. As required, sediment and erosion control measures, must be utilized to control sediment during construction and to stabilize the site after construction is complete. These measures must include:
    i. Tarps, sand bags, poly plastic sheeting and/or filter fabric are required to be onsite during works.
    ii. Cover temporary fills or soil stock piles with polyethylene or tarps.
    iii. Exposed soils must be seeded immediately after disturbance. Soil surfaces to be treated should be roughened in advance of seeding.

4. Existing Buildings and Structures

The existing buildings on the parent parcel shall be required to meet current bylaw provisions and be removed in order to ensure compliance with the current bylaw provisions.

Schedule No. 2
Proposed Plan of Subdivision



Schedule No. 3

[illegible]
2761 Lane Road, Nanoose Bay, BC
Phone/Fax (250) 468-1769

File: SM-001
May 27, 2008

Stephen and Donna Marshall
PO Box 30, Site 118
RR1 Bowser, B.C.
V0R 1G0

SUBJECT: AQUIFER PROTECTION ASSESSMENT
PROJECT: PROPOSED SUBDIVISION OF LAND
LOCATION: 6614 WEST ISLAND HIGHWAY, BOWSER, BC
LEGAL DESC: LOT 2, DL 85, VIP6267, NEWCASTLE LAND DISTRICT

Dear Mr. & Ms. Marshall:

1. Introduction

a. As requested, Ground Control Geotechnical Engineering Ltd. (Ground Control) has carried out an assessment of the above site in order to assess potential impacts to the underlying groundwater aquifer in relation to proposed subdivision and new residential development at this site. This report provides a summary of our findings.

2. Purpose of the Assessment

a. We understand that the subject property is to be subdivided to create five residential lots. As the site overlies a known groundwater aquifer, an Environmentally Sensitive Features Development Permit will be required to address Aquifer Protection and we understand that The Regional District of Nanaimo (RDN) has requested an engineer's report regarding potential development-related aquifer impacts as a pre-condition to issuance of the permit.

b. In this regard, our assessment is intended to determine possible impacts on the site's underlying groundwater aquifer that might occur as a result of the proposed development, and to provide recommendations for protection of the aquifer.

3. Details of the Proposed Development

a. We understand that the site is to be subdivided to create five residential lots with individual areas ranging from 2000 m^2 to 3347 m^2. Future buildings will be standard single-family residential homes and out-buildings.

b. The new lots will be accessed by a new road to be constructed off of the Island Highway within a road dedication along the southeast side of the property.

c. We understand that a common septic treatment plant and disposal field will be used for sewerage disposal, receiving effluent from individual septic tanks on each new lot. An interceptor drain and vertical groundwater cutoff membrane will be installed around the new sewerage disposal area to intercept and capture shallow groundwater that would otherwise impair function of the sewerage disposal field. At the time of our site visit, these trenches were dug but the piping and membrane had not yet been installed.

d. Water will be provided to all the new lots by connection to the local municipal drinking water system (Bowser Water Works District), as has been the case for the existing residences on the site.

e. Details of the location of the new lots, the new road, and the common septic field are shown on a Conceptual Layout Plan prepared by Thorconsult Limited, Municipal and Land Development Engineers, of Bowser BC (their Project Number BT08-B, Drawing 1, Revision 0), and the reader is referred to that drawing for complete details. The conceptual drawing will not be reproduced here based on the understanding that the client has this document in-hand. If desired, the client may enclose a copy of the Concept Plan with our report for the reference of regulatory officials.

4. Assessment Methodology

a. For our assessment, aerial photographs for the site (summer 2005) were reviewed to assess visible land features and contour plans were reviewed to assess the local topography.

b. Details of the underlying aquifer were researched from available documents, primarily the *Regional District of Comox-Strathcona Aquifer Classification Mapping Project Report, August 2000* and the online BC Water Resources Atlas web-utility.

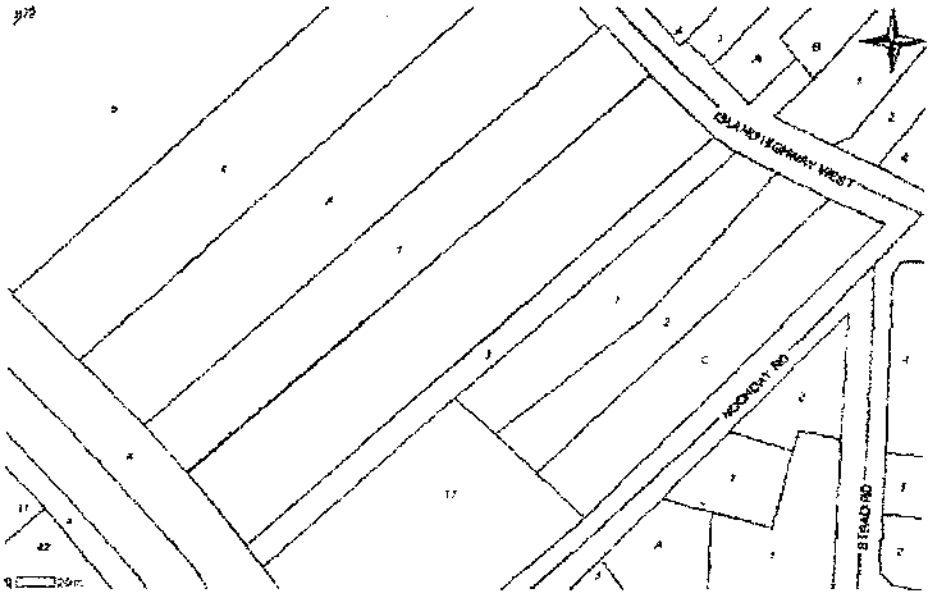
c. Water well drilling records for local area wells were reviewed to determine the nature and depth of soils in the area.

d. A site reconnaissance was carried out with the client on May 22, 2008 to confirm site conditions, to observe surface soil and drainage, to observe the location of important features such as the septic disposal area, and also to review the location of the proposed new lots.

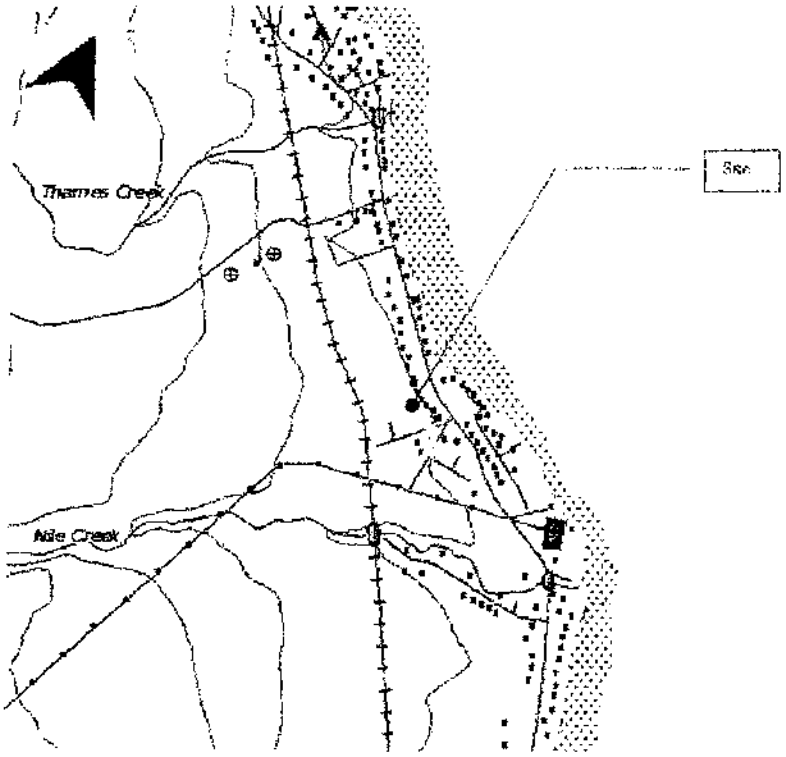
5. Site Conditions

5.1. General

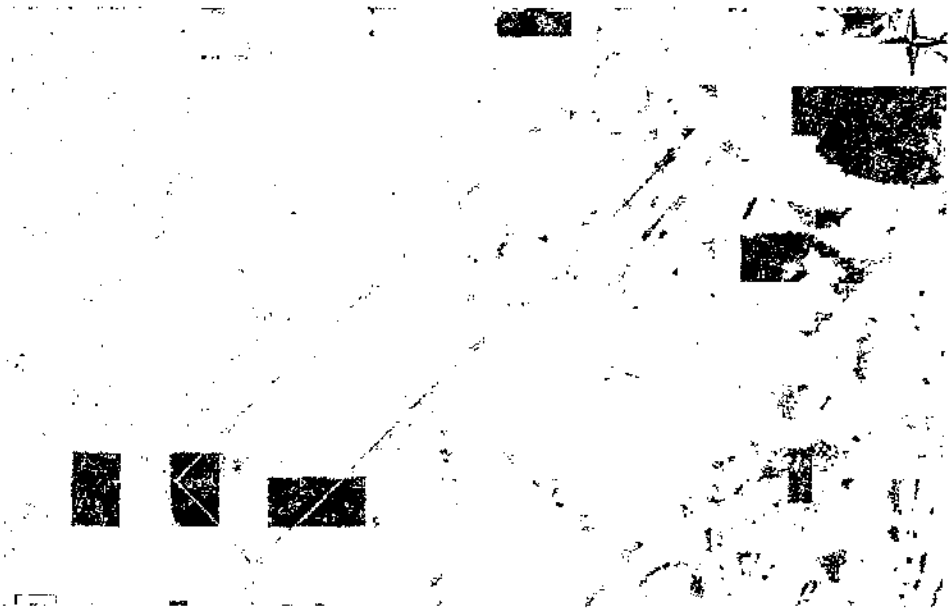
a. The subject site is a relatively long and narrow parcel running in a northeast-southwest direction between the Island Highway and the E&N Railway. The site has an area of about 1.6 hectares (4 acres) and is located at 6614 Island Highway West, within the Bowser town site, as shown on the site location map below (greyed area).



b. Regional topography generally slopes gradually downwards to the northeast as shown in the map and contour plan below, with regional surface drainage towards the Georgia Strait. Groundwater flow directions are expected to follow a similar pattern.



c. An aerial photograph of the site is provided below for the reader's reference in the reading of this report. The property lines shown (in yellow) are approximate.

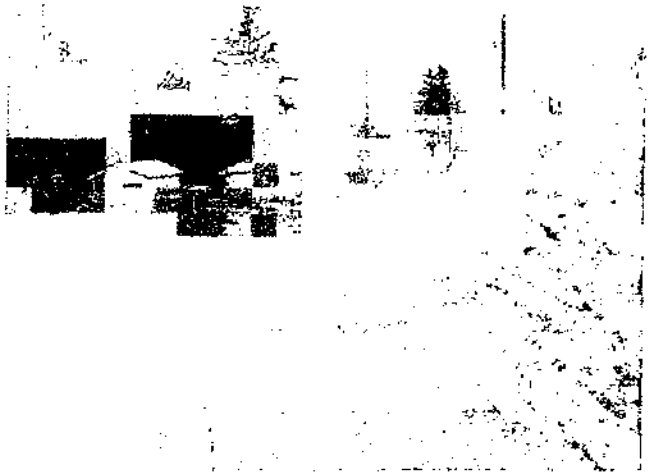


d. The site is currently developed with two small dwellings and three garage-style buildings. Sewerage from the two existing dwellings is disposed of in an underground infiltration field. This field will be decommissioned as part of the redevelopment of the site, in favour of the new system previously described.

e. A shallow water well about 13' deep is believed to have existed within the north portion of the property, but it has reportedly been backfilled since the property became serviced with municipal water.

f. The site has been largely cleared of trees. Vegetation primarily consists of grasses and other low-growing plants. A gravel laneway provides access.

g. Site photos showing the general appearance of the site are provided below, showing the approximate northeast two-thirds of the site in the upper photo and the approximate southwest third of the site in the lower photo.



h. The general topography of the site matches that of the regional topography, sloping gently downward towards the northeast. No significant watercourses were observed on the site.

5.2. Soil and Groundwater Conditions

a. Shallow soil conditions were visible within the interceptor trenches recently dug around the future sewerage disposal field. A surface layer of poorly-graded, orangey-brown, compact, gravelly sand was present to a depth of about one to one and a half metres. These surface sands are interpreted to be part of the Capilano Sediments, which are marine, fluvial, and lacustrine deposits related to former higher sea, river, and lake units.

b. Underlying this layer, we observed dense, grey-brown, silty sand. . These dense underlying soils are interpreted to be glacial deposits (a.k.a. Till, a.k.a. hardpan) of the Vashon Drift, constituting the uppermost drift sheet of the region.

c. Groundwater was noted to be 'perched' on the surface of the glacial Vashon Drift soils, indicating that these soils are relatively impervious and limit the downward migration of groundwater.

d. Deeper soil conditions in the local area were assessed by referencing well logs available on-line through the BC Water Resources Atlas. Well information in the immediate vicinity is somewhat limited as only shallow hand-dug wells are reported. These well logs generally confirm the presence of the glacial soils as the predominant soil underlying the local area.

e. Records for three deep wells were available for locations within 0.6 km of the site and at widely separated locations encompassing the local area. Logs for these wells confirm the presence of the Vashon Drift soils over a wide areal extent and to significant depths. Well 12792 shows these soils to a depth exceeding 40' (full depth of the 'till' was not discovered), while wells 12762 and 14196 indicate a depth of these soils of 125'.

f. A map of the well locations in the area is attached to this report. The three significant deep wells are identified by their well tag ID number. Printouts of the well logs for these three wells are also attached at the end of this report.

Protection of Aquifer, Proposed Subdivision of Land
File: SM-001
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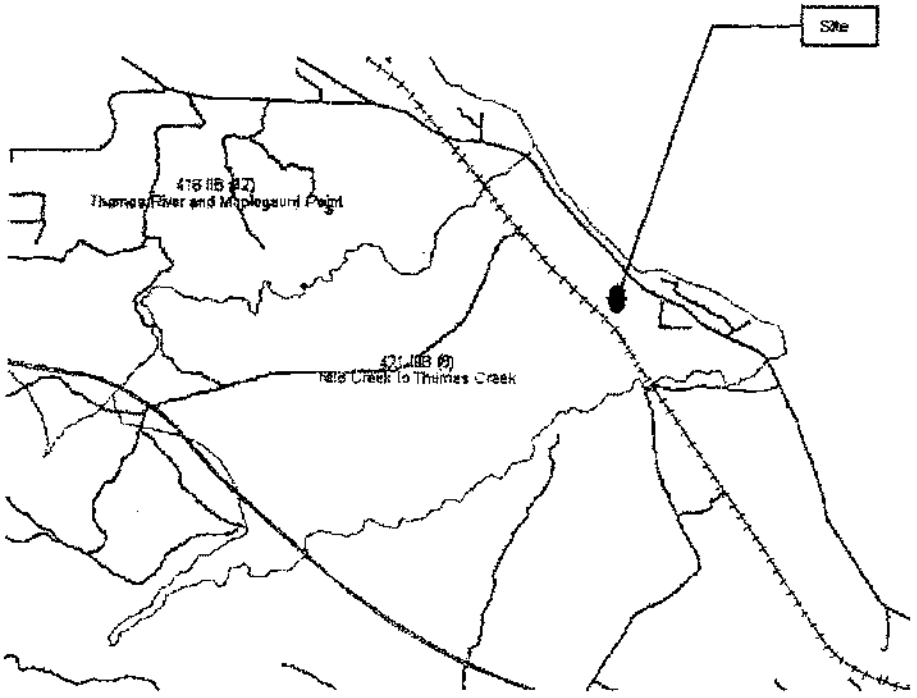
5.3. Aquifer Information.

a. Available groundwater and environmental features maps and reports identify the underlying aquifer as Aquifer 421, referred to as the Nash Creek Aquifer (*Regional District of Comox-Strathcona Aquifer Classification Mapping Project*) or as the Nile Creek to Thames Creek Aquifer (*BCGS Database Map on-line, shown below*).



b. This aquifer is classified IIIB on both the BCGS map above and the BC Water Resources Atlas web-utility, but is classified IIIC by the Comox-Strathcona Mapping Project report. Classification III indicates that the aquifer is lightly developed in relation to its capacity, meaning demand is light relative to water availability and additional development should not be a problem, provided productivity can meet the demand. Classification B or C indicates a moderate to low vulnerability to contamination.

Protection of Aquifer, Proposed Subdivision of Land
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c. The following information regarding the aquifer is repeated from the *Regional District of Comox-Strathcona Aquifer Classification Mapping Project Report, August 2000, Section 4.15.*

The aquifer delineated between Nile Creek and Thames Creek is found in a Quadra deposit that measures approximately 6.2 km². This aquifer marks the southern extent of the study area, lying outside the RDCS.

This Quadra Sediment is not well documented here. MELP (Ministry of Environment, Lands, and Parks, Groundwater Section) *has seven water well records for this hydrologic unit, yet the data quality is poor. Only one record contained yield and lithographic data, noting a withdrawal rate of 0.02 L/s, indicating low productivity. The thickness of the overburden was also recorded, depicting a layer of Vashon Till measuring 7.6 metres.*

The delineation of this aquifer was based on seven groundwater well records, surficial geology (Fyles, 1959 and 1963) and a field survey. It is known that Quadra Sediments are present here, yet the low level of development and incomplete well logs made the classification difficult.

d. The indicated thickness of Vashon Drift (a.k.a. Vashon Till) of 7.6m (which is about 25') provided in the quotation above is less than has been indicated by our well record review discussed earlier. Our well log review indicates the Vashon Drift soils typically extend to at least 40' and often up to 125'. The reason for this discrepancy is unknown, and in our opinion, the depth of Vashon Drift soils at the subject site is likely much greater than indicated in the quote above. Nevertheless, the Comox-Strathcona report does confirm the presence of a significant layer of dense glacial soils between the ground surface and the aquifer below

6. Conclusions & Recommendations

6.1. General

a. Based on the information obtained, we conclude that the local aquifer has a low vulnerability in relation to proposed development of the subject site. The aquifer is well protected from potential sources of surface or shallow ground contamination by a significant depth of dense glacially-deposited overburden soils that function as an aquitard, effectively isolating the underlying aquifer from surface effects.

b. Surface water and shallow groundwater appears to be perched within the sandy soil veneer within a few feet of the ground surface, and does not interact with the aquifer far below due to the effective hydraulic separation imposed by the Vashon Drift overburden soils. The surface waters flow within a separate shallow regime above the Vashon Drift, and any surface contamination will be confined to this shallow zone and should have no hydraulic path or access to the aquifer.

c. To our knowledge there are no apparent breaches of this layer of overburden soils that protect the aquifer (e.g. there are no deep water wells penetrating the overburden at this site, or within about 0.6 km of the site. The site is not considered to be a recharge area for the Nile Creek Aquifer, nor are any such recharge areas expected down-gradient of the site.

d. To our knowledge water services to all nearby properties are provided by municipal (piped) services sourced from municipal wells far removed from the site, and the subject aquifer underlying the site is not believed to be used as drinking water supply by any local properties. Nevertheless, this should not reduce the requirements to adequately protect the subject aquifer. Aquifer protection is further discussed below.

Protection of Aquifer, Proposed Subdivision of Land
File: SM-001
May 27, 2008
Page 12 of 14

6.2. Potential Impacts to Aquifer Quality

a. Potential sources of aquifer contamination associated with the proposed development will primarily be those contaminants associated with sewerage disposal. Phosphorous, nitrogen, and pathogenic materials are the principal constituents of concern in sewerage effluent.

b. Sewerage disposal in this manner is a common local practice, utilizing natural attenuation, filtration, and biological action to treat and remove contaminants. Sewerage disposal has been used historically at this site with no reported impacts to the aquifer that we are aware of. The increased volume of sewerage associated with an increased number of future dwellings on the site will be somewhat offset by the upgrade from the current Type 1 disposal system (septic tank and disposal field) to a Type 3 disposal system (treatment plants with common disposal field). Assuming installation of the disposal system meets appropriate regulatory standards, the zone in which sewerage byproducts are expected to be significantly present should be relatively shallow and local in extent.

c. As with any site, there is also a potential for contamination due to the activities of site uses, such as spillage of lubricants and fuels from vehicles, fertilizers and pesticides used on landscaping, and other common household chemicals associated with residential land uses. As the quantities of these items are typically quite limited in a residential setting, the risk of significant spills of harmful products occurring at this site is considered low.

d. Based on the limited potential sources of aquifer contamination, and based the significant depth of low permeability overburden soils separating these contaminants from the aquifer, the proposed development is not considered to represent a significant risk to the Nile Creek Aquifer.

6.3. Potential Impacts to Aquifer Quantity

a. The proposed development will be supplied by the municipal water system supplied from municipal wells located within a separate aquifer well away from the site. As such, the development will not remove water from the subject aquifer below the site.

b. Neither is the site a recharge area for the underlying aquifer, so changes to on-site infiltration patterns caused by impervious surfaces (such as roofs and roads) are expected to have no significant effect on the amount of water within the aquifer below.

c. Based on these considerations, development of the site should not have any significant adverse effect on the quantity of water available within the Nile Creek Aquifer.

6.4. Mitigation and Protection of the Aquifer

a. Adequate protection of the aquifer is naturally provided by the beneficial presence of thick natural deposits of low-permeability glacial soils which act to hydraulically separate the shallow surface groundwater regime from the deeper underlying aquifer.

b. Based on the natural conditions, the proposed low risks associated with the proposed residential site use, and provided that new sewerage disposal systems meet applicable regulatory requirements, no unusual measures are expected to be required for the adequate protection of the Nile Creek Aquifer (Aquifer 421) in connection with the proposed development.

7. Acknowledgements

a. Ground Control Geotechnical Engineering Ltd. acknowledges that this report may be requested by Approving Officers and Building Inspectors as a precondition to the issuance of a development or building permit and that this report, or any conditions contained in this report, may be included in a restrictive covenant filed against the title to the subject property.

b. It is acknowledged that the Approving Officers and Building Officials may rely on this report when making a decision on application for the development of the land.

c. We acknowledge that this report has been prepared solely for, and at the expense of, the owner of the subject land.

8. Limitations

a. The conclusions and recommendations submitted in this report are based a limited number of data sources, as described above. If unanticipated conditions are discovered during development and construction, our office should be contacted immediately to allow reassessment of the recommendations provided.

9. Closure

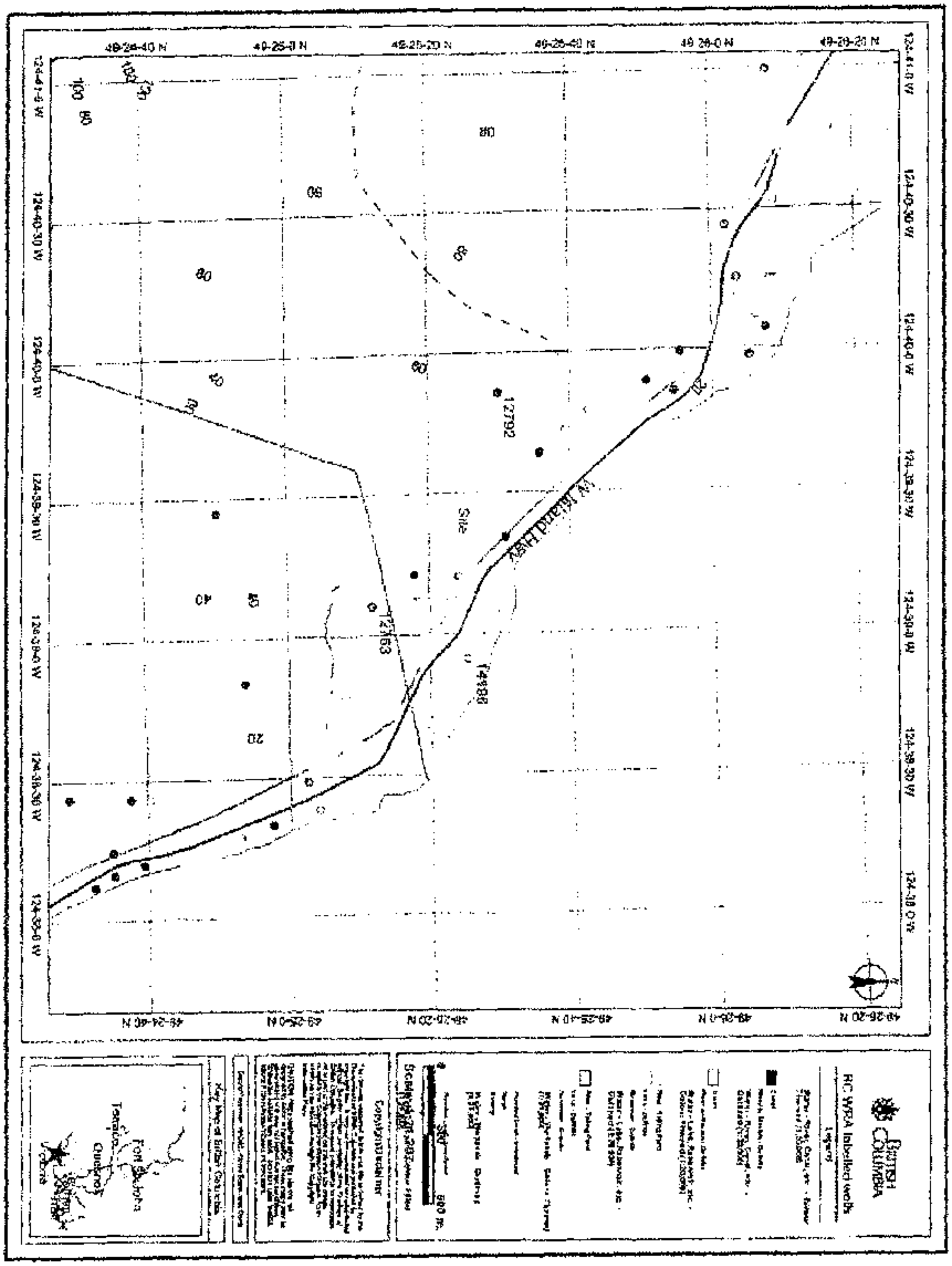
a. Ground Control Geotechnical Engineering Ltd. appreciates the opportunity to be of service on this project. If you have any comments, or additional requirements at this time, please contact us at your convenience.

