

July 18, 2019

Our File: 2211-46871-12

Mr. Ken Rogers  
Manager of Planning  
Village of Cumberland  
2673 Dunsmuir Avenue  
Box 340, Cumberland, BC V0R 1S0

Dear Mr. Rogers,

**CVE PHASE 9 DEVELOPMENT PERMIT APPLICATION – ADDITIONAL REQUESTED INFORMATION.**

This is further to the Village of Cumberland's request for additional information, in support of Coal Valley Estate's Development Permit applications for Phase 9. The Village has requested two specific items be addressed prior to further review of Coal Valley Estate's applications. We understand these items to be as follows:

- The applicant is to confirm that downstream drainage capacity is adequate to safely convey runoff from phase 9.
- The applicant is to confirm that water quality at the point of discharge into natural conveyance systems is appropriate.

Strategic Natural Resource Consultants (SNRC) has carried out further site review and documented the downstream conveyance system between the point of discharge (SRW Plan VIP83947) between 2608 and 2604 Kendal Avenue, and the mapped wetland areas. For clarity, this is the only point of piped stormwater discharge that services Phase 9 of the Coal Valley Estates development. SNRC has also reviewed the point of discharge for Q100 overland flows from the development to verify flow path and downstream wetland connectivity. The attached document entitled "Coal Valley Estates Phase 9 Outfall Assessment" provides an account of SNRC's field observations. Key findings from the report include:

- The conveyance channel downstream of the phase 9 outfall does not directly connect to downstream wetlands;
- Water discharged into the downstream drainage channel fully infiltrates into the highly permeable soils within the channel, and evidence of surface flow is no longer detectable approximately 200m from the wetland;
- There is a physical barrier (the old rail bed) that precludes overland flow from the drainage directly to the wetland. Notwithstanding the noted lack of surface flow to this point, the rail bed precludes overland flow to the wetland, forcing water to infiltrate into the ground well up-gradient of the wetlands.
- SNRC considers the existing downstream conveyance system to be suitable for discharge of stormwater;
- The existing outfall is not subject to the Water Sustainability Act, as there is no existing stream within the vicinity of the discharge point.

It is important to note that the stormwater outfall that services Phase 9 (and some prior phases of the development) was a formalization of the Village's own stormwater outfall that serviced approximately 11ha of existing development in the Village, including the Cumberland Elementary School, and the Willard

*Page 1 of 2*



/ Ulverston / Westwood/ Egremont neighborhood. Prior to development of Coal Valley Estates Phase 3, a 600mm diameter (Village owned) stormwater outfall directed water onto Coal Valley property. As part of the development of CVE Phase 3, this discharge was piped across Coal Valley's land to a new outlet into the same natural channel that the water previously made its way into.

A condition of the Phase 3 subdivision was registration of a drainage SRW for the relocated outfall, and confirmation that the drainage did not connect directly to the wetland, or, alternatively, an SRW all the way to the wetland. Coal Valley secured a statutory right-of-way across the neighboring property (then owned by Mike Jenks) for the benefit of the Village and Coal Valley Estates. We have attached a copy of SRW Plan VIP83947 which indicates the extents of the drainage based on past study, as agreed with Village staff of the day. You will note that the SRW is consistent with the mapping provided by SNRC in its attached report.

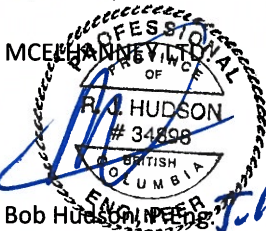
The Coal Valley Estates development has been subject to the Village's requirements for stormwater quality as based on current bylaw requirements. The Village's existing Municipal Stormwater System Regulation and Fees Bylaw No. 1024, 2015, does not provide specific qualitative targets for stormwater discharge. Bylaw 1024 does contain requirements for specific infrastructure for multifamily and commercial developments, but does not include runoff quality targets or specific infrastructure requirements for single family residential development. This is not uncommon; most jurisdictions do not provide specific targets for water quality for areas servicing municipal roadways.

Notwithstanding, the Village's engineering specifications for stormwater collection and conveyance systems do include specific requirements for sediment capture catch basins. Each phase of Coal Valley Estates, including Phase 9, utilizes MMCD spec catch basins to capture settleable solids, and larger suspended solids. Additional polishing of runoff occurs during contact with vegetation within the downstream channelized drainage, prior to runoff being fully infiltrated into the soils, well up-gradient of wetlands.

This level of qualitative treatment meets all current Village of Cumberland bylaw requirements, and is consistent with the Villages own practices.

We trust the information herein is as required. Should you have any questions, we would encourage you to contact Mr. Chris Durupt, P.Eng, or the undersigned.

Yours truly,

  
Bob Hudson, P.Eng.