Respectfully Submitted,
Ground Control Geotechnical Engineering Ltd.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. W. McKINLEY
28500

Richard McKinley, P. Eng.
Geotechnical Engineer

Attachments:
- Map of reported water-well locations (one page)
- Well logs for wells 12763, 12792, and 14196 (four pages)


BC WRA labelled wells
Legend
Key Map of British Columbia
Site
W Island Hwy
12792
12163
14988
49-24-40 N
49-25-0 N
49-25-20 N
49-25-40 N
49-26-0 N
49-26-20 N
124-38-0 W
124-38-30 W
124-39-0 W
124-39-30 W
124-40-0 W
124-40-30 W
124-41-0 W

BRITISH COLUMBIA

Report 1 - Detailed Well Record

Well Tag Number: 12763

Owner: JAMESON

Address:

Area:

WELL LOCATION:
NEWCASTLE Land District
District Lot: Plan: Lot: 22
Township: Section: Range:
Indian Reserve: Meridian: Block:
Quarter:
Island:
BCGS Number (NAD 27): 092F047214 Well: 4

Class of Well:
Subclass of Well:
Orientation of Well:
Status of Well: New
Well Use: Unknown Well Use
Observation Well Number:
Observation Well Status:
Construction Method: Unknown Constru
Diameter: 0.0 inches
Casing drive shoe:
Well Depth: 165 feet
Elevation: 0 feet (ASL)
Final Casing Stick Up: inches
Well Cap Type:
Bedrock Depth: 160 feet
Lithology Info Flag:
Pile Info Flag:
Sieve Info Flag:
Screen Info Flag:

Site Info Details:
Other Info Flag:
Other Info Details:

Construction Date: 1950-01-01 00:00:00.0

Driller: Unknown
Well Identification Plate Number:
Plate Attached By:
Where Plate Attached:

PRODUCTION DATA AT TIME OF DRILLING:
Well Yield: 0 (Driller's Estimate)
Development Method:
Pump Test Info Flag:
Artesian Flow:
Artesian Pressure (ft):
Static Level:

WATER QUALITY:
Character:
Colour:
Odour:
Well Disinfected: N
EMS ID:
Water Chemistry Info Flag:
Field Chemistry Info Flag:
Site Info (SEAM):

Water Utility:
Water Supply System Name:
Water Supply System Well Name:

SURFACE SEAL:
Flag:
Material:
Method:
Depth (ft):
Thickness (in):

WELL CLOSURE INFORMATION:
Reason For Closure:
Method of Closure:
Closure Sealant Material:
Closure Backfill Material:
Details of Closure:

Screen from	to feet	Type	Slot Size

GENERAL REMARKS:

LITHOLOGY INFORMATION:

From	0 to	8 Ft.	Sand and gravel
From	8 to	69 Ft.	Sandy blue clay
From	69 to	110 Ft.	Hard blue clay
From	110 to	125 Ft.	Blue clay with gravel

From	125	to	128 Ft.	Fine sand
From	128	to	140 Ft.	Sandy blue clay
From	140	to	160 Ft.	Coarse sand, silt, some gravel
From	160	to	165 Ft.	Sandy shale

- Return to Main

Information Disclaimer
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BRITISH COLUMBIA

Report 1 - Detailed Well Record

Well Tag Number: 12792

Owner: BOULDER SHORES

Address:

Area:

WELL LOCATION:
NEWCASTLE Land District
District Lot: Plan: Lot:
Township: Section: 85 Range:
Indian Reserve: Meridian: Block:
Quarter:
Island:
BCGS Number (NAD 27): 092F047232 Well: 10

Class of Well:
Subclass of Well:
Orientation of Well:
Status of Well: New
Well Use: Unknown Well Use
Observation Well Number:
Observation Well Status:
Construction Method: Dug
Diameter: 0.0 inches
Casing drive shoe:
Well Depth: 40 feet
Elevation: 0 feet (ASL)
Final Casing Stick Up: inches
Well Cap Type:
Bedrock Depth: feet
Lithology Info Flag:
File Info Flag:
Sieve Info Flag:
Screen Info Flag:

Site Info Details:
Other Info Flag:
Other Info Details:

Construction Date: 1950-01-01 00:00:00.0

Driller: Unknown
Well Identification Plate Number:
Plate Attached By:
Where Plate Attached:

PRODUCTION DATA AT TIME OF DRILLING:
Well Yield: 0 (Driller's Estimate)
Development Method:
Pump Test Info Flag:
Artesian Flow:
Artesian Pressure (ft):
Static Level:

WATER QUALITY:
Character:
Colour:
Odour:
Well Disinfected: N
EMS ID:
Water Chemistry Info Flag:
Field Chemistry Info Flag:
Site Info (SEAM):

Water Utility:
Water Supply System Name:
Water Supply System Well Name:

SURFACE SEAL:
Flag:
Material:
Method:
Depth (ft):
Thickness (in):

WELL CLOSURE INFORMATION:
Reason For Closure:
Method of Closure:
Closure Sealant Material:
Closure Backfill Material:
Details of Closure:

Screen from	to feet	Type	Slot Size

GENERAL REMARKS:

LITHOLOGY INFORMATION:
From 0 to 4 ft. Gravel
From 4 to 40 ft. Till with sand and gravel lenses

- Return to Main

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BRITISH COLUMBIA

Report 1 - Detailed Well Record

Well Tag Number: 14196	Construction Date: 1954-01-01 00:00:00.0
Owner: JAMIESON CONSTRUCTIO	Driller: Pacific Water Wells
Address:	Well Identification Plate Number:
	Plate Attached By:
Area:	Where Plate Attached:
	PRODUCTION DATA AT TIME OF DRILLING:
WELL LOCATION:	Well Yield: 15 (Driller's Estimate: Gallons per Hour (U.S /Imperial:
NEWCASTLE Land District	Development Method:
District Lot: Plan: Lot: 22	Pump Test Info Flag: N
Township: Section: Range:	Artesian Flow: 01
Indian Reserve: Meridian: Block:	Artesian Pressure (ft):
Quarter:	Static Level:
Island:	
BCGS Number (NAD 27): 092F047223 Well: 5	WATER QUALITY:
	Character:
Class of Well:	Colour:
Subclass of Well:	Odour:
Orientation of Well:	Well Disinfected: N
Status of Well: New	DNS ID:
Well Use: Unknown Well Use	Water Chemistry Info Flag:
Observation Well Number:	Field Chemistry Info Flag:
Observation Well Status:	Site Info (SEAM):
Construction Method: Drilled	
Diameter: 6.0 inches	Water Utility:
Casing drive shoe:	Water Supply System Name:
Well Depth: 248 feet	Water Supply System Well Name:
Elevation: 0 feet (ASL)	
Final Casing Stick Up: inches	SURFACE SEAL:
Well Cap Type:	Flag: N
Bedrock Depth: 160 feet	Material:
Lithology Info Flag: N	Method:
Site Info Flag: N	Depth (ft):
Sieve Info Flag: N	Thickness (in):
Screen Info Flag: N	
	WELL CLOSURE INFORMATION:
Site Info Details:	Reason For Closure:
Other Info Flag:	Method of Closure:
Other Info Details:	Closure Sealant Material:
	Closure Backfill Material:
	Details of Closure:

Screen From	To Feet	Type	Slot Size

GENERAL REMARKS:
YIELD 15 GPM SCREEN WAS SET 155 TO 160

LITHOLOGY INFORMATION:

From	0 to	0 Ft.	At 150' - 2 GPM - salty
From	0 to	0 Ft.	192' - 0.7 GPM
From	0 to	8 Ft.	Sand and gravel
From	8 to	25 Ft.	Sandy blue clay
From	25 to	69 Ft.	Sandy blue clay, some boulders
From	69 to	110 Ft.	Hard blue clay
From	110 to	125 Ft.	Blue clay with gravel
From	125 to	128 Ft.	Fine sand, some water
From	128 to	149 Ft.	Sandy blue clay
From	149 to	150 Ft.	Coarse sand, silt and some gravel
From	150 to	165 Ft.	Sandy shale
From	165 to	234 Ft.	Shaly sandstone
From	234 to	248 Ft.	Hard sandstone
From	3 to	4 Ft.	
From	0 to	0 Ft.	Note: screen was removed and hole gone
From	0 to	2 Ft.	used as well water was coming in.

- Return to Main

Information Disclaimer
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Attachment No. 1

EXCERPT

MINUTES OF THE ELECTORAL AREA 'H'
PARKS AND OPEN SPACE ADVISORY COMMITTEE MEETING
HELD AT LIGHTHOUSE COMMUNITY CENTRE
AUGUST 13, 2008, AT 7:30PM

Attendance: Michael Procter, Chair
Patty Biro, Secretary
David Bartram, Director, RDN Board
Valerie Weismiller
Brenda Wilson
Marguerite Little

Staff: Jonathan Lobb, Parks Operations Coordinator

Regrets: Barry Ellis

9.1 **Cash In-Lieu of Park Land Proposal**

MOVED D. Bartram, SECONDED B. Wilson, that the Electoral Area 'H' Parks and Open Space Advisory Committee support the Cash In-Lieu of Park Land Proposal in conjunction with the Subdivision Application for Lot 2, District Lot 85, Newcastle Land District Plan 6267, Except Plan 19744 6614/6618 Island Highway West, Electoral Area 'H'.

CARRIED

Attachment No. 2

MINUTES OF A PUBLIC INFORMATION MEETING

Held at the Lighthouse Community Centre
240 Lion's Way, Qualicum Bay on August 26, 2008 at 4:00 pm
Subdivision Application No. 27349
For the property legally described as Lot 2, District Lot 85, Newcastle District, Plan 6267 Except That Part in Plan 19744 and located at 6614 / 6618 Island Highway West in Electoral Area 'H'

Note: these minutes are not a verbatim recording of the proceedings, but are intended to summarize the comments of those in attendance at the Public Information Meeting.

Present:
Public in attendance: approximately 3 persons

For the Applicant: Steve Marshall, Applicant

For the RDN: Chair: Director David Bartram
Chair Electoral Area H POSAC, Michael Proctor
Geoff Garbutt, Manager of Current Planning
Angela Mays, Planning Technologist

The Chair opened the meeting at 4:00 pm and followed with greetings to the public and an introduction of the staff, the Chair of the Electoral Area H POSAC and the applicant.

The Chair stated the purpose of the Public Information Meeting (PIM) and asked the Manager to provide an overview of the statutory provisions as it relates to park land provision and an overview of the proposal for cash-in-lieu of parkland. The Manager indicated that the proposal for would result in an approximately $12,700.00 contribution (based on 5 %) to Electoral Area 'H' community parks fund.

The Chair then asked the applicant to give a summary of the subdivision and cash-in-lieu of parkland proposal.

The Applicant spoke about his subdivision and indicated that the provision of small amount of park in the subdivision was not appropriate and that the cash-in-lieu of parkland would be more appropriate.

The Chair then invited comments and questions from the audience with respect to the park land proposal.

Doug Prizeman, 6670 Island Highway West, commented that he was interested in development in the area and had no issues with the proposal for cash-in-lieu of parkland.

The Chair asked if there were any further submissions with respect to the park land proposal.

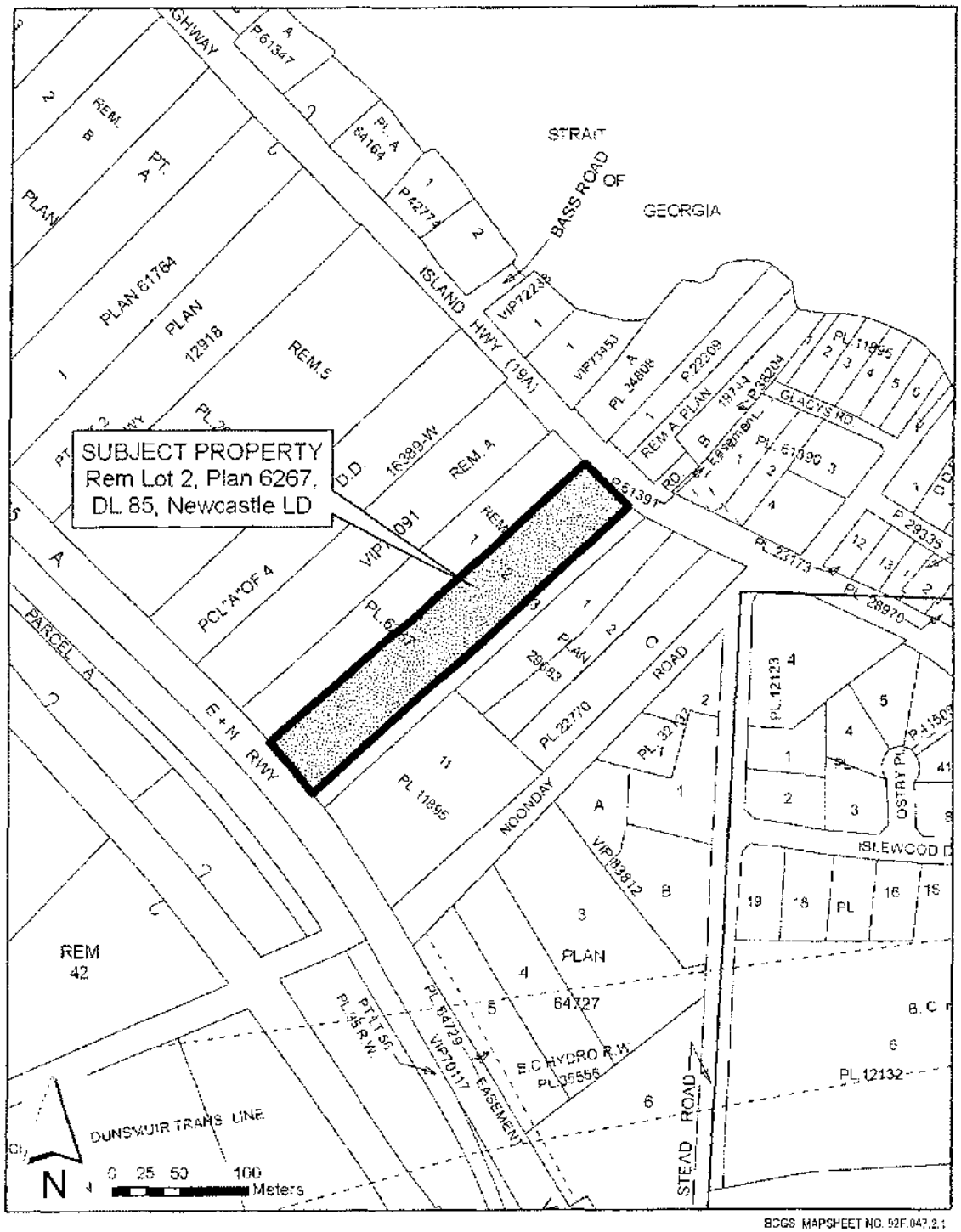
There being none, the Chair thanked those in attendance, indicated that this matter would be considered along with a Development Permit for the proposed subdivision at the Electoral Area Planning Committee on September 9, 2008 at 6:00 pm at the RDN Office in Nanaimo and closed the Public Information Meeting.

The meeting concluded at 4:25 pm.

Original Signed

Geoff Garbutt
Recording Secretary

Attachment No. 3
Development Permit Application No. 60828
Request for Cash-In-Lieu of Park Land
Location of Subject Property



REGIONAL DISTRICT OF NANAIMO

RDN REPORT		
CAO APPROVAL		
EAP	✓	Sept 9 '08
COW		
SEP 0 2 2008		
RHD		
BOARD		

MEMORANDUM

TO: Geoff Garbutt
Manager of Current Planning

DATE: August 28, 2008

FROM: Kristy Marks
Planner

FILE: 3060 30 60830

SUBJECT: **Development Permit with Variance Application No. 60830 – Delesalle**
Lot 1, District Lot 10, Newcastle District, Plan 22939 - Electoral Area 'G'
RDN Map Ref. No. 92F.038.4.1 – Folio No. 769.011552.025

PURPOSE

To consider an application for a Development Permit with Variance to allow the construction of a single residential dwelling and attached garage with a variance to the height on a property located at 121 Kinkade Road.

BACKGROUND

The subject property, legally described as Lot 1, District Lot 10, Newcastle District, Plan 22939, is a coastal property located on Kinkade Road in Electoral Area 'G' (*See Attachment No. 1 for location of subject property*). A residential dwelling and tennis court that previously occupied the property have recently been demolished. The parcel slopes gently to the south and consists of a lawn and cleared area as well as trees and grass adjacent to the sea. The subject property is bordered by the sea to the northeast, developed residential parcels to the southeast and Kinkade Road to the west.

The subject property is designated within the Environmentally Sensitive Areas, Hazard Lands and Fish Habitat Protection Development Permit Areas (DPA) pursuant to "Regional District of Nanaimo French Creek Official Community Plan Bylaw No. 1007, 1996". The applicant has completed the Riparian Areas Regulation Property Declaration Form and as there are no streams on or within 30 metres of the subject property, the application is exempt from the requirements of the Fish Habitat Protection DPA. This application was made prior to the adoption of "Regional District of Nanaimo Electoral Area 'G' Official Community Plan Bylaw No. 1540, 2008" and is therefore exempt from any new Development Permit requirements.

The property is approximately 0.26 hectares in size and is currently zoned Residential 2 (RS2) pursuant to "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987". The applicant is requesting approval to construct a 363 m^2 residential dwelling and attached garage with a height variance. As the property is located adjacent to the sea and within the Little Qualicum River Floodplain a minimum floor elevation of 3.8 metres Geodetic Survey of Canada (GSC) is required. As the existing ground elevation at the proposed building site is approximately 2.5 metres to 2.9 metres the dwelling unit must be raised approximately 0.9 metres in order to meet the minimum floodplain elevation.

Requested Variance Summary *- Section 3.4.62 Dwelling Unit Height*

Maximum Dwelling Unit Height	Proposed Height	Requested Variance
8.0 metres	8.81 metres	0.81 metres

ALTERNATIVES

1. To approve Development Permit with Variance application No. 60830 subject to the conditions outlined in Schedules No. 1-3 and the notification requirements of the ***Local Government Act***.

2. To deny the Development Permit with Variance application as submitted.

POLICY B1.5

Regional District of Nanaimo Development Variance Permit Application Policy B1.5 Evaluation provides staff with guidelines for reviewing and evaluating Development Variance Permit applications. The policy requires that the potential impacts of the variance are warranted by the need for the variance.

The applicants have provided the following justifications for the requested height variance:

- The proposed residential dwelling and attached garage would be under height if they were not required to meet the minimum floodplain elevation;
- The applicant has submitted a Geotechnical Hazards Assessment in order to ensure that the property is safe and suitable for the intended use;
- There are no views or privacy impacts related to the requested setback variance as this property is lower than the surrounding parcels.

LAND USE AND DEVELOPMENT IMPLICATIONS

As outlined above, the applicant is requesting approval for a height variance to allow the redevelopment of a residential property at 121 Kinkade Road. The location of the proposed single residential dwelling and attached garage are outlined on *Schedule No. 2*. Building elevations for the proposed development are outlined on *Schedule No. 3*.

In keeping with the Hazard Lands DPA the applicant has submitted a Geotechnical Hazards Assessment prepared by Ground Control Geotechnical Engineering Ltd dated June 10, 2008 which addresses the proposed dwelling unit and attached garage (*Schedule No. 4*). This report states that the proposed development is considered safe and suitable for the use intended. As per board policy, staff recommends that the applicant be required to register a section 219 covenant that registers the Geotechnical Report prepared by Ground Control Geotechnical Engineering Ltd., and includes a save harmless clause that releases the Regional District of Nanaimo from all losses and damages as a result of erosion and/or landslide.

Given the location of the subject property in relation to adjacent developed parcels and that the applicant is proposing to locate the dwelling and attached garage in the general location of the previous dwelling, staff do not anticipate that the requested variance will impede the views of adjacent property owners. In addition the applicant is proposing to construct a dwelling that would meet the maximum height requirements if it was not required to meet the minimum floodplain elevation.

SUSTAINABILITY IMPLICATIONS

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist". This proposal represents the redevelopment of an existing residential parcel. The applicant is proposing to construct in the general location of the previous dwelling and to retain existing vegetation on the subject property. With respect to the dwelling under consideration, it will be constructed to current building code standards which reflect reduced environmental impact and energy efficient design elements.

PUBLIC CONSULTATION PROCESS

As part of the required public notification process, pursuant to the ***Local Government Act***, property owners and tenants located within a 50 metre radius, will receive a direct notice of the proposal, and will have an opportunity to comment on the proposed variance, prior to the Board's consideration of the application.

VOTING - Electoral Area Directors – one vote, except Electoral Area 'B'.

SUMMARY/CONCLUSIONS

This is an application for a Development Permit with Variance to increase the maximum permitted height from 8.0 metres to 8.81 metres to allow the construction of a residential dwelling and attached garage at 121 Kinkade Road in Electoral Area 'G'. Given that the applicant has submitted a Geotechnical Hazards Assessment, the guidelines of the Hazard Lands DPA have been addressed. With respect to the requested variance, the property is located within the Little Qualicum River Floodplain and construction is required to meet the floodplain elevations, and there are no anticipated impacts related to the requested height variance. Staff recommends that the requested Development Permit with Variance be approved subject to the terms outlined in Schedules No. 1-3 of this report, and the notification requirements of the ***Local Government Act***.