*July 18/2019.*

  
Reviewed by:  
Derek Jensen, ASCT

Enclosures

cc: Village of Cumberland, Sundance Topham  
CVE Ltd.

# BC OnLine



BC OnLine Land Title Internet Service  
Provided in co-operation with  
Land Title and Survey Authority

-----  
L TSA - DOCUMENT RETRIEVAL    REF # X26180    REQUESTED: 2012-07-12 09:43

CLIENT NAME:                    MCELHANNEY ENGINEERING & SURV(COURTENAY)  
ADDRESS:                         495 - 6TH STREET  
                                      COURTENAY BC V9N 6V4

PICK-UP INSTRUCTIONS:

USER ID: PB73375                APPL-DOC # FB358587    VI Registered    RCVD:2010-07-09  
ACCOUNT: 166545  
FOLIO 46871-1

REMARKS:

Help Desk Victoria ..... (250) 953-8200  
                                  In B.C. .... 1-800-663-6102  
Administration Office ... (250) 953-8250  
Fax Number ..... (250) 953-8222

Persons who need to rely on a plan for legal purposes must examine the official version at the Land Title Office in which the plan is deposited. However, plans with plan numbers beginning with the letters EPP or EPS are electronic plans which constitute the official version.

FB358588

-9 JUL 2010 10 01

FB358587

Land Title Act  
Form C

(Section 219.81)

Province of British Columbia

GENERAL INSTRUMENT - PART 1

(This area for Land Title Office use)

Page 1 of 9 pages

1. APPLICATION: (Name, address, phone number and signature of applicant, applicant's solicitor or agent)

IVES BURGER (CN10180)  
(c/o BEST Search & Registry Ltd.)  
Barristers & Solicitors  
505 Fifth Street  
Courtenay, B.C., V9N 1K2 334 2416

  
Signature of Applicant's Agent - Elsie Carter

2. PARCEL IDENTIFIER(S) AND LEGAL DESCRIPTION(S) OF LAND:\*

(PID)  
023-888-491

(LEGAL DESCRIPTION)  
Lot A, Section 26, Township 10, Comox District, Plan VIP65968

3. NATURE OF INTEREST:\*

DESCRIPTION

DOCUMENT REFERENCE  
(page and paragraph)  
entire document

PERSON ENTITLED TO INTEREST

Statutory Right of Way over <sup>8' in Plan</sup> ~~shown on~~ ~~W.P. 2251~~ and Priority Agreement over Mortgage No. CA303259 and Mortgage # CA722841

Transferee

4. TERMS: Part 2 of this instrument consists of (select one only)

- a) Filed Standard Charge Terms
- b) Express Charge Terms
- c) Release

|                                     |                                       |
|-------------------------------------|---------------------------------------|
| <input type="checkbox"/>            | D.F. No.                              |
| <input checked="" type="checkbox"/> | Annexed as Part 2                     |
| <input type="checkbox"/>            | There is no Part 2 of this instrument |

sc 7/9/2010 10:01:24 AM 2  
Charge 2 \$146.80

A selection of (a) includes any additional or modified terms referred to in item 7 or in a schedule annexed to this instrument. If c) is selected, the charge described in item 3 is released or discharged as a charge on the land described in item 2.

5. TRANSFEROR(S):\*

651559 B.C. LTD. (INC.NO. BC651559) and BANCORP BALANCED MORTGAGE FUND LTD. (INC.NO. BC0567642) and BANCORP FINANCIAL SERVICES INC. (INC.NO. BC0712503) and BRIAN GRUSON and BRL CONSULTING INC. (INC.NO. BC0738533)

6. TRANSFEE(S): (including postal address(es) and postal code(s))\*

THE CORPORATION OF THE VILLAGE OF CUMBERLAND, of 2673 Dunsmuir Avenue, Cumberland, B.C. V0R 1S0

7. ADDITIONAL OR MODIFIED TERMS:\*

N/A

8. EXECUTION(S): This instrument creates, assigns, modifies, enlarges, discharges or governs the priority of the interest(s) described in item 3 and the Transferor(s) and every other signatory agree to be bound by this instrument and acknowledge(s) receipt of a true copy of the filed standard charge terms, if any.

Execution Date

| Y  | M  | D  |
|----|----|----|
| 10 | 06 | 25 |

Officer Signature(s)

  
Name: C. MATHEWS

Address: PO Box 340 2673 DUNSMUIR AVE  
CUMBERLAND BC

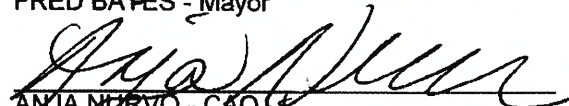
Occupation: CORPORATE OFFICER  
(as to both signatures)

Village of Cumberland

Party(ies) Signature(s)

THE CORPORATION OF THE VILLAGE OF CUMBERLAND by its authorized signatory(ies):

  
FRED BATES - Mayor

  
ANJA MURVO - CAO  
Deputy Corporate Officer


Officer Certification:

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the Evidence Act, R.S.B.C. 1979, c. 116, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the Land Title Act as they pertain to the execution of this instrument.

If space insufficient, enter "SEE SCHEDULE" and attach schedule in Form E.

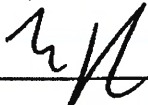
Land Title Act  
FORM D


EXECUTIONS CONTINUED

Officer Signature(s)  
  
Name: **JOHN A. DAVIS**  
**BARRISTER & SOLICITOR**  
Address: **192 MEMORIAL AVENUE**  
**PARKSVILLE, BC V9P 2G5**  
Occupation:  
(as to both signatures)

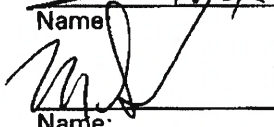
| Y  | M  | D  |
|----|----|----|
| 07 | 08 | 29 |


Party(ies) Signature(s)  
651559 B.C. LTD. by its authorized  
signatory(ies):

  
Name: **MIKE JENKS**  
Name:


Officer Signature(s)  
  
Name:  
Address:  
Occupation:  
(as to both signatures)  
**Douglas Bentley**  
**Barrister & Solicitor**  
Suite 1420-1090 West Georgia Street  
Vancouver, BC V6E 3V7

| Y  | M  | D  |
|----|----|----|
| 07 | 10 | 29 |

Party(ies) Signature(s)  
BANCORP BALANCED MORTGAGE FUND  
~~LTD.~~ by its authorized signatory(ies):  
~~INC LTD.~~  
Name: **RICHARD R. MACKIN**  
  
Name: **Mark D. Silverwood**

Officer Signature(s)  
  
Name:  
Address:  
Occupation:  
(as to both signatures)  
**Douglas Bentley**  
**Barrister & Solicitor**  
Suite 1420-1090 West Georgia Street  
Vancouver, BC V6E 3V7

| Y  | M  | D  |
|----|----|----|
| 07 | 10 | 29 |

Party(ies) Signature(s) **INC**  
BANCORP FINANCIAL SERVICES ~~LTD.~~ by its  
authorized signatory(ies):  
Name: **RICHARD R. MACKIN**  
  
Name: **Mark D. Silverwood**

OFFICER CERTIFICATION:

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the Evidence Act, R.S.B.C., 1979 c. 116, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the Land Title Act as they pertain to the execution of this instrument.


\* If space insufficient, enter "SEE SCHEDULE" and attach schedule in Form E.  
\*\* If space insufficient, continue executions on additional page(s) in Form D.



Land Title Act  
FORM D

EXECUTIONS CONTINUED

Officer Signature(s)

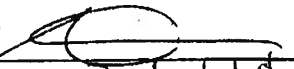
  
 Name: Brent Lokash  
 Address: Barrister & Solicitor  
 3543 W. 5<sup>th</sup> Ave.  
 Occupation: Vancouver, B.C.  
 V6R 2S1

| Y  | M  | D  |
|----|----|----|
| 10 | 03 | 27 |

Party(ies) Signature(s)

  
 BRIAN GRUSON

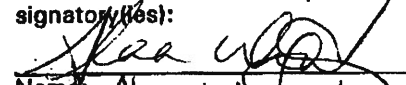
Officer Signature(s)

  
 Name: Brent Lokash  
 Address: Barrister & Solicitor  
 3543 W. 5<sup>th</sup> Ave.  
 Occupation: (as to both signatures) Vancouver, B.C.  
 V6R 1S1

| Y  | M  | D  |
|----|----|----|
| 10 | 03 | 25 |

Party(ies) Signature(s)

BRL CONSULTING INC. by its authorized signatory(ies):

  
 Name: Alana Weigarten  
 Name: \_\_\_\_\_

**OFFICER CERTIFICATION:**

Your signature constitutes a representation that you are a solicitor, notary public or other person authorized by the Evidence Act, R.S.B.C., 1979 c. 116, to take affidavits for use in British Columbia and certifies the matters set out in Part 5 of the Land Title Act as they pertain to the execution of this instrument.

- \* If space insufficient, enter "SEE SCHEDULE" and attach schedule in Form E.
- \*\* If space insufficient, continue executions on additional page(s) in Form D.

PART 2  
TERMS OF INSTRUMENT

DEFINITIONS:

- 1. The Transferor, 651559 B.C. LTD. (INC.NO. BC0651559), referred to in Part 1 is referred to as the "Owner".
- 2. The Transferee referred to in Part 1 is referred to as the "Village".