RECOMMENDATION

That Development Permit with Variance application No. 60830, to permit the construction of a single residential dwelling and attached garage with a maximum height of 8.81 metres on the property legally described as Lot 1, District Lot 10, Newcastle District, Plan 22939, be approved subject to the conditions outlined in Schedules No. 1-3 and the notification requirements of the ***Local Government Act***.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

Schedule No. 1
Terms of Development Variance Permit No. 60830

Bylaw No. 500, 1987 – Requested Variance

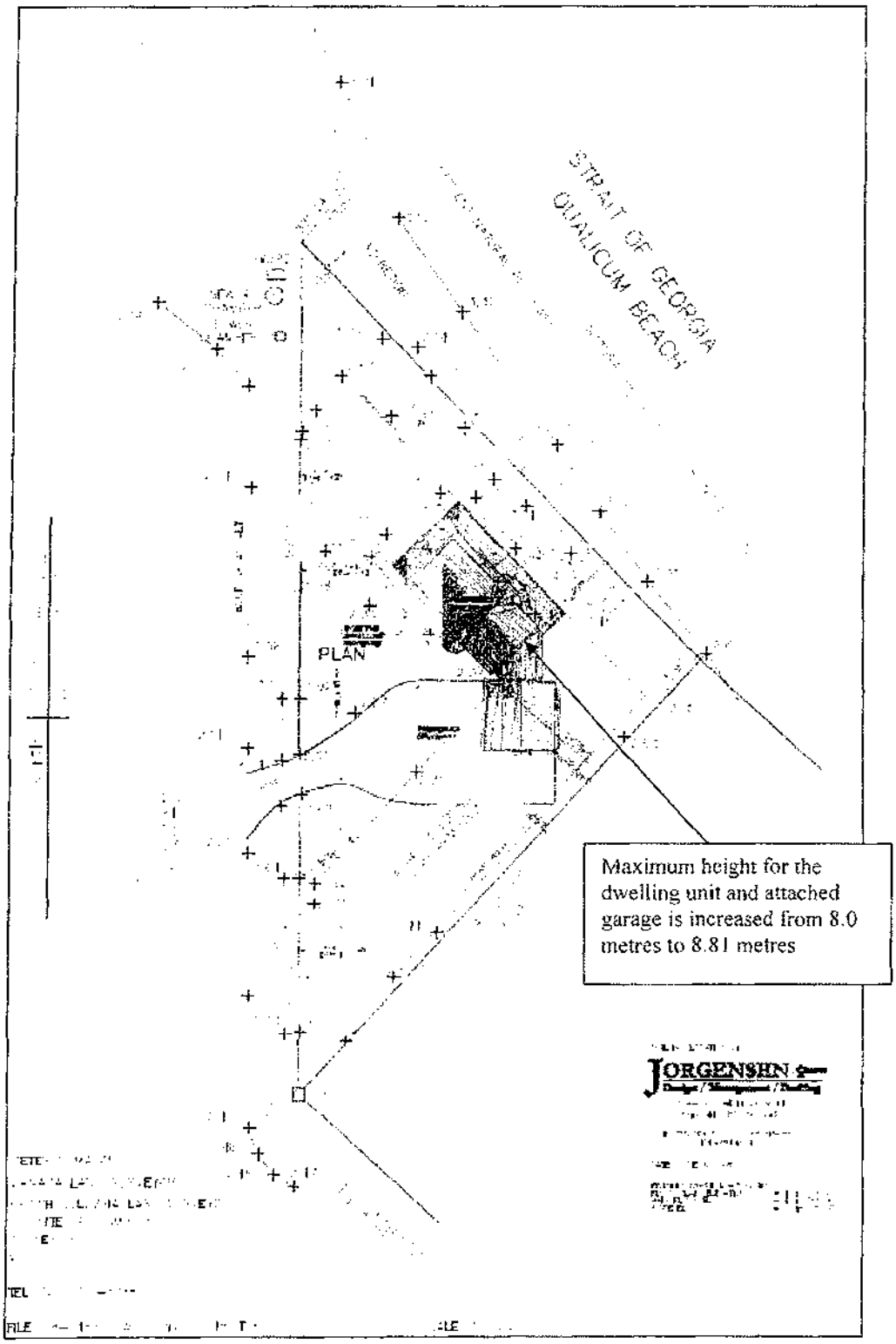
With respect to the lands, "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987," is varied as follows:

1. **Section 3.4.62, Dwelling Unit Height** is varied by increasing the maximum height of the dwelling unit and attached garage located on Lot 1, District Lot 10, Newcastle District, Plan 22939 from 8.0 metres to 8.81 metres as shown on *Schedule No. 2.*

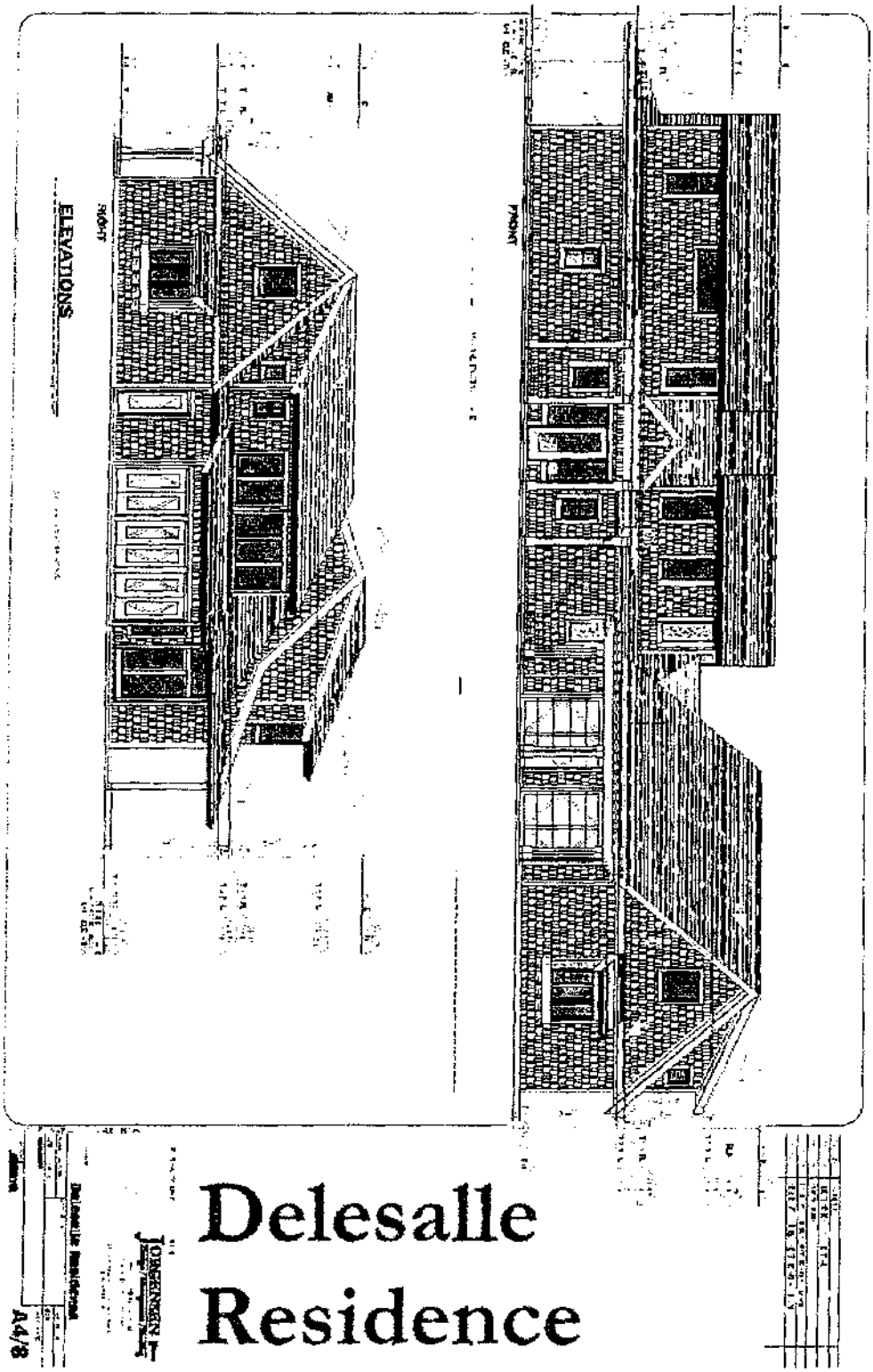
Conditions of Approval

2. The dwelling unit and attached garage shall be sited in accordance with the site plan prepared by Jorgensen Osmond Ltd. dated June 5, 2008 based on the survey prepared by Peter T. Mason BCLS attached as *Schedule No. 2.*
3. The dwelling unit and attached garage shall be developed in accordance with the building elevations prepared by Jorgensen Osmond Ltd. attached as *Schedule No. 3.*
4. The dwelling unit and attached garage shall be constructed in accordance with the Geotechnical Hazards Assessment prepared by Ground Control Geotechnical Engineering Ltd. dated June 10, 2008, attached as *Schedule No. 4.*
5. Staff shall withhold the issuance of this permit until the applicant, at the applicant's expense, registers a section 219 covenant that registers the Geotechnical Hazards Assessment prepared by Ground Control Geotechnical Engineering Ltd. dated June 10, 2008 and includes a save harmless clause that releases the Regional District of Nanaimo from all losses and damages as a result of erosion and/or landslide.

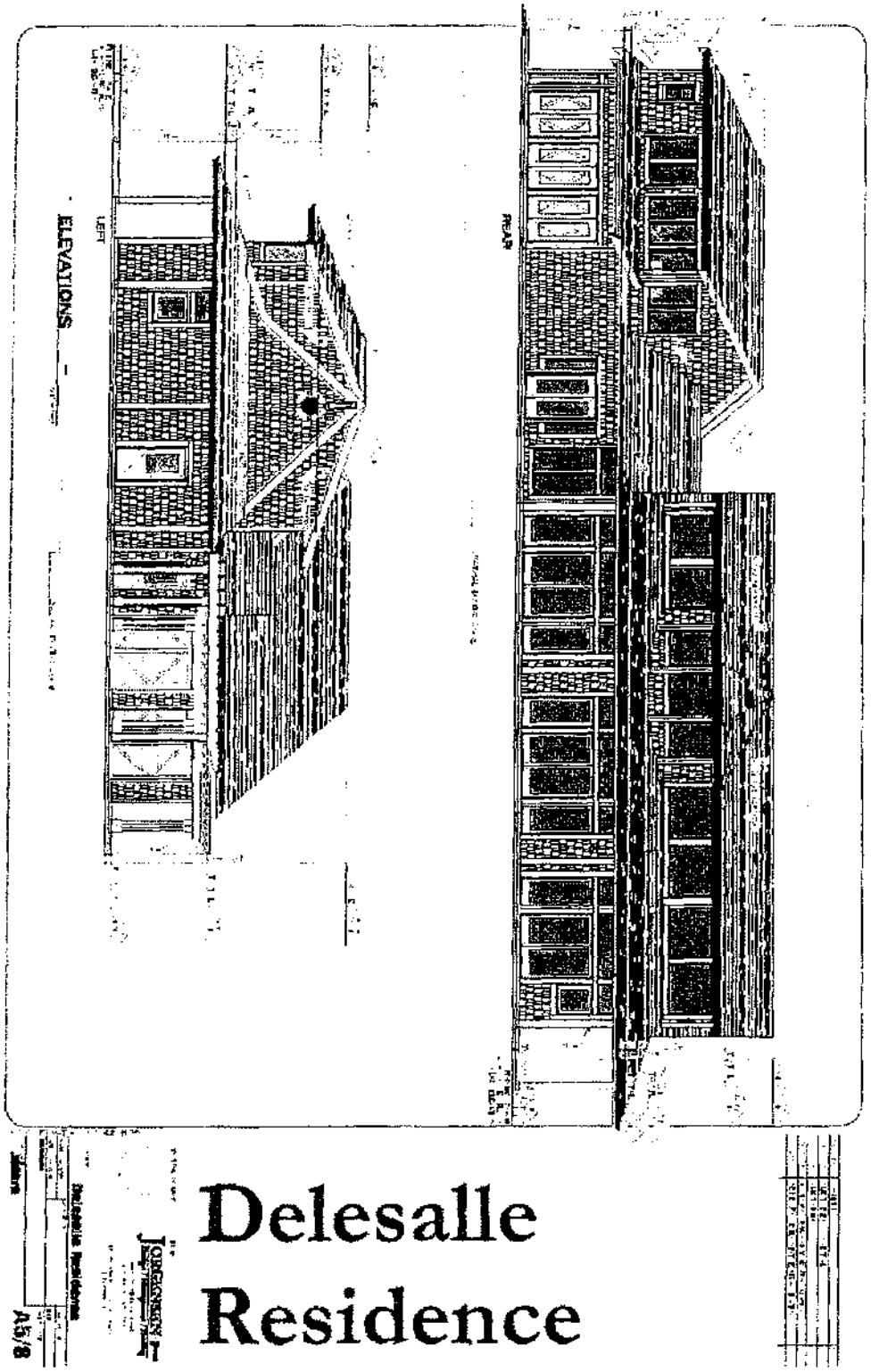
Schedule No. 2
Site Plan



Schedule No. 3
Building Elevations
(Page 1 of 2)



Schedule No. 3
Building Elevations
(Page 2 of 2)



Schedule No. 4
Geotechnical Hazards Assessment
(Page 1 of 13)

GROUND CONTROL
GEOTECHNICAL ENGINEERING LTD.
2731 Lana Road, Nanoose Bay, BC
Phone/Fax: (250) 468-1759

File: JDC-001
June 10, 2008

J D Construction
Box 264
Parksville, BC
V9P 2G4

Attention Mr. Joe Beaulac

SUBJECT: GEOTECHNICAL HAZARDS ASSESSMENT
PROJECT: PROPOSED NEW SINGLE-FAMILY RESIDENCE
LOCATION: 121 KINCADE STREET, QUALICUM BEACH, B.C.
LEGAL DESC: LOT 1, DL 10, VIP22939, NEWCASTLE LAND DISTRICT

Dear Mr. Beaulac:

1. Introduction

a. As requested, Ground Control Geotechnical Engineering Ltd. (Ground Control) has carried out a geotechnical hazards assessment of the above site. This report provides a summary of our findings and recommendations.

2. Background

a. Based on plans and information provided by the client, we understand that the property is to be re-developed by demolition of the existing house and tennis court, and the construction of a new house with attached garage. We understand that the new structure will be a standard low-rise residential building (two storeys) using wood frame construction supported on a concrete foundation. The new structure will employ concrete slab-on-grade main floors (i.e. no crawl-space or basement).

b. For the reader's reference, a site plan (prepared by the others) showing the site layout, ground elevations, and the proposed building location is attached.

c. It is understood that a geotechnical hazards assessment is required in support of your application for a development and/or building permit, as the property is located within a Natural Hazards Development Permit Area. It appears that the principle concern relates to the location of the property adjacent to the Strait of Georgia, consequently there may be special geotechnical requirements needed to protect against ocean flooding and wave related hazards.

Schedule No. 4
Geotechnical Hazards Assessment
(Page 2 of 13)

Geotechnical Hazards Assessment
File: JDC-001
June 10, 2008
Page 2 of 13

3. Assessment Objectives

a. Our assessment, as summarized within this report, is intended to meet the following objectives:

   i. Determine whether the land is geotechnically safe and suitable for the intended purpose (residential house), where 'safe' is defined as a probability of a geotechnical failure or another substantial geotechnical hazard resulting in property damage of less than 10 percent in 50 years;

   ii. Identify any geotechnical deficiency that might impact the design and construction of the development, and prescribe the geotechnical works and any changes in the standards of the design and construction of the development that are required to ensure the land, buildings, and Works and Services are developed and maintained safely for the use intended; and

   iii. Acknowledge that Approving Officers may rely on this Report when making a decision on applications for the subdivision or development of the land.

b. When assessing the safety of the site from flood related hazards, we have used one-in-200 year flood levels. The one-in-200 year event is the prescribed flood event in BC.

4. Assessment Methodology

a. Richard McKinley, P.Eng, of Ground Control visited the site on June 9, 2008 to observe general site conditions and to note apparent geotechnical hazards.

b. BC Ministry of the Environment Flood Maps were referenced to determine expected flood levels at the site, both for the adjacent ocean and the Little Qualicum River. The elevation of maximum tides at the site was reviewed using data from the Hornby Island Tide Station.

c. Data from a recent survey carried out by Peter T. Mason, Canada Land Surveyor, was reviewed to determine ground elevations of the site, and of the foreshore area, in relation to GSC datum, for comparison to tide and flood map elevations. These elevations are shown on the attached drawing.

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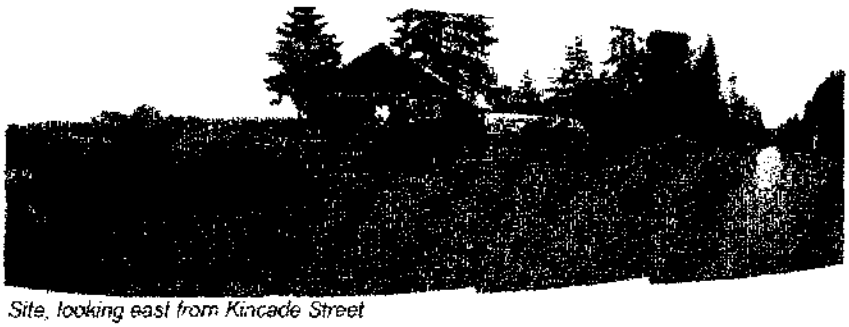
5. Site Conditions

5.1. General

a. The subject lot is triangular in shape, bounded by Kincade Street to the west, the foreshore of the Georgia Strait to the northeast, and a neighbouring residential property to the southeast. An older one and a half storey house and a tennis court currently occupies the property.

Site, looking north from Kincade Street

b. The site has a gentle slope downward to the south, with a total topographic relief of about one metre. Vegetation consists of grassy lawn with a few scattered trees of varying ages. The presence of mature trees along the north side of the property (see photos and plan) indicate that these areas adjacent to the foreshore have been stable for many years (i.e. have not been subjected to large-scale ocean erosion or scour).



Site, looking east from Kincade Street

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c. Along the north end of the property the land rises to the crest of a wide rounded berm of granular soils apparently built up at the natural boundary by ocean waves. The berm is well vegetated with dune-grass. The current natural boundary is indicated by a line of driftwood logs.

Foreshore Area: photo is taken looking west along foreshore from adjacent property

d. The foreshore area beyond the berm has a relatively gentle slope and consists of coarse sand and gravel aggregates

e. A comparison of the present natural boundary to the natural boundary recorded on historical plans indicates that accretion of soil is occurring along the foreshore, and rather than eroding the land, the ocean has historically depositing soil and increased the land area (see attached plan).

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5.2. Site History

a. The site has been used in the past for sing'e-family residency, a use similar in nature to the proposed re-development. The age of the existing house is not known exactly, but is reported by the client to be greater than 40 years. We understand from the client that there are no know instances of flooding or wave impacts to the existing building. The new building will be located in approximately the same location as the current building, so this provides confirmation the proposed building location is not prone to these hazards.

b. Our observations of the building's exterior found no indications of apparent flood or wave related damage, nor where there any indications of significant foundation distress that would indicate problems with foundation support conditions.

5.3. Soil Conditions

a. Based on our observations of soils exposed at the surface, in ditches, and along the foreshore, soils that will be encountered within the expected depth of house construction will consist of marine deposits: primarily compact to dense, poorly-graded sandy gravel and gravelly sand.

b. In general, these soil conditions are considered to be favourable for the project, as the gravel and sand deposits are expected to have good bearing capacity properties and be free draining.

5.4. Groundwater Conditions

a. Due to the relatively permeable nature of the local soils, groundwater is expected to be approximately coincident with the level of the adjacent ocean. The highest high tides at this site are 2.1m so there is a potential that groundwater will be encountered within excavations below elevation 2.1m GSC during periods of high tides. Excavations for the new building are not expected to reach this depth and consequently are not expected to be impacted by groundwater. Deeper underground utility trenches might reach this depth, however, timing of excavations to coincide with periods of low tide will be a simple solution and groundwater is not expected to be a significant impediment to construction.

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5.5. Flood Level Information and Discussion

a. The primary flooding hazard in relation to this site is the risk of flooding from the adjacent ocean as a result of a storm surge and/or wave run-up. A secondary flooding hazard is the Little Qualicum River, whose channel is located about half a kilometer to the southwest of the site, and whose flood-plain is mapped as including the subject property.

b. British Columbia uses the 1 in 200-year flood to define flood risk areas. BC Ministry of Environment flood maps (*Flood Plain Mapping, Little Qualicum River, Drawing 93-11-1, September 1997, prepared by Hay and Company*) prescribe a flood elevation for this site of 3.8m GSC.

c. For comparison, the elevation of the ground surface at the proposed building location is about 2.5m to 2.9m GSC, while the top of the berm that separates the property from the ocean has an elevation of about 3.1 to 3.3m GSC.

6. Conclusions & Recommendations

6.1. General

a. From a geotechnical perspective the proposed development is considered 'safe' for the intended use, provided the recommendations in this report are followed.

b. The principal geotechnical hazards associated with this site are flooding and wave related hazards associated with the adjacent ocean, and flooding hazards from the Little Qualicum River. The following sections discuss these issues.

6.2. Flooding Issues

a. To protect against building damage during flooding, the interior spaces and water-susceptible components of occupied or high value structures should be constructed with a minimum floor elevation of 3.8 metres GSC, based on the Ministry of the Environment prescribed one-in-two-hundred-year flood elevation. This elevation is suitable to protect against flooding events from both the ocean and the Little Qualicum River (the ocean flood level is the higher, and controls).

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b. Portions of structures below the design flood elevation (e.g. foundations) should be constructed entirely of materials not susceptible to water damage, such as concrete.

c. We recommend that the preferred method for raising the minimum floor level of the proposed building above 3.8m GSC will be to elevate the building on a suitably tall concrete foundation, with footings supported on the existing natural soils.

d. Concrete foundations should be supported on native soils and be embedded a minimum of 0.6 m below the finished ground surface for protection from frost. Based on this minimum embeddment, no special requirements are considered necessary to protect against soil scour from flood waters.

6.3. **Set-back Distances from the Natural Boundary**

a. We understand that the proposed building will have a minimum setback from the seaward property line of 8.0 metres (see attached plan), and so will be more than 8.0 metres back from the current natural boundary. This is considered to be a geotechnically safe and suitable separation of the building from ocean hazards (shoreline erosion, wave impacts, and sea-spray).

b. As discussed above, wave action has been accreting land along the shore, and as such, erosion of the land is not expected to be an issue at this site, nor are special shore protection measures considered necessary.

c. In the event that the current pattern of shoreline deposition were to reverse itself and significant erosion of the shoreline begin to occurs (which is possible, even though the likelihood is considered low), the proposed setback is considered suitable to provide a sufficient buffer of land to allow for the occurrence of erosion to be identified and corrective action to be taken (e.g. by installing erosion protection such as rip rap), well before the proposed building is endangered.

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6.4. Footing Design

a. Foundation loads may be suitably supported on undisturbed, natural mineral soils or structural fill and may be designed based on an allowable bearing capacity of 100 kPa. This bearing value is considered conservative for the types of soil present.

b. This value assumes a minimum 0.3 metre depth of confinement or cover on all sides of the footings (i.e. on the interior as well as the exterior). Exterior footings should be provided with a minimum 0.6 metre depth of ground cover for frost protection purposes.

c. The allowable bearing value may be increased by 1/3 in the case of short duration loads, such as those induced by seismic forces or wind.

d. The recommended minimum footing plan dimension is 400mm.

e. Provided foundations are designed, constructed, and inspected as recommended in this report, settlements should be less than 25mm total, and 15mm differential between normal column/wall spacings.

6.5. Foundation Construction

a. Prior to placement of concrete footings, any bearing soils that have been softened, loosened, or otherwise disturbed during the course of construction should be removed, or else compacted following our recommendations for structural fill. Compaction will only be feasible if the soil has a suitable moisture content and if there is access for heavy compaction equipment. If the soils are overly wet, or if footing forms are in place, removal will likely be required.

b. Ground Control has been retained to provide Geotechnical Assurance services during construction, and has prepared and submitted Schedules B1 and B2 for the geotechnical aspects of the project. As such, we are responsible for carrying out 'field reviews' during construction, and must visit the site prior to footings being poured, to confirm that new footings will be founded on appropriate and properly prepared bearing soils.

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c. The client should contact Ground Control to carry out the required field reviews following demolition of the existing house and following excavation for the new house, but prior to placement of the new footings.

6.6. Interior Floor Slabs-On-Grade

a. We understand that interior main level floors will be concrete slabs-on-grade. Consequently, after construction of the foundation walls, it will be necessary to place engineered fill within the building's interior to elevate the subgrade to the required elevation for slab support. Ground Control should be notified prior to placement, to allow field review of these operations.

b. Engineered fills should be placed in lifts suitable for the size and type of compactor, but in no case thicker than 0.3m (1') thick as measured loose. The use of granular fill (free draining gravel and/or sand) is recommended. Each lift should be thoroughly compacted with a heavy (500 kg) vibratory diesel plate compactor or better. Contact Ground Control if alternate methods are being considered

c. Ground supported interior slabs should be underlain by a minimum 100 mm thickness of free draining granular material, and a continuous vapour barrier to limit entry of moist vapours from the damp soils below, as required by the BC Building Code.

6.7. Seismic Issues

a. No compressible or liquefiable soils have been identified at this site, nor are any expected. As such, no unusual seismic design requirements have been identified for this site.

6.8. Slopes

a. There are no significant slopes within or near potential building sites, therefore no special requirements are necessary to address slope issues.

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6.9. Permanent Drainage

a. Site soils are free-draining and the building will be constructed above the expected groundwater level, so no unusual permanent drainage provisions will be required. As such, conventional requirements of the B.C. Building Code pertaining to building drainage are considered suitable at this site.

b. Building drainage requirements as outlined by the B.C. Building Code typically include damp-proofing of foundation walls, installation of a standard footing-level perimeter drainage pipe system, drain rock burial of the perforated piping, roof drainage connected to a separate drainage system constructed from solid piping, and a provision for gravity drainage of all collected waters to a suitable discharge point down-slope and away from the building.

c. Based on information provided by the client, slab-on-grade construction is to be employed (i.e. no crawlspaces or basements) so there will be no below-grade interior spaces that might be susceptible to groundwater infiltration. Provided slabs-on-grade are at least 0.15m (6") above the surrounding ground level, it is considered acceptable to delete the requirements for footing level drains.

d. Lot surfaces should be grading to direct surface water away from buildings.

6.10. Service Trenches

a. No shallow bedrock was observed on site, nor is any expected, and standard construction practices are expected to be suitable for installation of shallow service trenches (water lines, sewerage lines). The sidewalls of all construction excavations should meet the requirements of applicable Occupational Health and Safety Regulations.

GROUND CONTROL
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7. Acknowledgements

a. Ground Control Geotechnical Engineering Ltd. acknowledges that this report may be requested by Approving Officers and Building Inspectors as a precondition to the issuance of a building or development permit and that this report, or any conditions contained in this report, may be included in a restrictive covenant filed against the title to the subject property. It is acknowledged that the Approving Officers and Building Officials may rely on this report when making a decision on application for the subdivision or development of the land.

b. We acknowledge that this report has been prepared solely for, and at the expense of, the client addressed on page 1.

8. Limitations

a. The conclusions and recommendations submitted in this report are based upon the data obtained from surface observations, and are to be confirmed by 'field reviews' during construction as discussed previously. Although not expected, should undiscovered conditions become apparent later (e.g. during excavation for construction) our office should be contacted immediately to allow reassessment of the recommendations provided.

b. The current scope of investigation was selected to provide an assessment of obvious geotechnical hazards. If stakeholders in these matters desire a greater degree of certainty, additional investigations can be carried out.

c. Our recommendations apply to the specific proposed structure described. Other structures may have unique requirements and so our recommendations should not be considered applicable to other developments, even within the same property.

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9. Closure

a. Ground Control Geotechnical Engineering Ltd. appreciates the opportunity to be of service on this project. If you have any comments, or additional requirements at this time, please contact us at your convenience.

Respectfully Submitted,
Ground Control Geotechnical Engineering Ltd.

Richard McKinley, P. Eng.
Geotechnical Engineer

GROUND CONTROL
GEOTECHNICAL ENGINEERING LTD.

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Geotechnical Hazards Assessment
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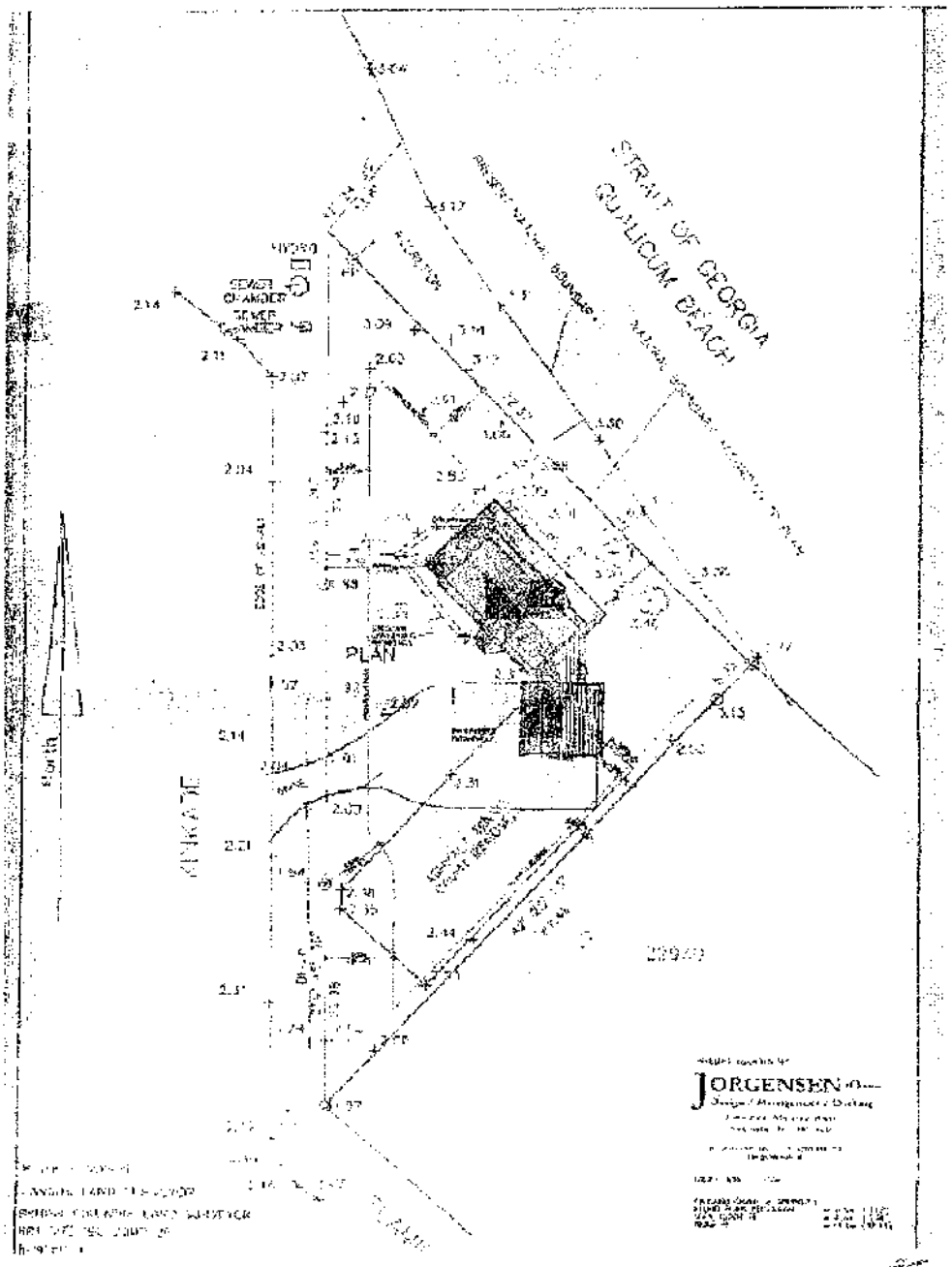
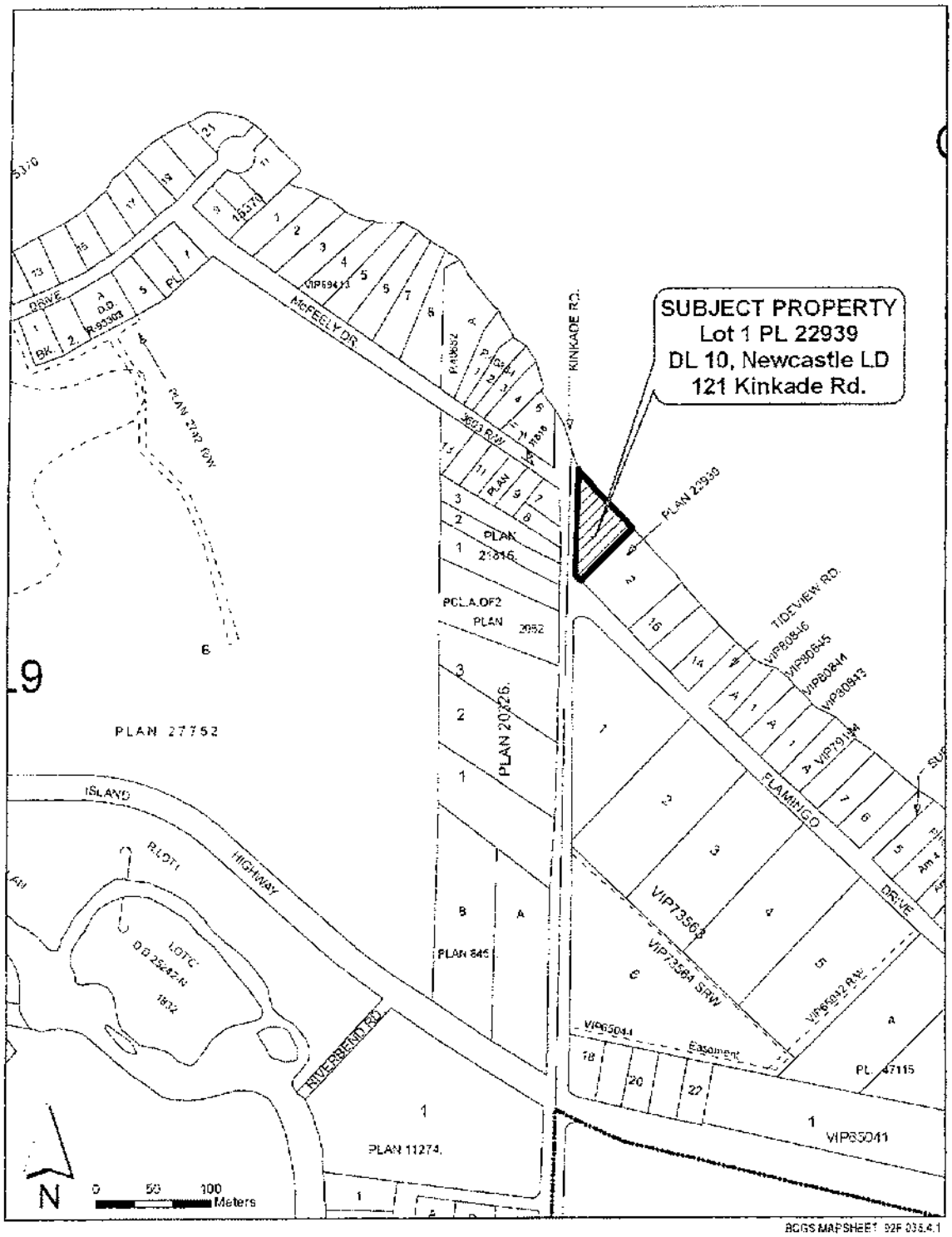


Attachment No. 1
Location of Subject Property



REGIONAL DISTRICT OF NANAIMO

RDN REPORT		
CAO APPROVAL		
EAP	✓	Sept 9'08
COW		
SEP 02 2008		
RHD		
BOARD		

MEMORANDUM

TO: Geoff Garbutt, Manager, Current Planning **DATE:** August 26, 2008

FROM: Elaine Leung, Planner **FILE:** 3060 30 60831

SUBJECT: **Development Permit with Variance Application No. 60831**
Request for 10% Frontage Relaxation
District Lot 170, Nanoose District Electoral Area 'E'
2545 Edwards Road - Folio No. 769.010502.000

PURPOSE

To consider an application for a Development Permit with Variance to vary the maximum permitted height for a residential dwelling and a request for relaxation of the minimum 10% perimeter frontage requirement on a property located in Electoral Area 'E' in conjunction with an application for subdivision in the Agriculture Land Reserve.

BACKGROUND

This is an application for a Development Permit with Variance to allow an increase in the maximum permitted height for a residential dwelling and frontage relaxation for the property legally described as District Lot 170, Nanoose District and located at 2545 Edwards Road in Electoral Area 'E' *(see Attachment No. 1 for location of subject property)*. The parcel is approximately 23 ha in size and is currently zoned Rural 5 (RU5) Subdivision District 'D' pursuant to the "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987" *(2 ha parcel size)*. The parcel is located within the Agricultural Land Reserve (ALR) and the applicant is proposing to subdivide a parcel approximately 2.4 ha in area, along the eastern boundary of the property. The proposed new lot (Lot A) will have road frontage off Morello Road. Both proposed parcels will meet the minimum parcel size provisions pursuant to Bylaw No. 500, 1987 *(see Schedule No. 2 for proposed subdivision layout)*.

The parent parcel currently supports a residence, accessory buildings, and an active farm. Surrounding uses include Resource Management (RM-3) zoned parcels to the south and west, Rural (RU5) zoned parcels to the north and frontage onto Morello Road to the east. The proposed new parcel is currently vacant and will be consistent with the existing rural lot sizes along Morello Road.

Pursuant to "Regional District of Nanaimo, Nanoose Bay Official Community Plan Bylaw No. 1400, 2005." the property is within the Farm Land Protection and Watercourse Protection Development Permit Area's (DPA). Given the Farm Land Protection DPA applies to lands *adjacent* to or *adjoining* ALR lands, the application is exempt from this DPA. The Watercourse Protection DPA is applicable to all land within the Riparian Assessment Area. Nanoose Creek and an unnamed tributary flow through the property therefore a Development Permit is required.

10% Minimum Frontage Requirements

The remaining parent parcel, as shown on the submitted plan of subdivision, will not meet the minimum 10% perimeter frontage requirement pursuant to section 944 of the ***Local Government Act***. The applicant is requesting to reduce the minimum frontage requirement from 10% to 0.5 % for the parent parcel. As the proposed parcel does not meet the minimum 10% parcel frontage requirement, approval of the Regional Board of Directors is required.

Proposed Variance

With respect to the lands, "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987" is requested to be varied as follows:

1. Section 3.4.85 (height) - is requested to be varied by increasing the maximum permitted height from 9.0 metres to 9.5 meters to permit the construction of a residential dwelling in the location shown on *Schedule No. 3* and generally constructed as shown on *Schedule No. 4*.

ALTERNATIVES

1. To approve Development Permit Application No. 60831 with variance, as submitted, subject to the conditions outlined in Schedules No. 1 - 4 and to approve the request for relaxation of the minimum 10% frontage requirements for the remaining lot.

2. To deny the Development Permit with variance as submitted and provide staff with further direction and to refuse the request for relaxation of the minimum 10% frontage requirements.

DEVELOPMENT IMPLICATIONS

The applicants have indicated that the purpose of the new lot is for residential use for their son, who currently assists in the farming operations. He intends to take over the farm in the future, and wishes to be located closer to the farm.

The applicants have submitted a proposed building envelope location, as well as proposed building plans. They note that they are restricted to constructing at this location due to topographical constraints on the property, as well as the creek which flows through the eastern boundary.

Access to the proposed new parcel will be from Morello Road. Although the proposed lot is 2.4 hectares in area, the available building envelope is limited, as the majority of the lot is sloping, leaving a building envelope at the highest point, at the rear of the property (the western boundary). The proposed building plans currently meet the maximum height requirement of 9.0 metres. However, due to floodplain elevation concerns, the applicants request to vary the maximum height maximum to 9.5 metres to accommodate additional building height.

The Agriculture Land Commission (ALC) has approved the proposed subdivision, concluding that the proposed lot for subdivision "has minimal agricultural capability," as it is Class 2 soil, with undesirable soil structure, and a limitation of topography. In addition, approval of the lot will support continued

agriculture uses, as it encourages the family farm operation. With respect to the proposed location of the dwelling, the ALC has supported this request as it will not negatively impact the farming operation.

Watercourse Protection Development Permit Area

The applicant has provided a Riparian Area Assessment, prepared by a Qualified Environmental Professional (QEP), for Nanoose Creek and the unnamed tributary located along the west boundaries of the parent parcel. This report, prepared by Toth and Associates dated April 22, 2008, establishes a Streamside Protection and Enhancement Area (SPEA) of 15.0 metres for Nanoose Creek and a 10.0 metre SPEA for the unnamed tributary. The report states that only those portions of windthrow trees projecting outside the SPEA boundaries are to be removed, the remainder is to be left as coarse woody debris on the forest floor. In addition, prior to development of the property the SPEA boundaries need to be legally surveyed and delineated on the ground. Finally, a post-development survey is required by the Ministry of Environment to ensure that the measures have been adhered to and no development has occurred within the SPEA boundaries.

Request for Relaxation of Minimum 10 % Frontage Requirements Implications

Ministry of Transportation and Infrastructure staff has indicated that they will support this request for relaxation of the minimum 10% frontage requirement on the parent parcel. The proposed new parcel will meet the minimum 10% frontage requirements. Additional road dedication for the remainder parcel would remove additional land from agricultural production.

VOTING

Electoral Area Directors – one vote, except Electoral Area 'B'.

SUSTAINABILITY IMPLICATIONS

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist". Although this is an application for a development permit required as part of a subdivision application resulting in reduced parcel size within the ALR, the intent of the subdivision is to create a parcel for a family member allowing the continued support of agricultural uses on the parent parcel. The RAR report prepared Toth and Associates includes recommendations for the protection of the SPEA for Nanoose Creek and the unnamed tributary and landscaping in the form of a hedge is required in order to buffer the proposed new parcel from agricultural uses on the parent parcel. With respect to the dwelling under consideration, it will be constructed to current building code standards which reflect reduced environmental impact and energy efficient design elements.

SUMMARY

This is an application for a development permit with variance to reduce the minimum road frontage requirement and increase the maximum height permitted on property located at 3545 Edwards Road, legally described as District Lot 170, Nanoose District.

Given the applicant has submitted a report prepared by a QEP which includes measure to protect the SPEA the requirements of the applicable development permit guidelines have been addressed. The

request for relaxation of the minimum 10% frontage requirements will not limit the availability of intended uses. Staff recommends approval of the Development Permit with variance and the request for relaxation of the minimum 10% frontage requirements as outlined in Schedules No. 1 - 4 of this staff report.

RECOMMENDATIONS

1. That Development Permit with Variance Application No. 60831 be approved subject to the conditions outlined in Schedules No. 1 - 4 of the corresponding staff report and the notification requirements of the ***Local Government Act.***
2. That the request for relaxation of the minimum 10% frontage requirement for the parent parcel be approved.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

Schedule No. 1
Conditions of Approval / Proposed Variance

The following sets out the conditions of approval:

1. Subdivision

a. The subdivision of the lands shall be in substantial compliance with Schedule No. 2.

2. Proposed Variance

With respect to the lands, "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987," is varied as follows:

a. **Section 3.4.85 (height)** - is varied by increasing the maximum permitted height from 9.0 metres to 9.5 meters to permit the construction of a residential dwelling in the location shown on *Schedule No. 3* and generally constructed as shown on *Schedule No. 4.*

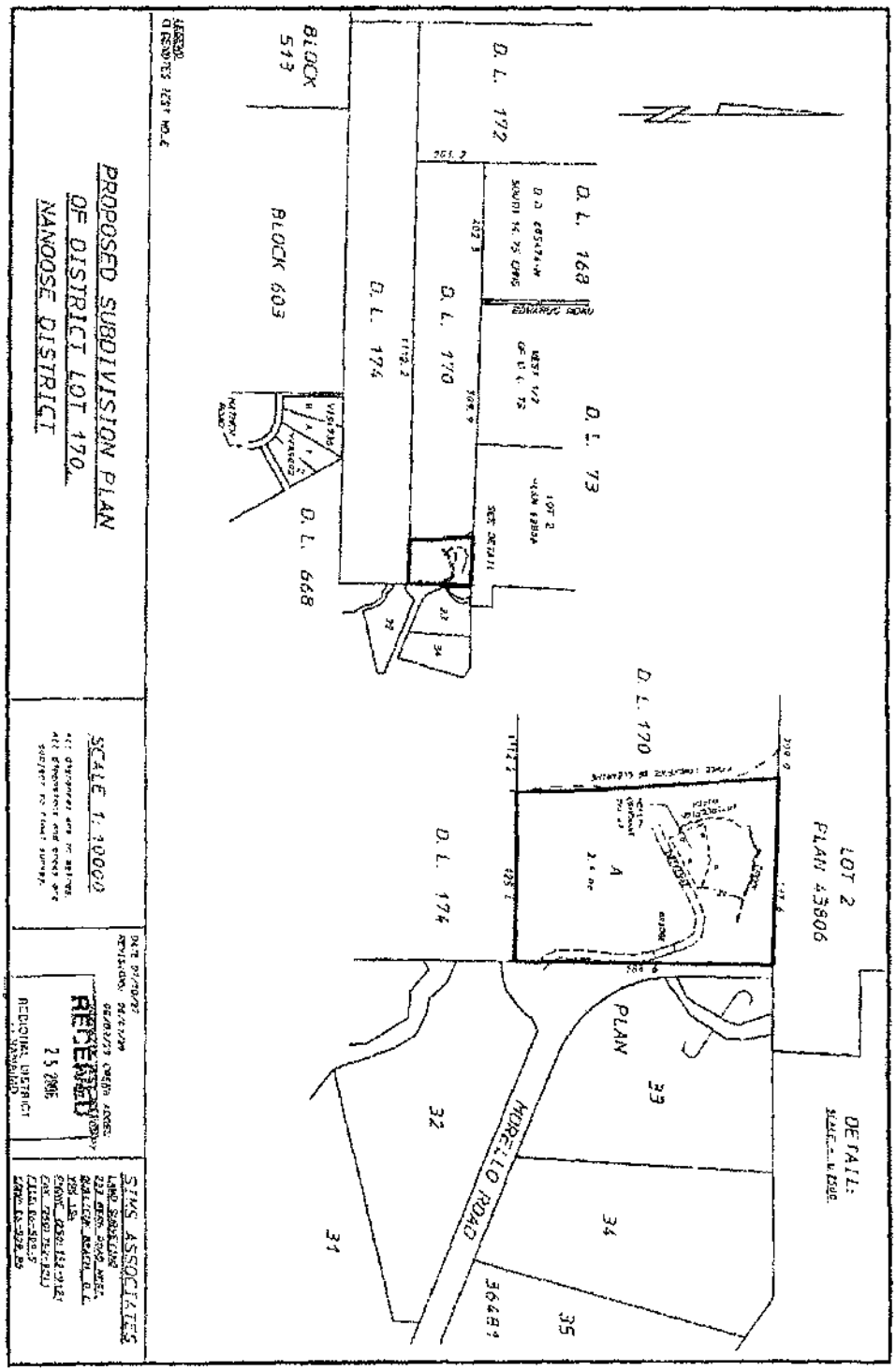
3. Riparian Assessment

a. The applicant shall develop the subject property in accordance with the recommendations of Riparian Area Assessment No. 784 prepared by Steve Toth (Toth and Associates) dated April 22, 2008.
b. The applicant's BCLS shall clearly mark on the ground the Streamside Protection and Enhancement Area's in accordance with the recommendations of Riparian Area Assessment No. 784 prepared by Steve Toth (Toth and Associates) dated April 22, 2008.
c. The applicant shall complete the recommendations concerning environmental monitoring and a post development survey as set out in Section 5 – Environmental Monitoring of the Riparian Area Assessment No. 784 to the satisfaction of a Qualified Environmental Professional.

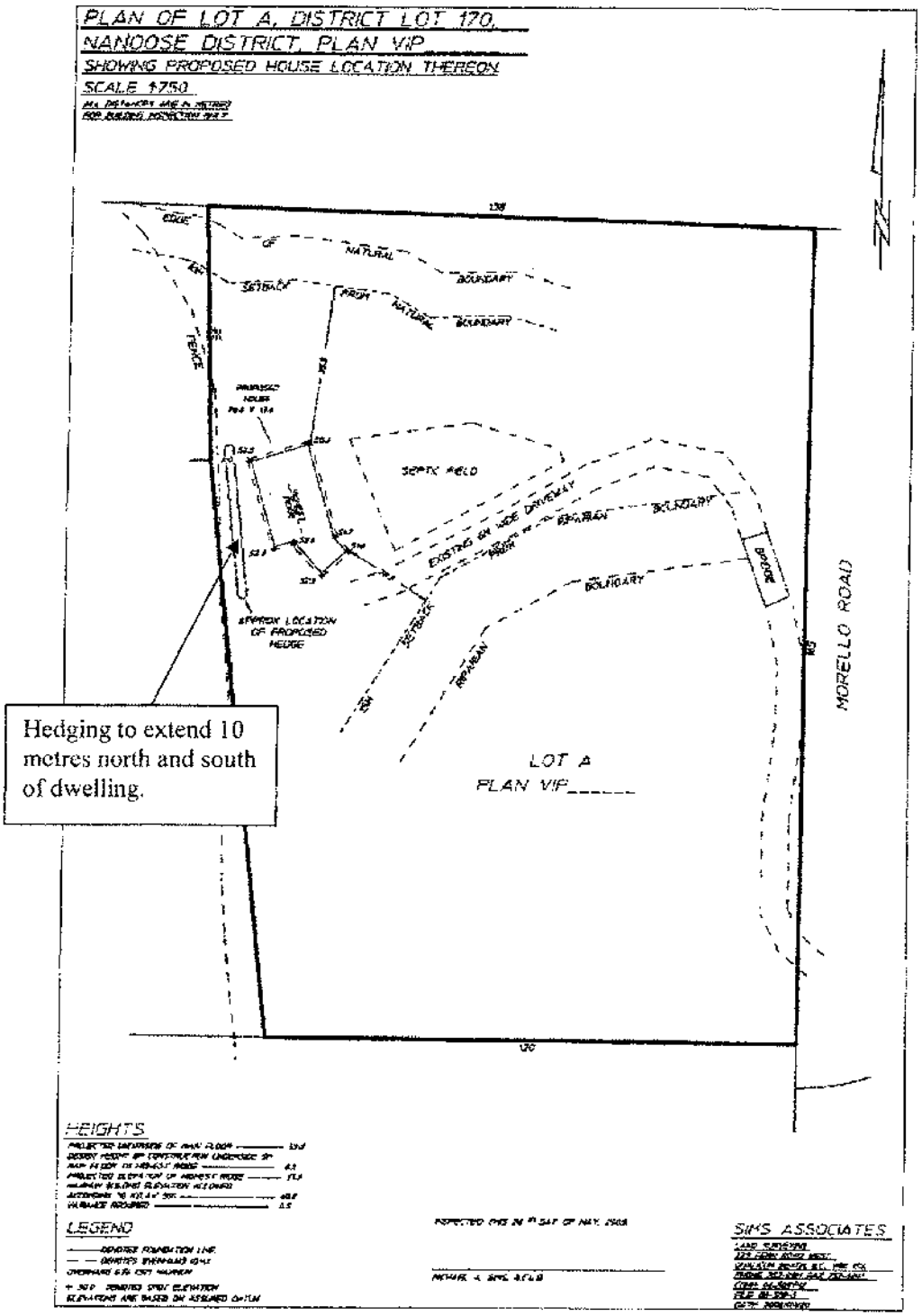
4. Landscaping

a. The applicant shall install farm standard fencing along the western property boundary of proposed Lot A.
b. The applicant shall install native hedging material, extending 10 metres north and south of the dwelling, with a minimum height of 1 metre, a minimum soil depth of 450 mm and with plantings on 0.75 m centres as outlined on the attached site plan.
c. Hedging is to be installed within 12 months of the issuance of the permit.

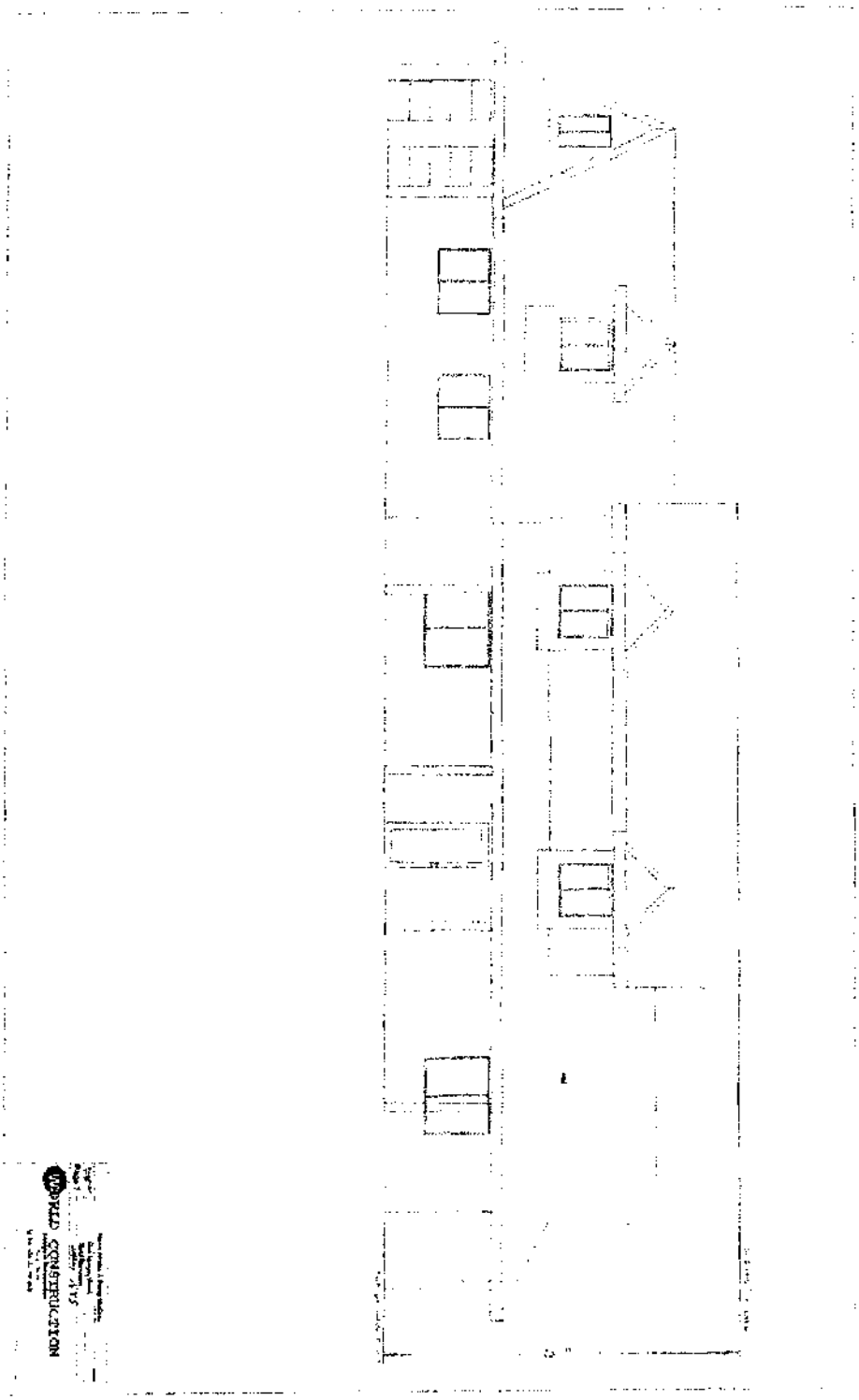
Schedule No. 2
Proposed Plan of Subdivision



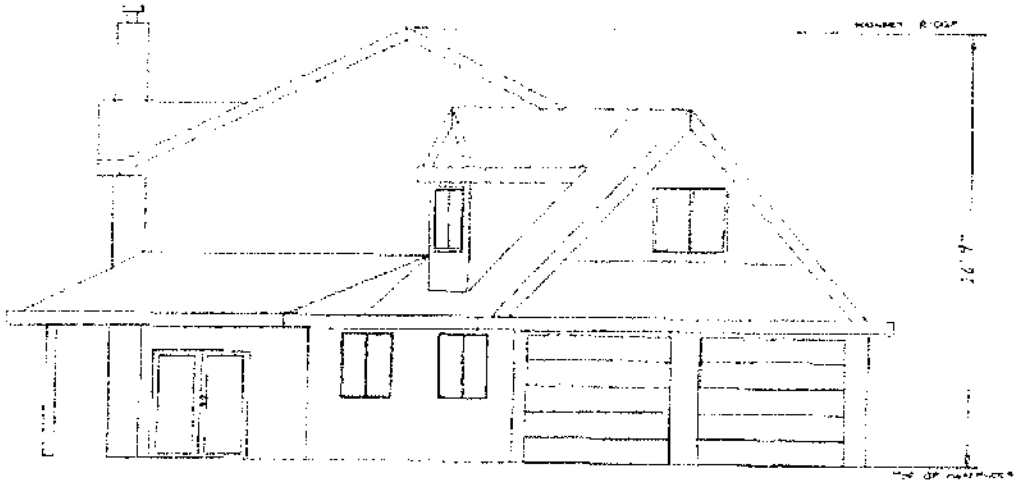
Schedule No. 3
Proposed Site Plan for Lot A

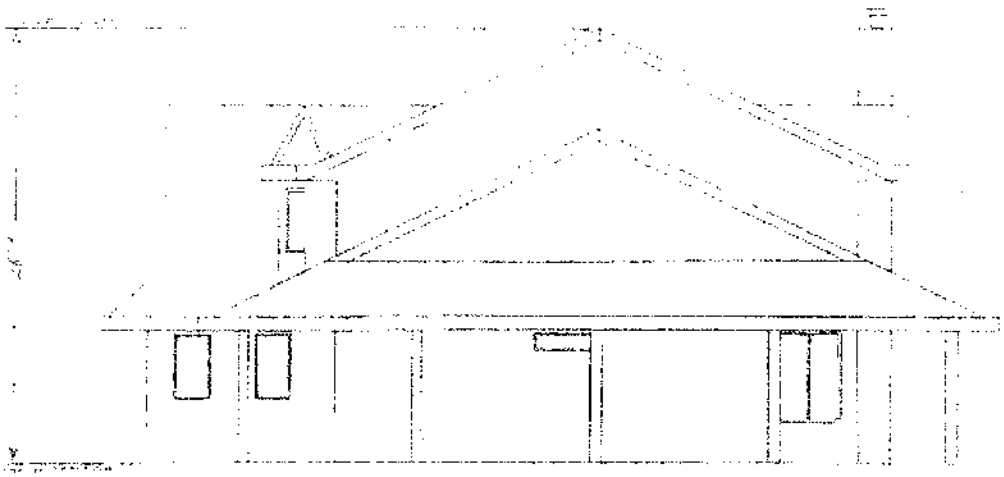


Schedule No. 4
Building Elevations (Page 1 of 3)

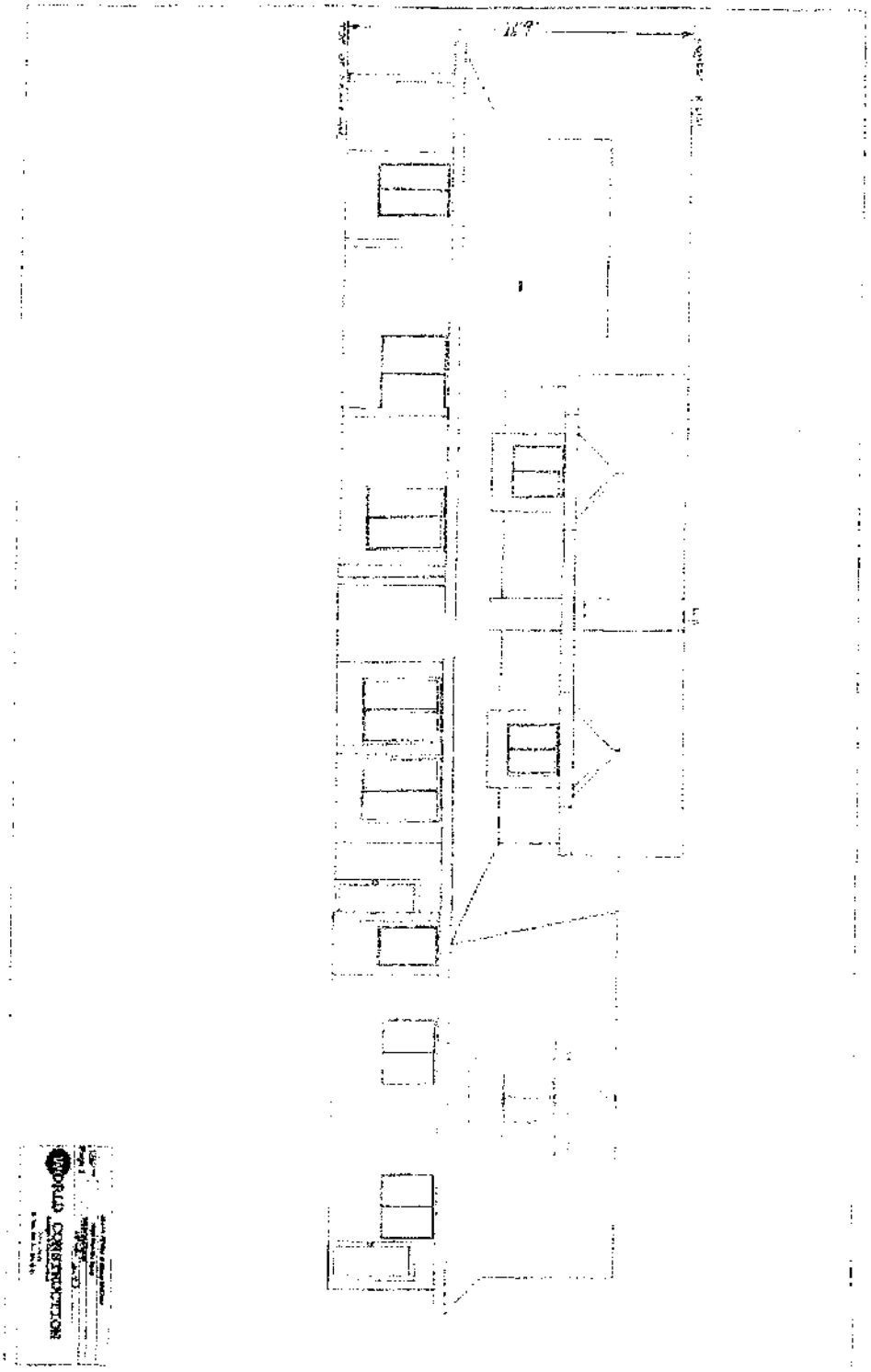


Schedule No. 4
Building Elevations (Page 2 of 3)

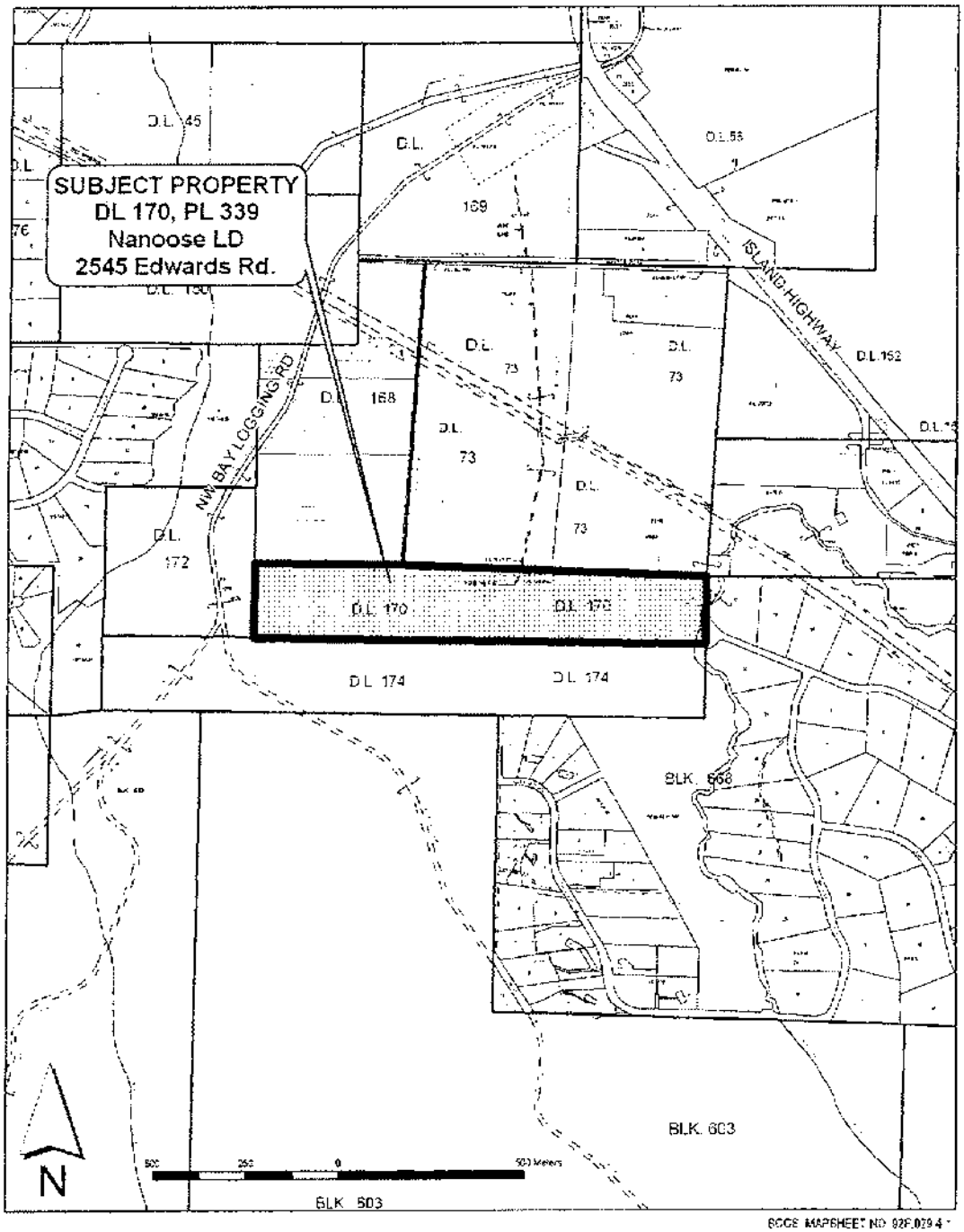




Schedule No. 4
Building Elevations (Page 3 of 3)



Attachment No. 1
Location of Subject Property



REGIONAL DISTRICT OF NANAIMO

RDN REPORT		
CAO APPROVAL		
EAP	✓	Sept 9 '08
COW		
SEP 0 2 2008		
RHD		
BOARD		

MEMORANDUM

TO: Geoff Garbutt, Manager, Current Planning **DATE:** August 15, 2008

FROM: Susan Cormie, Senior Planner **FILE:** 3060 30 60835

SUBJECT: **Development Permit Application No. 60835 – Steven Atkinson & Janet Atkinson**
Electoral Area 'C' – Jameson Road – Folio No. 768.05210.030

PURPOSE

To consider an application for a Development Permit within the Fish Habitat Protection Development Permit Area and to consider a request to relax the minimum 10% percent perimeter frontage requirement in conjunction with a 2-lot subdivision on property in the Jingle Pot area of Electoral Area 'C'.

BACKGROUND

The parent property, is 4.58 ha in size and legally described as Lot C, Section 12, Range 4, Mountain District, Plan VIP68030, is located on Jameson Road in Electoral Area 'C' *(see Attachment 1 for location of parent parcel)*. The property is zoned Rural 1 (RU1) and is within Subdivision District 'D' *(2 ha minimum parcel size with or without community services)* pursuant to the "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987". The applicants are proposing to create a 2-lot subdivision. Given that the properties are greater than 2 ha in size, two dwellings would be permitted on each proposed lot *(see Schedule No. 2 for proposed subdivision layout)*.

One mobile home, a travel trailer, and a number of accessory buildings are located on the parent property. There are also some small man-made ponds on the parcel. Surrounding land uses include rural zoned properties with Jameson Road bordering the south lot line.

Pursuant to the "Regional District of Nanaimo East Wellington – Pleasant Valley Official Community Plan Bylaw No. 1055, 1997", the property is designated within the Fish Habitat Protection Development Permit Area, in this case, for the protection of the fish habitat of Flemming and McGarrigle Creeks.

The parent parcel has a number of documents registered on title including the following:

- a covenant held by the Central Vancouver Island Health Authority restricting an area for septic disposal purposes only;
- a covenant held by the Ministry of Water, Land & Air Protection for the purposes of allowing no filling, no building, no removal of vegetation or other changes by human hands along the creek beds or within 18 m of the centre line of any creeks and restricting the location of buildings and structures to beyond 15 m from the natural boundary or 18 m from a stream centre line, whichever is greater on areas with an average slope of 5% or less and 9 m from the top of a slope on areas with an average slope of 5% or greater;

- a covenant held by the Ministry of Water, Land and Air Protection and the RDN for the purposes of defining a flood construction elevation 1.5 m above the natural boundary of any creek and establishing minimum a 15 m setback from all watercourses.

These covenants correspond with the current Bylaw No. 500, 1987 requirements for minimum setbacks for buildings and structures from watercourses.

A Development Permit has been issued for the property which limits additional creek crossings and requires that all future buildings and structures be located a minimum of 30 m from the top of the bank of the watercourse unless an additional Development Permit is issued.

The parent parcel is located within a RDN Building Service Area and is subject to the requirements of the "Regional District of Nanaimo Floodplain Management Bylaw No. 1469, 2006" at the time of building permit stage.

10% Minimum Perimeter Frontage Requirement

The proposed parcels, as shown on the plan of subdivision submitted by the applicant, will not be able to meet the minimum 10% perimeter frontage requirement pursuant to section 944 of the ***Local Government Act***. The requested frontages are as follows:

Proposed Lot No.	*Required Frontage*	*Proposed Frontage*	*% of Perimeter*
Proposed Lot 1	80.1 m	72.7 m	9.1 %
Proposed Lot 2	80.9 m	74.1 m	9.2 %

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist". The applicant has provided a riparian assessment report as part of his application.

ALTERNATIVES

1. To approve the Development Permit subject to the conditions outlined in Schedules No. 1 - 3 and approve the request to relax the minimum 10% perimeter frontage requirement for proposed lots 1 and 2.

2. To deny the Development Permit as submitted and provide staff with further direction and deny the request to relax the minimum 10% perimeter frontage requirement for proposed lots 1 and 2.

DEVELOPMENT / ENVIRONMENTAL IMPLICATIONS

The applicants have provided a Riparian Area Assessment prepared by a Qualified Environmental Professional (QEP) which has been accepted by the Ministry of Environment for those portions of McGarrigle and Flemming Creeks which cross the parcel. This report establishes a Stream Protection and Enhancement Area (SPEA) of 10.59 m for McGarrigle Creek and 17.3 m for Flemming Creek.

While the report notes that there are no development related activities proposed to occur at the time of subdivision, the report requires that a detailed Erosion and Sediment Control Plan must be developed by a Qualified Professional prior to any construction taking place and environmental monitor should be retained if any construction is planning to occur within the Riparian Area including up to 30 m from the high water mark. This means that additional Development Permits may be required prior to any further

development occurring on the proposed parcels. It is also noted that the 30 m requirement of the Riparian Report is consistent with the section 219 covenant concerning no construction within 30 m without a development permit being issued. The terms of all the registered covenant documents will have to be taken into consideration at the time of any future Development Permit application.

The established SPEA for McGarrigle Creek does not comply with the minimum watercourse setback provisions pursuant to Bylaw No. 500. The applicant's BCLS has provided a site plan showing zoning setbacks on the south side of the creek closest to Jameson Road. Staff recommends that the Riparian Assessment be attached as a schedule to the Development Permit in order to ensure that no development-related activities including buildings, storm drainage, any crossings including pipe lines for private septic or potable water, or wells occur within the SPEA. In addition, as a condition of approval, both the SPEA areas and the 30-m setback area of both creeks be clearly delineated on the ground to ensure no accidental encroachment into these areas *(see Schedule No. 1 Conditions of Approval)*.

With respect to the previous Development Permit restricting additional stream crossings, a reciprocal access agreement to the parent parcel via the property located to the west and is in place. As a result no new crossings should be required.

Existing Building Implications

The applicants have indicated that the existing mobile home will be removed. Other accessory buildings on the property, buildings and structures that do not meet the zoning requirements will be required to be removed or relocated as part of the subdivision review process *(see Schedule No. 1 Conditions of Approval)*.

Site Servicing Implications

The applicant has applied for septic disposal approval to the Central Vancouver Island Health Authority.

Bylaw No. 500, 1987 requires individual wells for each proposed parcel. Proof of potable water is subject to the approval of the Regional Approving Officer through the subdivision approval process.

The Ministry of Transportation and Infrastructure is responsible for the storm drainage. As part of the subdivision review process, the Regional Approving Officer will examine the storm water management of the parent parcel and impose conditions if required.

Frontage Relaxation / Ministry of Transportation and Infrastructure Implications

In spite of the reduced frontage, the proposed parcels will be able to support the intended residential uses permitted under Bylaw No. 500. Ministry staff have no concerns with this request for relaxation of the minimum 10% frontage.

SUSTAINABILITY IMPLICATIONS

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist". In accordance with Development Permit Guidelines and environmental best practice, water courses on the subject property will be protected, and further environmental measures may be required as development proceeds on the subject property.

VOTING

Electoral Area Directors – one vote, except Electoral Area 'B'.

SUMMARY

This is a subdivision application involving a Development Permit for the protection of the riparian areas of McGarrigle and Flemming Creeks and a request for relaxation of the minimum 10% frontage requirement for both proposed parcels in conjunction with a 2-lot subdivision for the property located adjacent to Jameson Road in Electoral Area 'C'.

The subject property is designated within the Fish Habitat Protection Development Permit Areas (DPA), in this case, for the purposes of ensuring protection of the fish habitat of McGarrigle and Flemming Creeks. The applicant has submitted a Riparian Assessment which has been accepted by the Ministry of Environment *(see Schedule No. 1 for Conditions of Approval)*. As the Riparian Assessment only considered the subdivision portion of the development of these proposed parcels, any future development will require additional riparian assessments and possibly Development Permits. In order to ensure there is no encroachment into both the SPEAs and the covenant areas, staff recommends that the property be delineated with clear markers showing both SPEAs and the covenant areas.

With respect to the request for relaxation of the minimum 10% perimeter frontage for the proposed parcels, despite the narrow frontages, there will be available building site areas outside the designated SPEAs to support intended residential uses. In addition, the Ministry of Transportation and Infrastructure staff has indicated that they have no objection at this time to the request for relaxation of the minimum 10% frontage requirement.

Given that the applicant has provided an accepted Riparian Area Assessment; as there are building site areas on the proposed parcels for residential uses; the parcel size is consistent with the Official Community Plan policies; and the Ministry of Transportation and Infrastructure is satisfied that access to each proposed parcel is achievable; staff recommends approval subject to the conditions outlined in *Schedules No. 1 and 2* of the staff report.

RECOMMENDATION

1. That Development Permit Application No. 60835 submitted by Steven Atkinson and Janet Atkinson, as part of a 2-lot subdivision proposal the property legally described as Lot C, Section 12, Range 4, Mountain District, Plan VIP68030 and designated within the Fish Habitat Protection Development Permit Area pursuant to the East Wellington – Pleasant Valley Official Community Plan Bylaw No. 1055, 1997, be approved, subject to the conditions outlined in Schedules No. 1 - 3 of the corresponding staff report.

2. That the request to relax the minimum 10% perimeter frontage requirement for proposed lots 1 and 2 as shown on Schedule No. 2 be approved.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

Schedule No. 1
Conditions of Approval
Development Permit Application No. 60835

The following sets out the conditions of approval in conjunction with Development Permit No. 60835:

1. **Subdivision**

   The subdivision of the lands shall be in substantial compliance with Schedule No. 2 (attached).

2. **Development Permit No. 60318**

   The provisions set out in Development Permit No. 60318 shall continue to apply to these proposed parcels.

3. **Riparian Assessment**

   a. The subdivision of the parent shall be developed in accordance with attached Schedule No. 3, the Riparian Areas Assessment No. 1013 prepared by EBA Engineering Consultants Ltd. and dated July 16, 2007.
   b. No development activities, other than the surveying required for subdivision, shall occur within the riparian area of Flemming and McGarrigle Creeks.

4. **Measures to Protect and Maintain the SPEA**

   a. No development activities in conjunction with the proposed subdivision shall occur within the SPEA as set out in the Riparian Area Assessment No. 1013.
   b. Applicant's QEP to provide written confirmation to the Regional District of Nanaimo that no works associated with the subdivision occurred within the SPEA prior to the applicant requesting written confirmation of RDN related subdivision requirements.

5. **Demarcation of SPEA and 30-metre Setback Area**

   a. The SPEAs, as established in the Riparian Assessment Report No. 1013, shall be clearly marked with permanent signage posted at a minimum of 10 m between posts to the satisfaction of the Regional District of Nanaimo.
   b. The signs shall be a minimum of 0.3 m by 0.46 m in size complete with wording explaining the riparian area to the satisfaction of the Regional District of Nanaimo.
   c. The 30 m setback area from Flemming and McGarrigle Creeks shall be clearly marked with temporary snow fencing or posts to the satisfaction of the Regional District of Nanaimo.

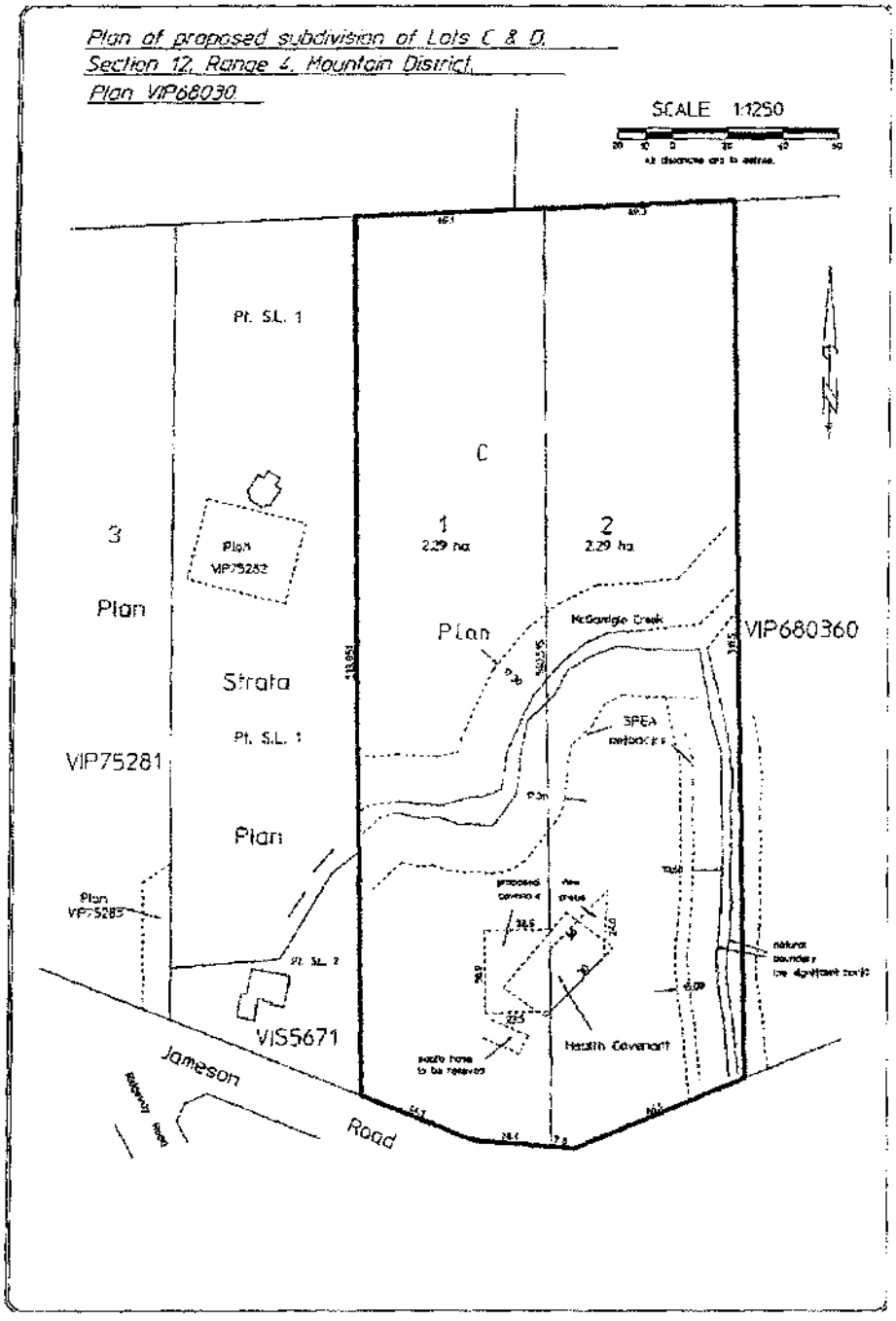
6. **Future Development**

   a. The requirements of Section 4 Measures to Protect and Maintain the SPEA Subsection 6 Sediment and Erosion Control shall be provided to the Regional District prior to any construction taking place within the proposed parcels.
   b. Any future development of the proposed parcels shall be subject to a riparian assessment and a corresponding development permit as required.

7. **Existing Buildings and Structures**

   Existing buildings on the parent parcel shall be required to meet current bylaw provisions and be removed in order to ensure compliance with the current bylaw provisions.

Schedule No. 2
Proposed Plan of Subdivision
Development Permit Application No. 60835



Schedule No. 3
Riparian Areas Assessment No. 1013
Development Permit Application No. 60835

FORM 1
Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Riparian Areas Regulation Assessment Report

Please refer to submission instructions and assessment report guidelines when completing this report.

Date: 2008-07-16

I. Primary QEP Information

First Name	Nigel	Middle Name Steven	
Last Name	Cavanagh		
Designation	R.P. Bio.	Company EBA Engineering Consultants	
Registration #	1584	Email ncavanagh@eba.ca	
Address	#1 – 4376 Boban Drive		
City	Nanaimo	Postal/Zip V9T 6A7	Phone # (250) 756-2256
Prov/state	BC	Country Canada	

II. Secondary QEP Information (use Form 2 for other QEPs)

First Name		Middle Name	
Last Name			
Designation		Company	
Registration #		Email	
Address			
City		Postal/Zip	Phone #
Prov/state		Country	

III. Developer Information

First Name	Steve	Middle Name	
Last Name	Atkinson		
Company			
Phone #	(250) 755-4077	Email steve@freshbcsalmon.com	
Address	2948 Jameson Road		
City	Nanaimo	Postal/Zip V9R 6W8	
Prov/state	BC	Country Canada	

IV. Development Information

Development Type	Subdivision: 6 or less Single Family Lots		
Area of Development (ha)	4.58	Riparian Length (m)	350.8 m
Lot Area (ha)	4.58	Nature of Development	Redevelopment
Proposed Start Date	July 2008	Proposed End Date	August 2008

V. Location of Proposed Development

Street Address (or nearest town)	2910 and 2930 Jameson Road						
Local Government	City of Nanaimo			City Nanaimo			
Stream Name	McGarrigle Creek and Flemming Creek						
Legal Description (PID)	024-312-339 (Lot C)			Region Vancouver Island			
Stream/River Type	stream			DFO Area South Coast			
Watershed Code	920-395400-37900 (McGarrigle Creek)						
Latitude	49	38	40	Longitude	124	41	16

Completion of Database Information includes the Form 2 for the Additional QEPs, if needed.
Insert that form immediately after this page.

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Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Table of Contents for Assessment Report

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Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Section 1. Description of Fisheries Resources Values and a Description of the Development proposal

(Provide as a minimum: Species present, type of fish habitat present, description of current riparian vegetation condition, connectivity to downstream habitats, nature of development, specific activities proposed, timelines)

The site was visited on April 15, 2008 by Nigel Cavanagh, R.P. Bio., and Shawneen Dallyn, Environmental Scientist. Conditions were overcast. Flows were moderate at the time of the site visit. Access to the study area is via Jameson Road which is located south of Highway 19, near the City of Nanaimo. The area is currently mostly undeveloped forest with minor landscaping/horticultural plantings and some residential use.

Two watercourses were assessed during the site visit – McGarrigle Creek (stream 1) and Flemming Creek (stream 2). Both watercourses connect to known fish bearing water downstream of the site. Flemming Creek is a tributary to McGarrigle Creek. This stream is reportedly seasonal with little to no flow in summer months. Neither FishWizard nor the Fisheries Inventory Summary System (FISS) contain any records for Flemming Creek. However, because it feeds into fish bearing waters (McGarrigle Creek) it was considered to be fish habitat.

McGarrigle Creek is a second order stream that flows into Millstone River, a known fish bearing watercourse. FishWizard and FISS list coho salmon (Oncorhynchus kisutch), rainbow trout (Oncorhynchus mykiss) and cutthroat trout (Oncorhynchus clarkia) as present in McGarrigle Creek. A waterfall exists downstream of the site and anecdotal information suggests that this barrier is impassable to fish. The Ministry of Environment's Sensitive Ecosystem Inventory (1997) identifies McGarrigle Creek as a sensitive riparian habitat.

For both creeks, channel gradient was measured with a clinometer and several readings were taken in an upstream and downstream direction. Channel width measurements were obtained starting at the upstream end and working in a downstream direction for McGarrigle Creek and from downstream to upstream in Flemming Creek. In total, 11 channel width measurements were obtained approximately every 10 m on each creek. Channel width, or bankfull width, was measured using a standard tape measure. The point where the bankfull width measurement was taken was indicated by a change in vegetation and/or sediment texture and by the edges of rooted terrestrial vegetation. The indicator used to identify the bankfull width were exposed roots, presence of fluvial sediments and undercut banks. The high water mark was visually identified and staked in the field with a cedar stake and pink flagging tape.

McGarrigle Creek: The banks were well defined but not confined. The area surrounding this creek appeared relatively flat. Channel substrate was dominated by gravel and small cobbles with a lesser component of fines. Occasional undercut banks were encountered. The riparian zone was well developed and contributed abundant over-hanging vegetation. Salmonberry (Rubus spectabilis), salal (Gaultheria shallon) and sword fern (Polystichum munitum) were the most common vegetation encountered. Tree species included western red cedar (Thuja plicata) and Douglas fir (Pseudotsuga menziesii). No fish or wildlife were observed in or around McGarrigle Creek.

Flemming Creek: Near the confluence with McGarrigle Creek, Flemming Creek had been influenced by a large woody debris jam. This jam was causing the water to pool to approximately 20 m from the confluence. Channel substrate was generally dominated by gravels and some fines

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Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

with occasional cobbles. The riparian zone was well developed and contributed abundant overhanging vegetation. Salmonberry (Rubus spectabilis), salal (Gaultheria shallon) and sword fern (Polystichum munitum) were the most common vegetation encountered. Tree species included western red cedar (Thuja plicata) and Douglas fir (Pseudotsuga menziesii). A vegetated island was encountered approximately 80 m from the confluence with McGarrigle Creek. The island was approximately 10 m long and 5 m wide. It was considered when obtaining channel width measurements. No fish or wildlife were observed in or around Flemming Creek.

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Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Section 2. Results of Riparian Assessment (SPEA width)

Attach or insert the Form 3 or Form 4 assessment form(s). Use enough duplicates of the form to produce a complete riparian area assessment for the proposed development

McGarrigle Creek: After removing the high and low values, the overall average bankfull width for McGarrigle Creek was found to be 3.53 m and gradient was 2.25 %. Based on the gradient, channel width and observations obtained, the channel type was determined to be riffle pool. The vegetation type was Tree. Our assessment determined that the SPEA would be 10.59 m from the high water mark.

Flemming Creek: After removing the high and low values, the overall average width for Flemming Creek was found to be 5.77 m and gradient was 1.5 %. Based on the gradient, channel width and observations obtained, the channel type was determined to be riffle pool. The vegetation type was Tree. The SPEA for Flemming Creek was determined to be 17.3 m from the high water mark.

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Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

2. Results of Detailed Riparian Assessment

Refer to Chapter 3 of Assessment Methodology

Date: 2008-07-16

Description of Water bodies involved (number, type): 1. stream

Stream	X
Wetland	
Lake	
Ditch	
Number of reaches	1
Reach #	1

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)

	Channel Width(m)	Gradient (%)
starting point	3.35	
upstream	3.7	
	4.0	
	3.7	
	3.1	2.5
downstream	3.2	
	3.0	
	4.05	
	3.2	2.0
	4.6	
	3.5	
Total: minus high flow	31.8	4.5
mean	3.53	2.25

	R/P	C/P	S/P
Channel Type	X		

I, Nigel Cavanagh, hereby certify that:
a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
b) I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson;
c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes

I, Nigel Cavanagh, hereby certify that:
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Polygon No:	1			Method employed if other than TR
	LC	SH	TR	
SPVT Type			X	
Polygon No:				Method employed if other than TR
	LC	SH	TR	
SPVT Type				

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Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Polygon No:				Method employed if other than TR	
SPVT Type					

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)	10.59							
Litter fall and insect drop ZOS (m)	10.59							
Shade ZOS (m) max	10.59	South bank	Yes		No	X		
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)							
Ditch Fish Bearing	Yes		No		If non-fish bearing insert no fish bearing status report			
SPEA maximum	10.59	(For ditch use table3-7)						

Segment No:		If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)								
Litter fall and insect drop ZOS (m)								
Shade ZOS (m) max		South bank	Yes		No			
SPEA maximum		(For ditch use table3-7)						

Segment No:		If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)								
Litter fall and insect drop ZOS (m)								
Shade ZOS (m) max		South bank	Yes		No			
SPEA maximum		(For ditch use table3-7)						

I Nigel Cavanagh, hereby certify that:
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c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
d) in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

Comments

McGarrigle Creek: After removing the high and low values, the overall average bankfull width for McGarrigle Creek was found to be 3.53 m and gradient was 2.25 %. Based on the gradient, channel width and observations obtained, the channel type was determined to be riffle pool. The vegetation type was Tree. Our assessment determined that the SPEA would be 10.59 m from the high water mark.

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2. Results of Detailed Riparian Assessment

Refer to Chapter 3 of Assessment Methodology

Date: 2008-07-16

Description of Water bodies involved (number, type): 2, stream

Stream	X
Wetland	
Lake	
Ditch	
Number of reaches	1
Reach #	1

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)

	Channel Width(m)	Gradient (%)
starting point	7.6	
upstream	5.75	2.0
	3.6	
	4.2	
	6.9	
downstream	3.6	
	4.9	
	6.0	
	10.6	1.0
	8.8	
	4.2	
Total: minus high flow	51.95	3.0
mean	5.77	1.5

	R/P	C/P	S/P
Channel Type	X		

I, Nigel Cavanagh, hereby certify that:
e) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
f) I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson;
g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
h) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes

I, Nigel Cavanagh, hereby certify that:
e) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
f) I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson ;
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		LC	SH	TR	Method employed if other than TR
Polygon No:	1				
SPVT Type				X	
Polygon No:					
SPVT Type					

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Polygon No:				Method employed if other than TR
SPVT Type				

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)	17.3							
Litter fall and insect drop ZOS (m)	15 (max)							
Shade ZOS (m) max	17.3	South bank	Yes		No	X		
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)							
Ditch Fish Bearing	Yes		No		If non-fish bearing insert no fish bearing status report			
SPEA maximum	17.3	(For ditch use table 3-7)						

Segment No:		If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)								
Litter fall and insect drop ZOS (m)								
Shade ZOS (m) max		South bank	Yes		No			
SPEA maximum		(For ditch use table 3-7)						

Segment No:		If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons						
LWD, Bank and Channel Stability ZOS (m)								
Litter fall and insect drop ZOS (m)								
Shade ZOS (m) max		South bank	Yes		No			
SPEA maximum		(For ditch use table 3-7)						

I, Nigel Cavanagh, hereby certify that:
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Comments

Flemming Creek: After removing the high and low values, the overall average width for Flemming Creek was found to be 5.77 m and gradient was 1.5 %. Based on the gradient, channel width and observations obtained, the channel type was determined to be riffle pool. The vegetation type was Tree. The SPEA for Flemming Creek was determined to be 17.3 m from the high water mark.

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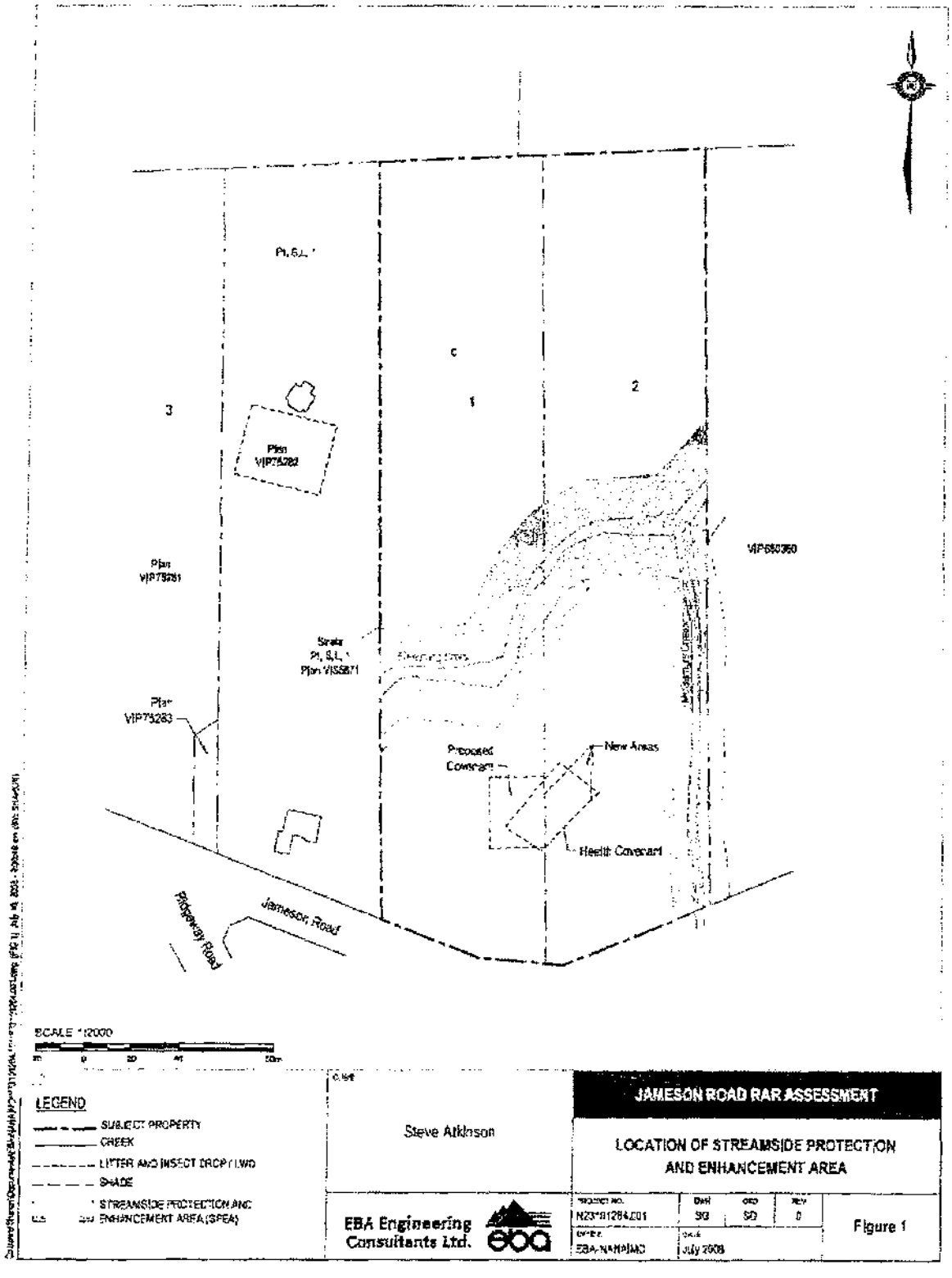
Section 3. Site Plan

Insert jpg file below

Site Plan


Pt. S.L.
C
1
2
3
Plan VIP75282
Plan VIP75281
Plan VIP75283
Strata Pt. S.L. Plan VIS5871
VIP60350
Proposed Covenant
New Areas
Restrictive Covenant
Jameson Road
Ridgeway Road
SCALE 1:2000
LEGEND
SUBJECT PROPERTY
CREEK
LITTER AND INSECT DROP (LWD
SHADE
STREAMSIDE PROTECTION AND ENHANCEMENT AREA (SPEA)
Steve Atkinson
JAMESON ROAD RAR ASSESSMENT
LOCATION OF STREAMSIDE PROTECTION AND ENHANCEMENT AREA
EBA Engineering Consultants Ltd.
eoa
Figure 1
July 2008

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Section 4. Measures to Protect and Maintain the SPEA

This section is required for detailed assessments. Attach text or document files, as need, for each element discussed in chapter 1.1.3 of Assessment Methodology. It is suggested that documents be converted to PDF *before* inserting into the assessment report. Use your "return" button on your keyboard after each line. You must address and sign off each measure. If a specific measure is not being recommended a justification must be provided.

1. Danger Trees	A danger tree assessment was not performed. Since the development will be located beyond the SPEA, there are unlikely to be any trees that would affect development
I, Nigel Cavanagh, hereby certify that: i) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; j) I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson. k) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
2. Windthrow	The proposed development is not expected to increase the risk of windthrow.
I, Nigel Cavanagh, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
3. Slope Stability	No signs of significant bank instability were observed and the topography of the site is relatively flat, therefore a slope stability assessment was not conducted.
I, Nigel Cavanagh, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
4. Protection of Trees	No vegetation is proposed to be removed from the SPEA. Trees located in the SPEA as well as roofs and drip zones will not be affected.
I, Nigel Cavanagh, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
5. Encroachment	This is a subdivision application and no construction plans are available at this time. Future construction activities should meet the SPEA.
I, Nigel Cavanagh, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson;	

FORM 1

Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
6. Sediment and Erosion Control	Subdivision phase only. A detailed ESCP (Erosion and Sediment Control Plan) must be developed by a qualified professional prior to any construction taking place.
I, Nigel Cavanagh, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson ; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
7. Stormwater Management	This is a subdivision application therefore no changes to current stormwater management are proposed.
I, Nigel Cavanagh, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	
8. Floodplain Concerns (highly mobile channel)	The channel was well confined and did not appear to be highly mobile so a floodplain assessment was not conducted.
I, Nigel Cavanagh, hereby certify that: a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*; b. I am qualified to carry out this part of the assessment of the development proposal made by the developer Steve Atkinson; c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and in carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation	

FORM 1
Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Section 5. Environmental Monitoring

Attach text or document files explaining the monitoring regimen Use your "return" button on your keyboard after each line. It is suggested that all document be converted to *PDF before* inserting into the PDF version of the assessment report. Include actions required, monitoring schedule, communications plan, and requirement for a post development report.

No Environmental Monitoring is required for this subdivision phase.
A part-time environmental monitor (EM) should be retained if construction is planned to occur within the RAA (between 30 m from the HWM and the SPEA). The EM will have a range of on-site duties, such as regulatory reporting, on-site data collection and coordination.
The EM will work with the contractors to identify mitigation measures and help resolve environmental problems as they arise. The EM will also have the authority to stop or curtail work that, in their opinion, threatens or has the potential to threaten the environment.
After construction is completed in future, a post development report is required by the Ministry of Environment. This report must be prepared after development has taken place and then be submitted to the electronic Notification System.

FORM 1
Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Section 6. Photos

Provide a description of what the photo is depicting, and where it is in relation to the site plan.

FORM 1
Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

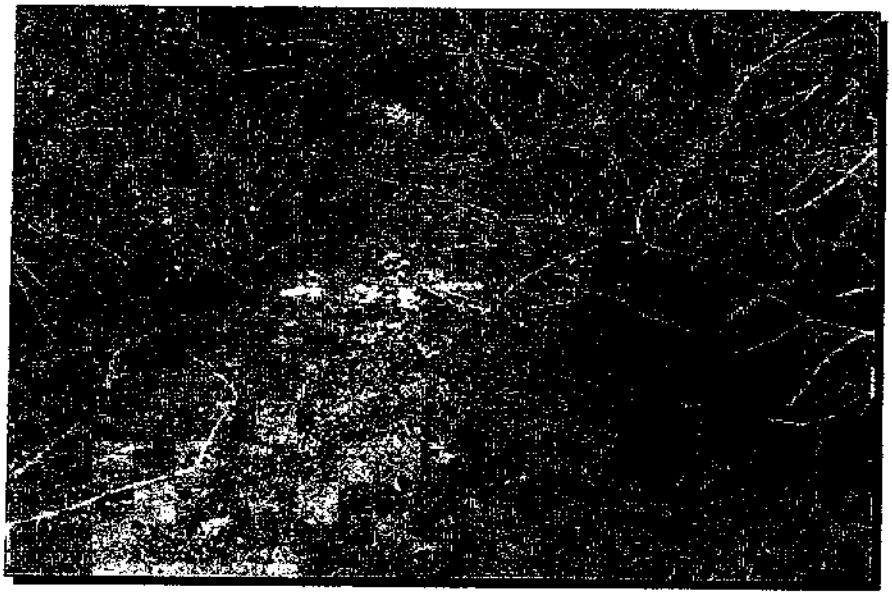


Photo 1
Typical crossection of McGarrigle Creek.

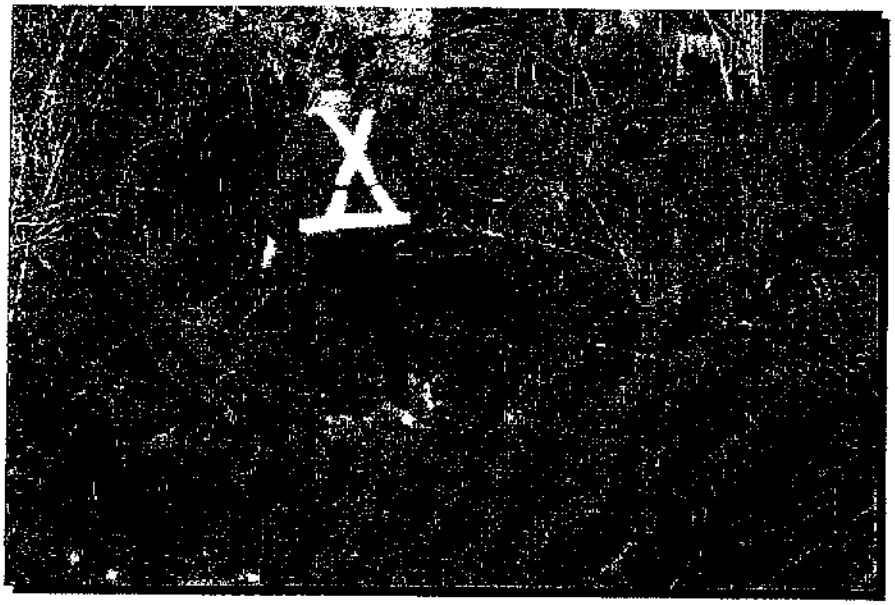


Photo 2
McGarrigle Creek, at approximate centre of Property.

FORM 1
Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

Section 7. Professional Opinion

Assessment Report Professional Opinion on the Development Proposal's riparian area.

Date 2008-07-16

1. I/We Nigel Cavanagh

Please list name(s) of qualified environmental professional(s) and their professional designation that are involved in assessment.)

hereby certify that:

a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
b) I am/We are qualified to carry out the assessment of the proposal made by the developer Steve Atkinson , which proposal is described in section 3 of this Assessment Report (the "development proposal"),
c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
d) In carrying out my/our assessment of the development proposal, I have/We have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation; AND

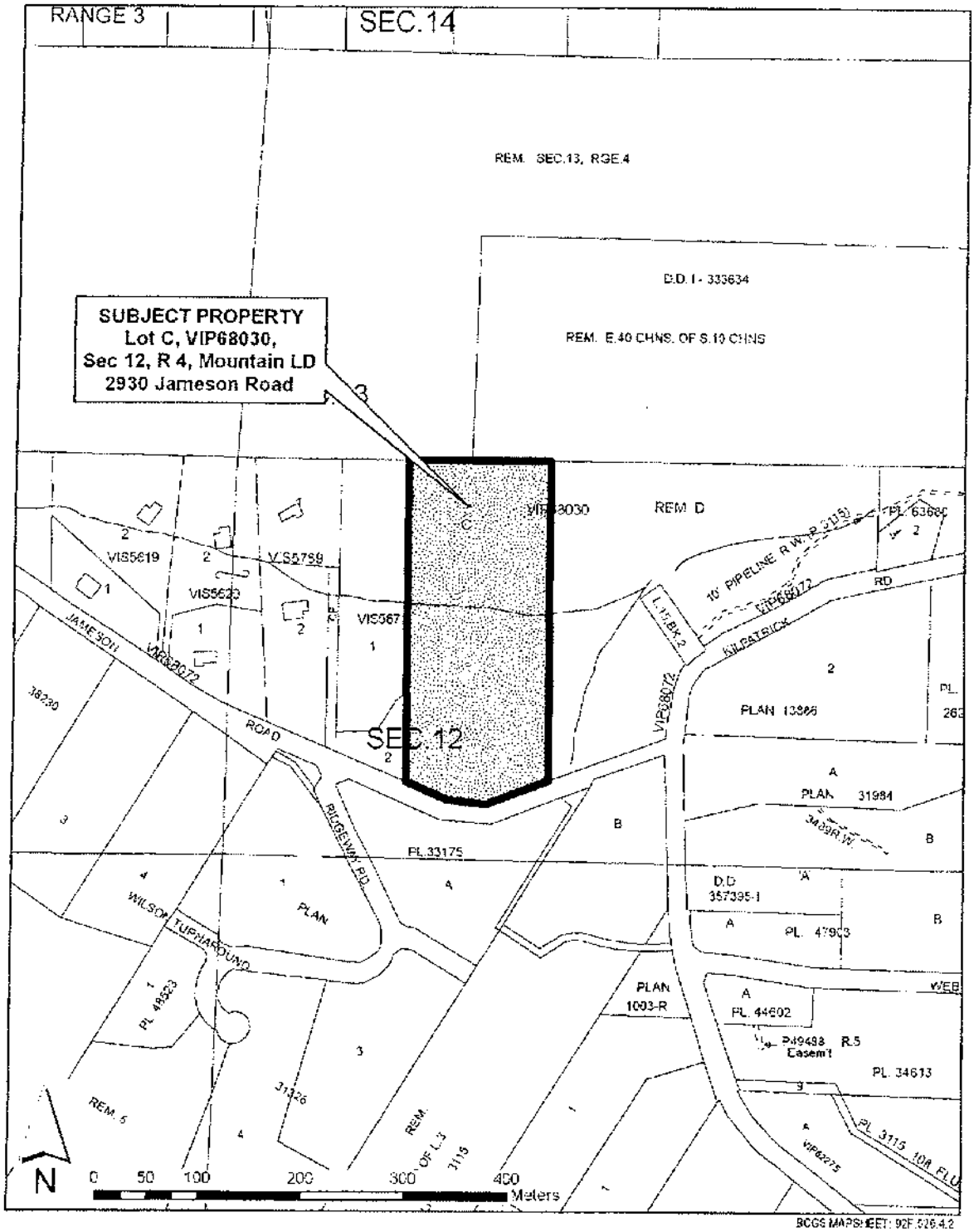
2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

a) ☐ if the development is implemented as proposed by the development proposal there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed, OR
(Note: include local government flex letter, DFO Letter of Advice, or description of how DFO local variance protocol is being addressed)

b) ☒ if the streamside protection and enhancement areas identified in this Assessment Report are protected from the development proposed by the development proposal and the measures identified in this Assessment Report as necessary to protect the integrity of those areas from the effects of the development are implemented by the developer, there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed.

[NOTE: "qualified environmental professional" means an applied scientist or technologist, acting alone or together with another qualified environmental professional, if
(a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association,
(b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and
(c) the individual is acting within that individual's area of expertise.]

Attachment No. 1
Development Permit Application No. 60835
Location of Subject Property



REGIONAL DISTRICT OF NANAIMO

RDN REPORT
CAO APPROVAL
EAP ✓ Sept 9 '08
COW
SEP 02 2008
RHD
BOARD

MEMORANDUM

TO: Geoff Garbutt
Manager, Community Planning

DATE: August 14, 2008

FROM: Elaine Leung
Planner

FILE: 3090 30 90811
768.04667.020

SUBJECT: **Development Variance Permit Application No. 90811 – Phillips**
Lot 20, Sections 16 &17, Range 8, Cranberry District, Plan VIP80144
Electoral Area 'A', RDN Map Ref. No. – 92G.011.2.1

PURPOSE

To consider an application for a Development Variance Permit for the construction of a residential accessory building located at 1999 Woodridge Road.

BACKGROUND

The subject property is legally described as Lot 20, Sections 16 & 17, Range 8, Cranberry District, Plan VIP80144 in Electoral Area 'A' (*See attached subject property map*). The parcel is approximately 0.20 hectares in area and is zoned Residential 2 (RS2), pursuant to "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987." It is bordered by residential lots to the west and south, and McMillan Road to the east.

The subject property lies within the Fish Habitat Protection Development Permit Area (DPA). The applicant has indicated that there are no streams on or within 30 metres of the subject property and therefore the proposed development is exempt from the Fish Habitat Protection Development Permit Area guidelines.

Requested Variances

The applicants have applied to vary Section 3.4.62 – Minimum Setback Requirements of "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987," as follows:

1. The 'other' lot line setback is requested to be relaxed from 5.0 metres to 2.0 metres, as shown on the site plan submitted by the applicant.

ALTERNATIVES

1. To approve Development Variance Permit No. 90811 subject to the conditions outlined in Schedule Nos. 1-3 and the notification requirements of the *Local Government Act*.
2. To deny the request for a Development Variance Permit.

BOARD POLICY B1.5

RDN Policy B1.5 (Regional District of Nanaimo Development Variance Permit, Development Permit with Variance and Floodplain Exemption Application Evaluation Policy) provides staff with guidelines for reviewing and evaluating Development Variance Permit applications. The policy requires that the potential impacts of the variance are warranted by the need for the variance. The applicant has submitted a letter with respect to the requested variance, stating the location of the accessory building would act as a buffer to the gas station located across the street. Additionally, as there is existing landscaping on the northern portion of the property, and covenants on title related to the southern portion of the property, the available building envelope is limited.

LAND USE AND DEVELOPMENT IMPLICATIONS

Staff conducted a site visit and noted a gasoline station across the street, to the east of the subject property. The location of the proposed accessory building would act as a privacy buffer, blocking light and noise from the gas station to the applicant's existing residence. The subject property is relatively flat with a slight increase in elevation towards the northern portion of the property onto Woodridge Road due to existing landscaping.

As the subject property is a corner lot, Woodridge Road is determined as the 'front' lot line as it is the shortest of the two road lines, and McMillan Road is considered an 'other' lot line. The applicant requests to vary the 'other lot line' setback from the required 5.0 metres to 2.0 metres. The proposed accessory building will be 384 m^2 in size, and will meet the maximum height requirement. The location of the proposed accessory building is outlined on the site plan attached as Schedule No. 2.

The applicant has submitted a survey prepared by Chris Everett Land Surveying, which shows a portion of the existing fence encroaching onto MacMillan Road. Staff note that as the Ministry of Transportation and Infrastructure (MOTI) is the body accountable for road issues within the RDN, the Regional District of Nanaimo is not requesting further action from the applicant, at this time. Staff has advised the applicant that the Ministry may require removal of the fence at their request. The Ministry has issued a permit dated June 10, 2008, to reduce the setback to 2.0 metres to permit the construction of the accessory building. As a condition of approval, the applicant is required to obtain a variance from the RDN prior to construction. The applicant has also indicated that their primary access would be off of Woodridge Road, and would not use MacMillan Road.

Additionally, there are covenants on title which restrict construction on the southern half of the subject property to accommodate a sewer area. As a result, the remaining buildable space would be limited to a small portion of the property.

Comments were received from the Building and Bylaw Department with no concerns with the application, as presented.

Public Consultation Process

As part of the required public notification process, pursuant to the ***Local Government Act***, property owners and tenants located within a 50 metre radius, will receive a direct notice of the proposal, and will have an opportunity to comment on the proposed variance, prior to the Board's consideration of the application.

SUSTAINABILITY IMPLICATIONS

The applicant has completed the "Sustainable Community Builder Checklist", as per Board policy. There are no sustainability implications related to this application.

VOTING

Electoral Area Directors – one vote, except Electoral Area 'B'.

SUMMARY/CONCLUSIONS

This is an application for a Development Variance Permit to vary the 'other' lot line setback for the construction of a residential accessory building. The proposed variance, if approved, would reduce the required setback from 5.0 metres to 2.0 metres (Section 3.4.62 of "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987," Minimum Setback Requirements) as shown on attached Schedule No. 1.

The applicant has indicated the proposed accessory building would act as a privacy buffer from noise and light to the gas station across the street. There are currently two existing covenants on title which prevent construction on the southern portion of the property due to a septic area. Furthermore, as the applicant has existing landscaping at the north portion of the property fronting onto Woodridge Road, the remaining buildable area remains limited. The proposed variance does not appear to have a negative impact on the adjacent property owners, as there are no notable views present from the subject property or from neighbouring properties. Staff recommend approval of the request.

RECOMMENDATION

That Development Variance Permit Application No. 90811, to permit the construction of a residential accessory building located at Lot 20, Sections 16 & 17, Range 8, Cranberry District, Plan VIP80144 be approved subject to the conditions outlined in Schedules No. 1-3 and notification requirements of the ***Local Government Act***.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

Schedule No. 1
Terms of Development Variance Permit No. 90811

Variances

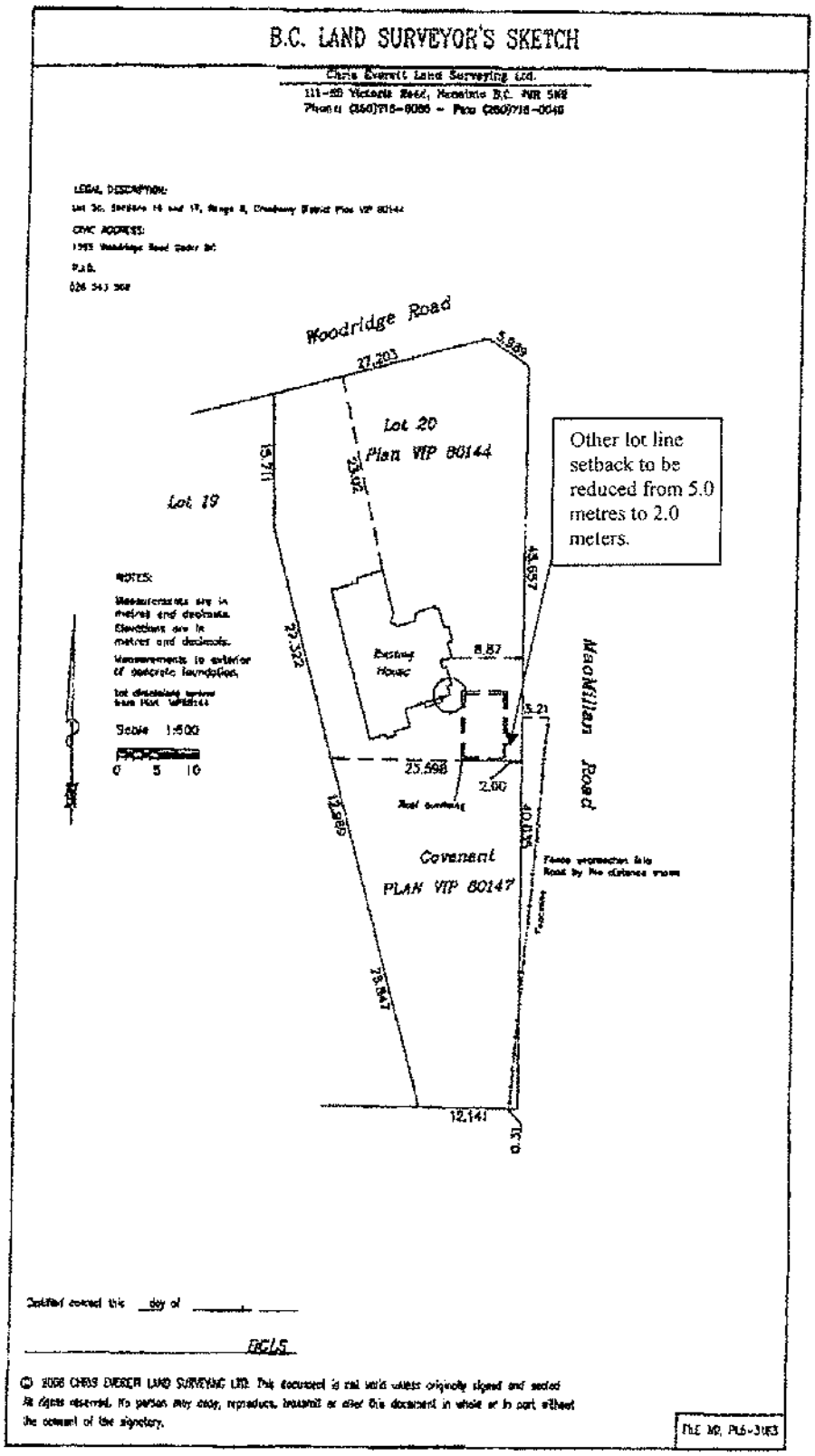
Development Variance Permit No. 90811 varies **Section 3.4.62 – Minimum Setback Requirements** of "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987," as follows:

1. The 'other' lot line setback is reduced from 5.0 metres to 2.0 metres for the construction of a residential accessory building as submitted by the applicant and attached as Schedule No. 2.

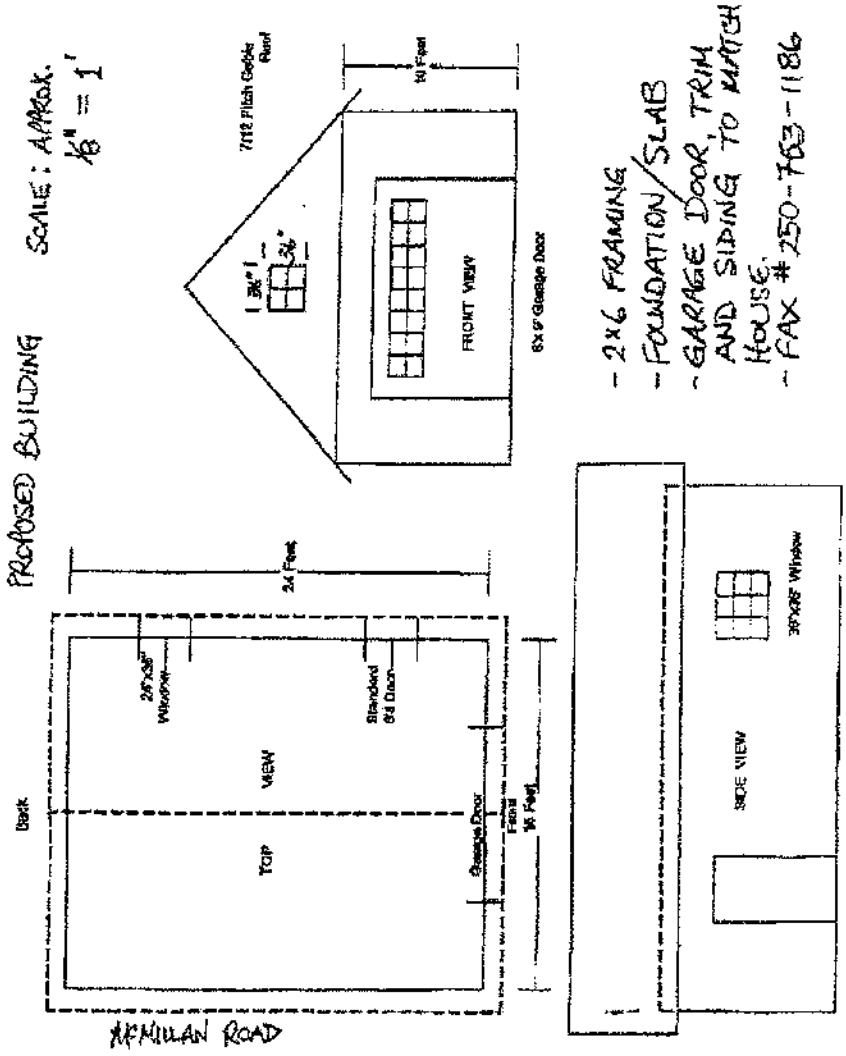
Conditions of Approval

1. The accessory building shall be sited in accordance with survey prepared by Chris Everett, received July 18, 2008 and attached as *Schedule No. 2.*
2. The accessory building elevations shall be developed in accordance with the Building Elevations submitted by the applicant attached as *Schedule No. 3.*
3. The applicant is required to provide confirmation of building setbacks by a British Columbia Land Surveyor at the final inspection of the dwelling.

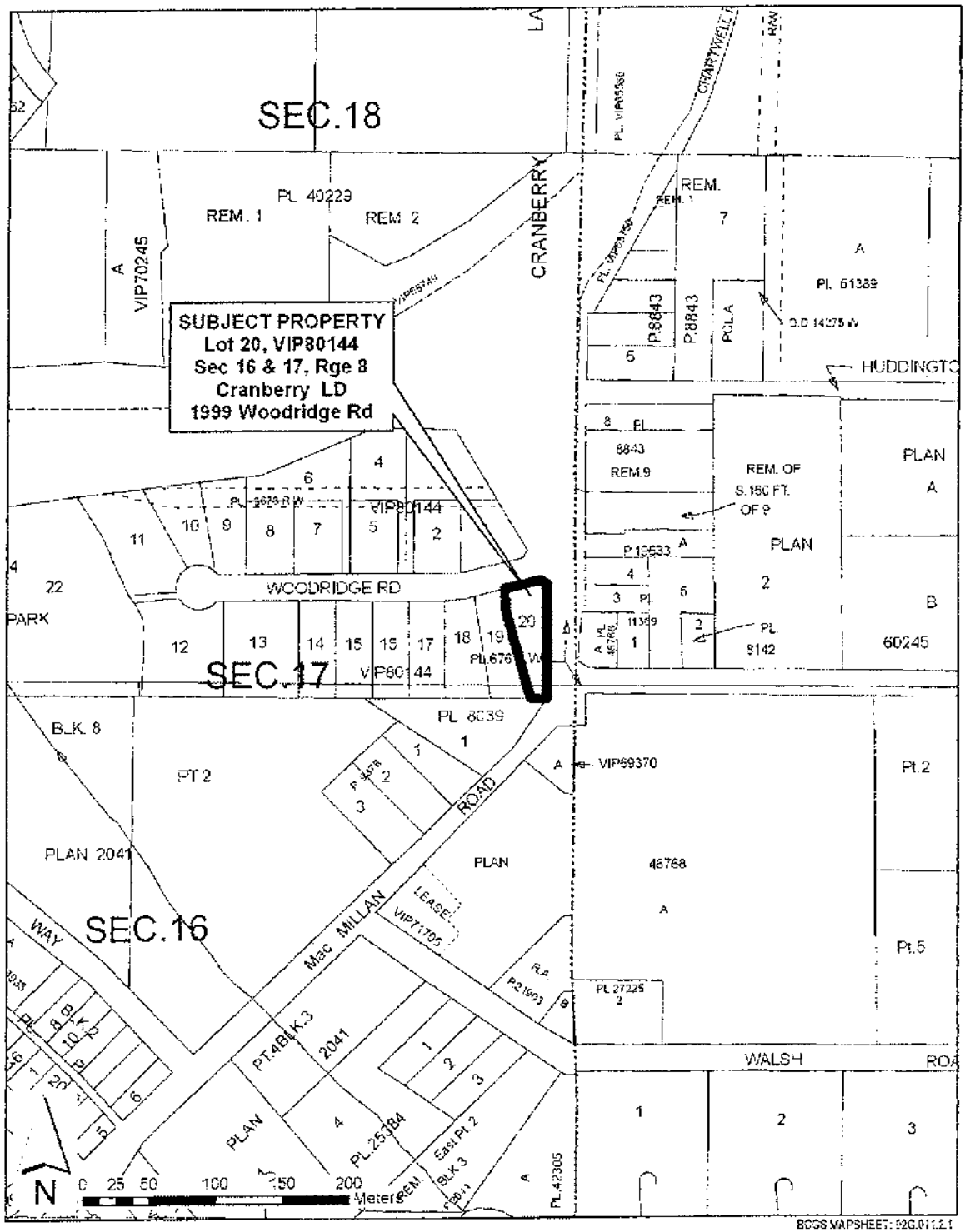
Schedule No. 2
Site Plan



Schedule No. 3
Building Elevations



Attachment No. 1
Location of Subject Property



REGIONAL DISTRICT OF NANAIMO

RDN REPORT
CAO APPROVAL
EAP ✓ Sept 9 '08
COW
SEP 02 2008
RHD
BOARD

MEMORANDUM

TO: Geoff Garbutt, Manager of Community Planning **DATE:** August 26, 2008

FROM: Lainya Rowett, Planner **FILE:** 3090 30 90812

SUBJECT: **Development Variance Permit Application No. 90812 – Kathryn Alexander**
Lot 4, District Lot 28, Newcastle District, Plan 22249
Electoral Area 'H'

PURPOSE

To consider an application for a Development Variance Permit to vary the minimum setback requirement for the front lot line, and the minimum setback requirement to a watercourse, in order to permit the development of a new single dwelling unit and attached garage.

BACKGROUND

This is an application to vary the minimum setback requirements to permit the construction of one single dwelling unit and attached garage on a residential property located at 5093 Seaview Drive in Electoral Area 'H,' legally described as Lot 4, District Lot 28, Newcastle District, Plan 22249 (see *Schedule No.1 for Subject Property Map*). The property is surrounded by residential lots and with the Strait of Georgia located nearby, north of Shoreline Drive.

The subject property (approximately 1,574 m^2) is zoned Residential 2 (RS2) pursuant to "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987," and is designated Rural Residential in the Regional District of Nanaimo Electoral Area 'H' Official Community Plan Bylaw No. 1335, 2003." The subject property is also located within the Environmentally Sensitive Features (Aquifer Protection) and Fish Habitat Protection Development Permit Areas (DPA) of this OCP.

There is a culverted watercourse running underground through the westerly side of the property that discharges onto a steep embankment adjacent to the subject property. Due to steep topography and lack of accessibility for fish, the enclosed watercourse is not fish bearing. The development is exempt from the Fish Habitat Protection DPA guidelines. The proposed development also meets the exemption guidelines for a development permit for Aquifer Protection, given that the development is limited to a single dwelling unit.

The applicant has advised that the existing dwelling on the property requires significant seismic upgrades that cannot be achieved on the existing foundation. Instead, the applicant proposes to construct a new dwelling further away from the top of bank and closer to Seaview Drive (see *Schedule No. 3* for Building Elevations). This location is consistent with the recommendations of a geotechnical assessment prepared by Lewkowich Geotechnical Engineering Ltd. for this property (*Schedule No. 4*), including an increased

rear lot line setback of 7.0 m, not 2.0 m as required in the RS2 Zone, for the principal dwelling and attached structures.

The minimum setback requirement for buildings and structures in this zone is 8.0 m from the front lot line. The proposed building would be setback approximately 3.4 m, to the overhang of the garage, from the front lot line (see *Schedule No. 2* for Survey Plan). Therefore, a variance is needed to reduce the front lot line setback requirement from 8.0 m to 3.4 m.

In addition, Bylaw No. 500 requires a minimum setback of 15.0m to a watercourse, including watercourses that are enclosed or in a conduit. The proposed dwelling would be located approximately 5.0 m away from the culverted watercourse on the property (see *Schedule No. 2*). Therefore, a variance is needed to reduce the minimum setback requirement to a watercourse from 15.0 m to 5.0 m.

ALTERNATIVES

1. To approve the Development Variance Permit as submitted subject to the conditions outlined in Schedules No. 1 to 3.

2. To deny the Development Variance Permit.

LAND USE AND DEVELOPMENT IMPLICATIONS

Approval of the requested variance would permit the proposed development of a new single dwelling unit and attached garage on the subject property with a reduced setback to the front lot line, and a reduced setback to a culverted watercourse. The front lot line setback to the existing dwelling (overhang) is approximately 3.89 m, so the proposed setback is only 0.5 of a metre closer to the road than the existing dwelling.

From staff's assessment of this application the proposed variances are reasonable and would permit a building to be constructed in a similar location as the existing dwelling, and dwellings on adjacent lots, as well as improve the location of the building envelope. Therefore, staff does not have any concerns with the proposed variances.

SUSTAINABILITY IMPLICATIONS

In keeping with Regional District of Nanaimo Board policy, the applicant has completed the "Sustainable Community Builder Checklist" The proposed variances would facilitate infill development on an existing lot. The applicant proposes to retain trees and to locate the development outside of the sensitive lands (steep embankment) within the property. The design of the new dwelling will also improve human health and safety through seismic upgrades, south facing windows to maximize solar gain, and the replacement of an existing septic treatment system.

PUBLIC CONSULTATION IMPLICATIONS

As part of the required public notification process, pursuant to the ***Local Government Act***, property owners located within a 50 metre radius, must receive notice of the proposal and will have an opportunity to comment on the proposed variance, prior to the Board's consideration of the permit.

SUMMARY/CONCLUSIONS

This is an application to vary the minimum setback requirements of the RS2 Zone to facilitate the construction of a new single dwelling unit. The RS2 zone requires buildings and structures to be located a minimum of 8.0 m from the front lot line, and Bylaw No. 500 requires a minimum setback of 15.0 m from a watercourse. The proposed development on the subject property requires a minimum setback of 3.4 m from the front lot line, and 5.0m from a culverted watercourse. Given the lack of negative impacts on the subject property or adjoining lots, and the geotechnical recommendations that will be conditional to this permit, staff recommends approval of the Development Variance Permit as submitted.

RECOMMENDATION

That Development Variance Permit application No. 90812 submitted by Christo Kuun Design & Construction Ltd. for the property legally described as Lot 4, District Lot 28, Newcastle District, Plan 22249, be approved subject to *Schedules No. 1 to 3* of the staff report and the notification requirements pursuant to the *Local Government Act*.

Report Writer

General Manager Concurrence

Manager Concurrence

CAO Concurrence

COMMENTS:

Devsvs/reports/2000/

Schedule No. '1'
Conditions of Development Variance Permit No. 90812
5093 Seaview Drive

The following sets out the terms of Development Variance Permit No. 90812:

Bylaw No. 500, 1987 – Variance

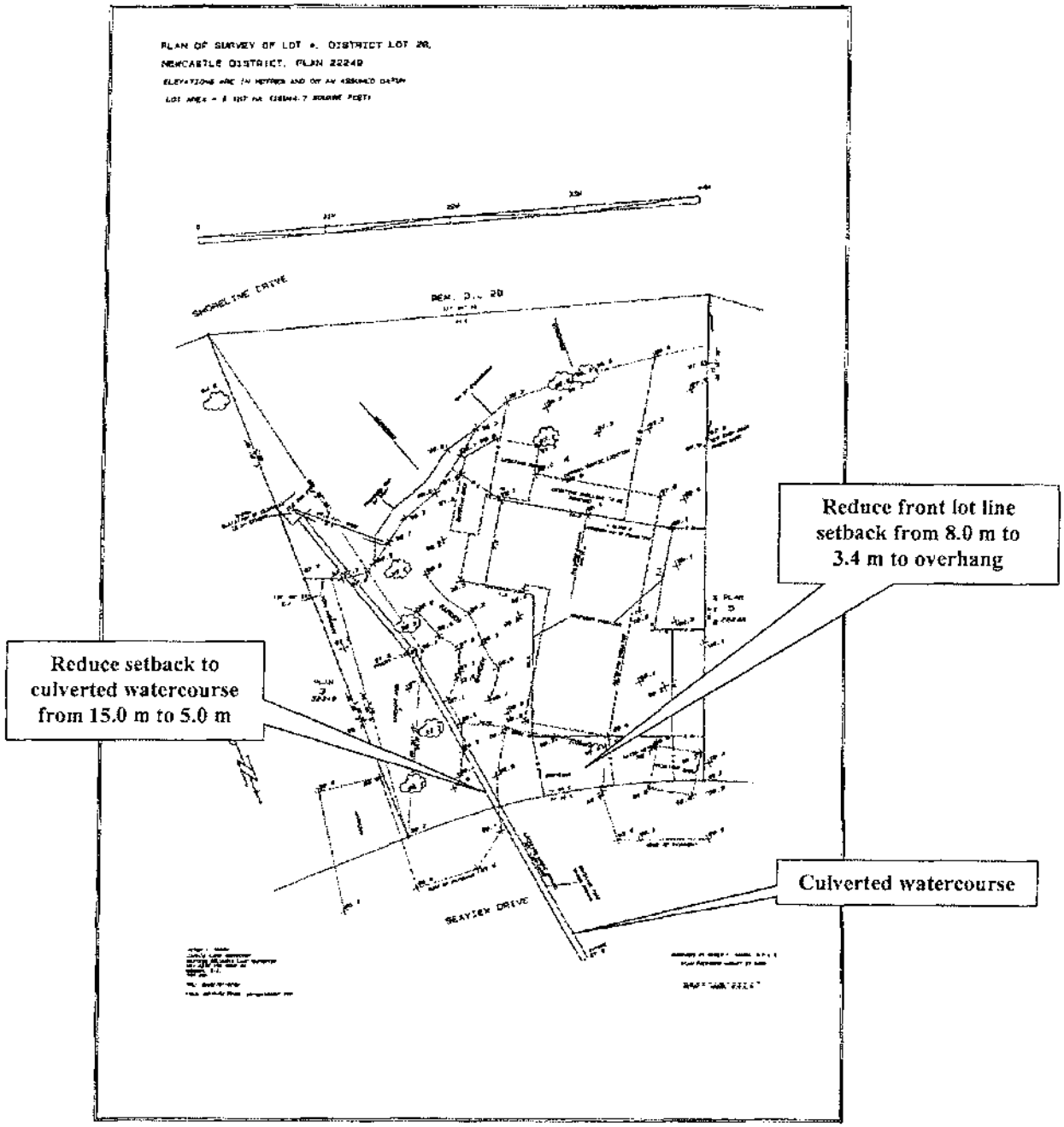
With respect to the lands, "Regional District of Nanaimo Land Use and Subdivision Bylaw No. 500, 1987," is varied as follows:

1. **Section 3.3.8a, Setbacks – Watercourses, excluding the Sea** is hereby varied by decreasing the minimum setback from the natural boundary of the watercourse for the proposed dwelling unit, located on Lot 4, District Lot 28, Newcastle District, Plan 22249 from 15.0 m to 5.0 m as shown on *Schedule No. 2.*
2. **Section 3.4.62 Minimum Setback Requirements – Front Lot Line** is hereby varied by decreasing the minimum setback from the front lot line for the proposed single dwelling unit and attached garage, located on Lot 4, District Lot 28, Newcastle District, Plan 22249 from 8.0 m to 3.4 m as shown on *Schedule No. 2.*

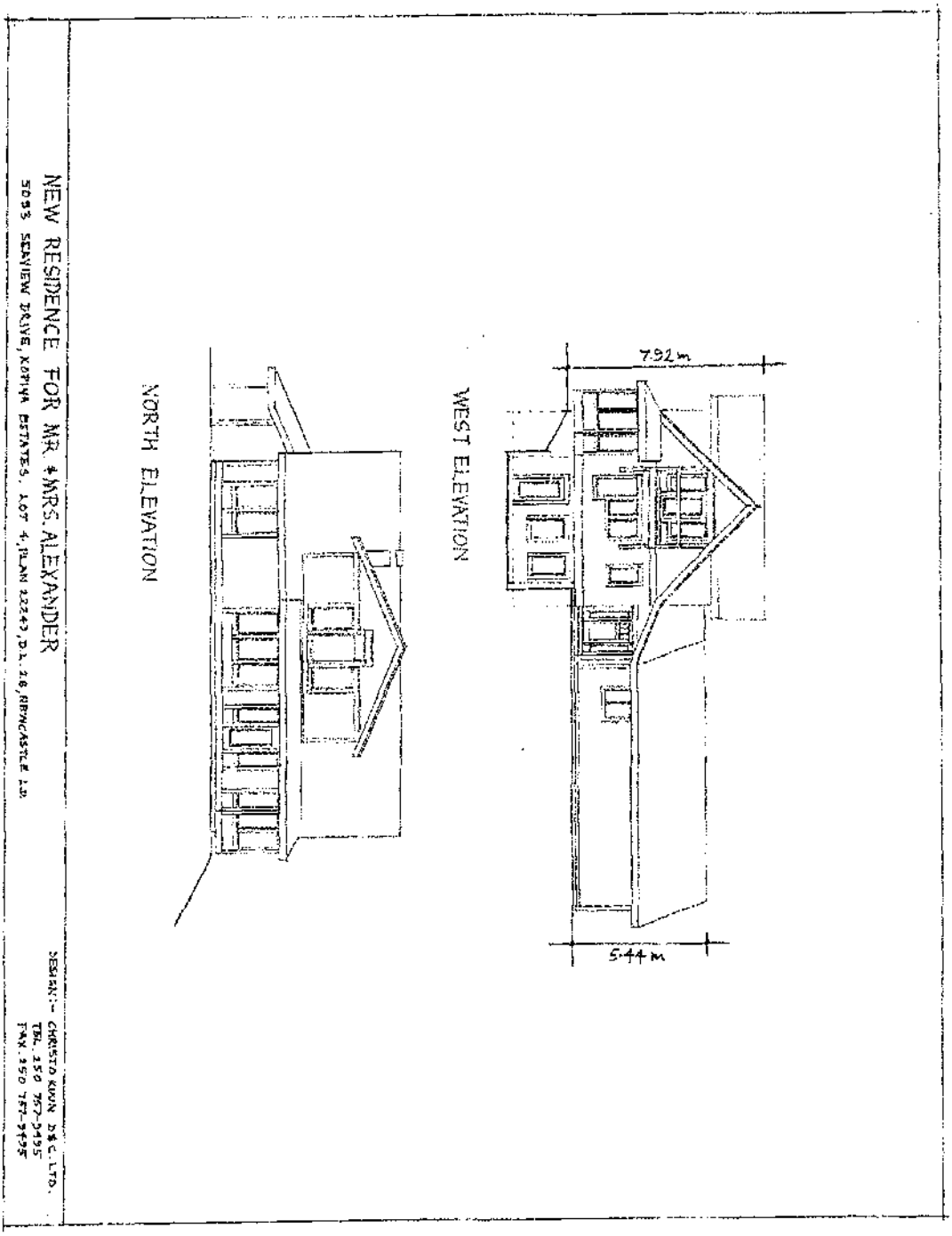
Conditions of Permit

1. The proposed dwelling unit shall be sited in accordance with the survey prepared by Peter Mason dated August 27, 2008 attached as *Schedule No. 2.*
2. The proposed dwelling unit shall be developed in accordance with the building elevations prepared by Christo Kuun Design & Construction Ltd. attached as *Schedule No.3.*
3. The proposed dwelling unit and any accessory structures are developed in accordance with the recommendations contained in the geotechnical assessment prepared by Lewkowich Geotechnical Engineering Ltd. and dated April 22, 2008, herein attached as *Schedule No.4.*
4. The subject property is included into a Building Inspection Service area.
5. The applicant applies for approval to the Ministry of Transportation and Infrastructure to reduce the minimum setback required from the road allowance (Seaview Drive) from 4.5 m to 3.4 m.

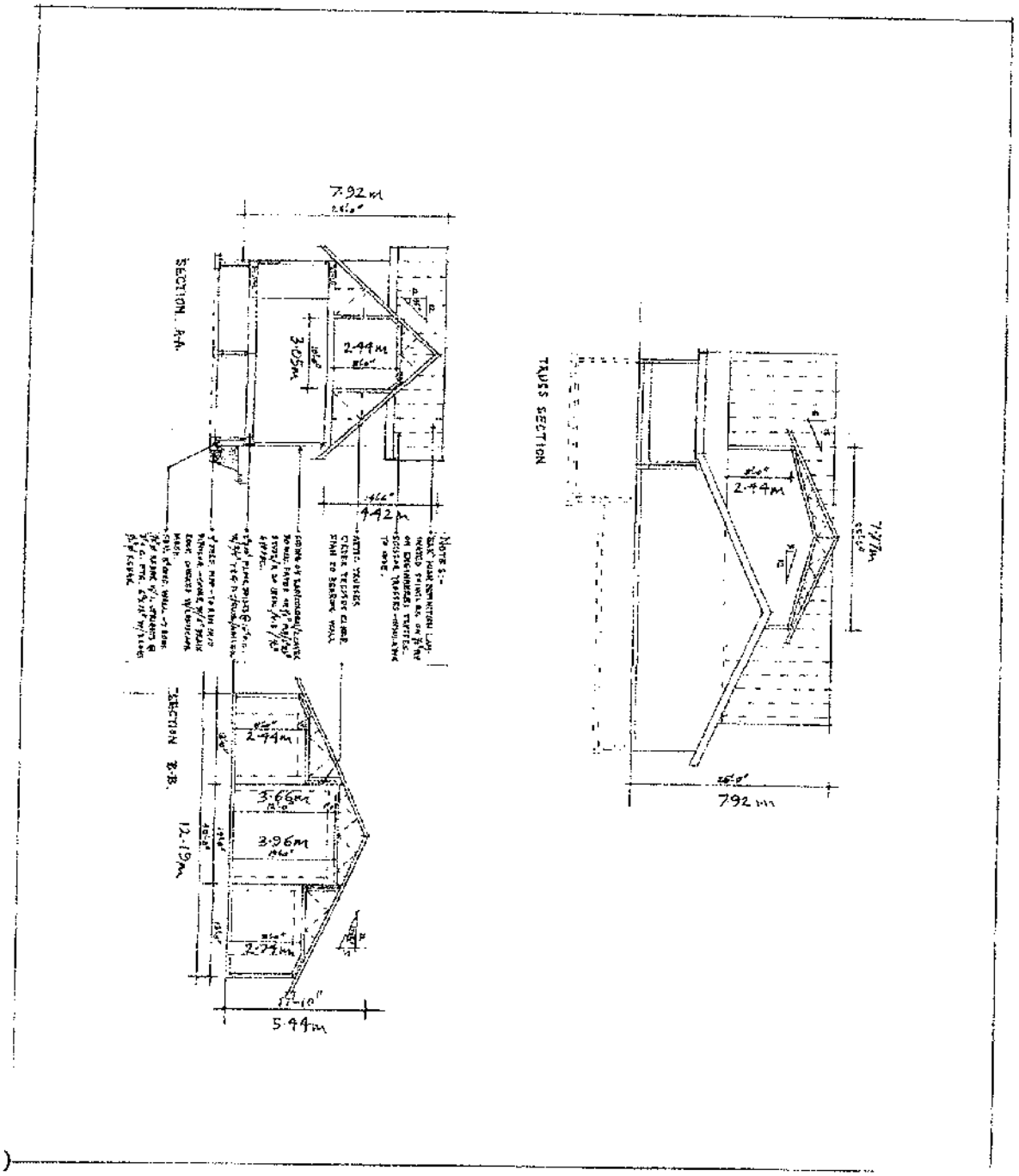
Schedule No. 2
Survey Plan and Proposed Variances for 5093 Seaview Drive
(page 1 of 3)



Schedule No. 3
Proposed Building Elevations for 5093 Seaview Drive
(page 2 of 3)



Schedule No. 3
Proposed Building Elevations for 5093 Seaview Drive
(page 3 of 3)



Schedule No. 4
Geotechnical Assessment for 5093 Seaview Drive

Lewkowich Geotechnical Engineering Ltd.

File: G6012.01
April 22, 2008

Christo Kuun Design & Construction
Site 160 C36
Bowser, B.C.
V0R 1G0

Attention: Mr. C. Kuun

PROJECT: PROPOSED RESIDENCE
5093 SEAVIEW DRIVE, DEEP BAY, B.C.

SUBJECT: GEOTECHNICAL EVALUATION

Dear Mr. Kuun:

1. Introduction

a. At your request - on behalf of the property Owner, Lewkowich Geotechnical Engineering Ltd. evaluated geotechnical conditions at the referenced site. The purpose of this work was to to determine whether the site was geotechnically safe and suitable for the purposes of siting a single family residential structure.

b. Lewkowich Geotechnical Engineering Ltd. acknowledges that this report may be requested by the Building Inspector of the Regional District of Nanaimo as a precondition to the issuance of a building permit and that this report, or any conditions contained in this report may be included in a restrictive covenant under Section 699 of the Local Government Act and filed against the title to the subject property.

c. Lewkowich Geotechnical Engineering Ltd. acknowledges that this report has been prepared for and at the expense of the Owner of the subject land. Lewkowich Geotechnical Engineering Ltd. has not acted for or as an agent of the Regional District of Nanaimo in the preparation of this report.

Suite A - 2569 Kenworth Road, Nanaimo, British Columbia, V9T 3M4
Telephone: (250) 756-0355 Facsimile: (250) 756-3831

d. This report is intended to address issues of slope stability, bearing, and drainage relative to the proposed structure. It is noted that the site includes an ocean-facing slope and that slope failures are known in the general area. However, since the property is bounded to the north by a roadway, we have not considered wave action and consequent erosion for the purposes of this report.

e. The property is currently developed by a single family dwelling. We understand that the Owner intends to demolish the existing house and to replace it with a new structure. The existing ground disposal (septic) field is also to be replaced, since the existing field does not comply with current Health regulations due to its proximity to the ocean-facing slope comprising the northern part of the lot.

2. Area Topography, Geology, and Stability Conditions

a. The site is an irregularly shaped property consisting of an upper plateau area bounded to the north by a steep ocean-facing slope. An old ravine lies within the property, near its western boundary. This ravine, which was utilized for storm drainage to the south and east, was improved by the installation of a culvert within the southeastern part of the lot, and the culvet backfilled. A headwall was installed ast part of these improvements. The site is flanked by a vacant lot to the west, and by an existing developed lot to the east. Shoreline Drive lies to the north of the property.

b. Available geological information for the Deep Bay area as outlined here is based on available geologic mapping, including work by the Geological Survey of Canada, combined with our experience and observations in the Deep Bay area. We have supplemented this information by a ground reconnaissance of exposed soils. Shallow soil conditions within the upper portion of the site, within the periphery of the existing house, were noted in a series of pits excavated by yourselves.

c. In evaluating slope conditions, we measured the slope inclination and overall height as input for our stability assessment. In addition, we examined soil exposures within this and nearby properties. The dominant soil type - locally exposed within the slope face here and on nearby properties - was deposited during the most recent period of glacial ice advance. The resulting soil, referred to as a glacial till, is largely a heterogeneous mixture of silt, sand and gravel with minor percentages of clay and cobble-to-boulder sized stone. Because this material was surcharged by the weight of glacial ice, this soil type has a high density and soil strength. This formation is overlaid by a layer which represents an alluvial (water laid) soil that was deposited following glacial ice retreat. This latter material is approximately two metres thick as determined by observation of test pits excavated by yourselves. It is predominantly comprised of a sand and gravel layer, locally underlain by a thin deposit of clayey silt.

d. The glacial till where near the shoreline in the central part of the east coast of Vancouver Island is commonly underlain by a uniformly graded and very dense laminated formation of fine to medium grained sand. This formation, which is referred to as the Quadra Formation, represents an alluvial type of deposit that immediately preceded the most recent advance of glaciation. While we have not observed this formation definitively, it may be present within the lower segment of the ocean-facing slope. While not exposed within the slope face, it is possible that the surface is overlaid by old slope colluvium (collection of soil eroded from the upper part of the slope).

e. While the glacial till formation is typically heterogeneous in composition, localized layers or lenses of sand have been typically observed in the Deep Bay area. In most cases, we would expect that these layers or lenses are localized, but in some instances are likely contiguous over a significant area. Another structure within the till is localized fissuring. This resulted from surcharging - and unloading - of the glacial ice.

f. The overlying alluvial soil has a relatively high permeability (capability for water absorption and consequent flow), while the glacial till soil where un-disrupted by other structural elements such as layering or fissuring is virtually impervious. Therefore, ground water includes shallow flow directed towards the ocean-facing slope within the alluvial soil. Localized concentrations of water also occur from within contiguous sand lenses or layers as well as the localized fissuring.

g. In general, segments of the slope within the Deep Bay area have been in a state of ongoing instability. The typical mode of failure here is referred to as a "slab failure" mode, where the surface of the slope to depths of about one to three metres destabilize. At least within the majority of the Deep Bay area, larger scale slope failures, such as rotational block failure, have not occurred due to the relatively high strength of the subsurface soils although such failures are not unknown.

h. Slab failures represent an ongoing evolution of the slope face under "normal" circumstances, taking into account current property owner landscaping practices and lower-frequency storm events. However, lower frequency events - notably seismic events or earthquakes - need to be addressed. This is of particular concern today considering a revision to the B.C. Building Code in 2006. This revision included increased requirements to address "design" seismic forces.

3. Factors Contributing to Slope Instability

a. There are a combination of reasons for the ongoing slope instability in the Deep Bay area. Following glaciation, the ocean-facing slope naturalized at a relatively steep inclination, but was reasonably stable due to its natural heavy timber growth. Subsequent development has resulted in changes to the groundwater regime, loss of the natural heavy tree growth, and disturbance along the slope due to local landscaping practices.

b. Probable changes in the groundwater regime, loss of mature tree growth, impacts of glacial unloading (which in turn led to the formation of a fissure pattern most notable at shallow depths), and slope disturbance would all contribute to a weakening of the slope surface to the cited one to three metre depth, which would then tend to destabilize from low-frequency storm events or heavier-than-normal winter rains. These occurrences would then result in elevated ground water conditions.

c. Negative landscaping practices provide an overall contributing factor to instability. These include the removal of mature trees or topping of coniferous trees (which has long-term harmful effects for tree health) for view purposes. Other practices include installation of lawn irrigation systems and consequent over-aggressive watering, septic field installation, and deposition of pruning material, fall leaves and lawn trimmings immediately below the slope crest.

4. Conclusions and Summary

a. The ocean-facing slope comprising the northern part of the lot is prone to ongoing instability in the form of a "slab failure" mode. In general, these failures result in the loss of a thickness of material that typically ranges from one to three metres. We conclude that these types of failure are ongoing in nature. However, in taking into account the potential for a major, low frequency level of seismic event - which is required to be considered in the current B.C. Building Code - loss of the rear yard area is possible and partial loss of support to the house cannot be necessarily ruled out. Please note that stabilization of the slope to mitigate loss of the rear yard area from a major earthquake, based on currently accepted soil strength parameters would require a major slope reconstruction or strengthening.

b. Based on the results of our site evaluation, we recommend a minimum setback of 7 metres (approximately 20 feet), as measured from the crest of the slope to the foundations of permanent residential structures. Please note that this applies to all attached segments of the residence, including above-ground attached sundecks.

c. Any structure built closer than the cited setback distances shall not be habitable structures, and should be fully detached from the principal residential buildings. This is intended to address non critical landscaping elements, such as gazebos, patio areas, hot tub enclosures, etc. Please note that the potential for loss of the structure due to slope failure increases as the distance to the crest diminishes. A setback distance less than three metres should not be considered. Property owners shall be made aware of the risks involved in construction within the setback distance. Notice may be done by means of a restrictive covenant on title.

d. Storm water within the property shall be controlled by closed, non perforated piping. This includes runoff from the adjacent road, roof areas, and ancillary pavements such as patio "hardscape" and driveways. This recommendation is intended to minimize as much as practicable ground water levels upland from the ocean-facing slope.

e. Vegetation shall be maintained on the slope face, as well as within the setback distance, as an erosion control measure. Please note that we have no objection, from the geotechnical aspect, to tree removal at the slope crest, or on the slope within three metres (as measured vertically) of the crest, since these trees could represent a surcharge. However, stumps shall be left in place, and vegetation planting (which may consist of low ground cover vegetation) should be undertaken as soon as practicable.

f. Fill within the setback area shall be limited to a thickness no more than one metre in any area. In addition, grading shall achieve no net increase in ground level on a lot-by-lot basis. Grading shall be done in a manner that does not allow concentrated overland flow towards the slope face.

g. Ponds or swimming pools (except hot tubs) shall only be installed following engineering input to evaluate the adequacy of the lining installation, piping, and drainage. In-ground lawn irrigation systems should be discouraged within the setback distance, or at a minimum shall be installed by qualified and experienced personnel, and be maintained on a regular schedule to mitigate the potential for leaks. Watering levels shall be set at minimum requirements for landscaping maintenance.

h. Property owners should be made aware of the potential for ongoing erosion of a localized nature, and should be prepared to maintain local drainage that allows positive flow without soil loss through erosion. In addition, existing vegetation cover growth shall be encouraged and be maintained in a dense condition.

Lewkowich Geotechnical Engineering Ltd.

Attachment No. 1
Location of Subject Property