WHEREAS

- A. The Transferor is the registered owner in fee simple of the lands situate lying and being in the Village of Cumberland in the Province of British Columbia legally described as:  
  
Lot A, Section 26, Township 10, Comox District, Plan VIP65968  
  
(hereinafter called the "Lands");
- B. Section 218 of the *Land Title Act*, R.S.B.C. 1996, c. 250 enables the Owner to grant in favour of the Village an easement without a dominant tenement to be known as a statutory right of way;
- C. The Village requires and the Owner wishes to grant to the Village a statutory right of way for storm drainage purposes over of the Lands; and
- D. This statutory right of way is necessary for the operation and maintenance of the Village's undertaking.

NOW THEREFORE in consideration of the premises contained in this Agreement, \$1.00 paid by the Village to the Owner, and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the parties, the parties agree as follows:

1. The Owner hereby grants and conveys in perpetuity and at all times to the Village the full, free and uninterrupted right, licence, liberty, privilege, easement and right of way in common with the Owner over that portion of the Lands (the "Statutory Right of Way") which is shown in heavy black on a Statutory Right of Way Plan prepared by M.R. Kuss, B.C.L.S., and certified correct on the 4<sup>th</sup> day of JUNE, 2010, a reduced copy of which is attached to this Agreement as Schedule A:

- (a) to enter over, on, in and under the Statutory Right of Way to:
  - (i) conduct surveys and examinations;
  - (ii) dig up, remove and replace soil;
  - (iii) construct, install, operate, maintain, clean, cover with soil, alter, relocate, renew, inspect and replace power poles, transmissions lines, pipes, culverts, retaining walls, wing walls, manholes, meters, pumps, valves and similar equipment, or any of them, together with all ancillary attachments and fittings (all of which are collectively called the "Works");

for the purpose of conveying, draining, containing, protecting, metering, and disposing of stormwater in connection with the provision of storm drainage service to the Lands;

- (b) to bring on to the Statutory Right of Way all materials and equipment the Village requires or desires for the Works;
- (c) to clear the Statutory Right of Way and keep it clear of anything which in the opinion of the Village constitutes or may constitute an obstruction to the use of the Statutory Right of Way or to the Works; and
- (d) to do all acts which in the opinion of the Village are incidental to the foregoing.

2. The Owner shall:

- (a) not do or permit to be done any act or thing which in the opinion of the Village might interfere with, injure, impair the operating efficiency of, or obstruct access to or the use the Statutory Right of Way or the Works;
- (b) trim or, if necessary, cut down any tree or other growth on the Lands which in the opinion of the Village constitutes or may constitute a danger or obstruction to those using the Statutory Right of Way or to the Works;
- (c) execute all further documents and things for the better assuring unto the Village of the Statutory Right of Way granted by this Agreement;
- (d) permit the Village to peaceably hold and enjoy the rights granted by this Agreement;
- (e) maintain reasonable access to the Statutory Right of Way by keeping it free of material and/or equipment and structures so as to permit and allow Village staff and equipment access to the drainage course and drainage inlets and outlets.
- (f) grant a licence to the Village to cross over the Lands for reasonable access to the Statutory Right of Way and make reasonable ancillary use of the Lands for carrying out the Works.

3. The Village shall:

- (a) use the Statutory Right of Way and carry out the constructions and maintenance of the Works in a good and workmanlike manner in order to cause no unnecessary damage or disturbance to the Owner, the Lands or any improvement on the Lands;
- (b) not bury, without the prior written consent of the Owner, debris or rubbish in excavations or backfill;
- (c) remove shoring and like temporary structures as backfilling proceeds;
- (d) rake up all rubbish and construction debris it creates in order to leave the Statutory Right of Way in a reasonably neat and clean condition;
- (e) exercise care not to damage the Lands or any improvements on the Lands and if the Village should cause any such damage, restore such damaged Lands or improvements thereon to as close to the pre-damaged condition as is reasonably practical with reasonable dispatch or where the Village deems restoration to be impractical, reimburse the Owner for all damage the Village has caused but not restored;



- (f) accept sole responsibility for only normal and usual maintenance of storm drainage works within the Statutory Right of Way, including but not limited to:
  - (i) stormwater mainline and manholes; and
  - (ii) storm drainage mainline and manholes; and
- (g) not be unreasonable in its opinions herein.

4. No right granted to or reserved by the Village in this Agreement shall require the Village to clean, repair, or maintain the Works or the Statutory Right of Way unless the Village is expressly required in this Agreement to perform such cleaning, repairing or maintenance.

5. All chattels, equipment, supplies, fixtures or other materials comprising the Works or otherwise installed by the Village over, on, in or under the Statutory Right of Way are and shall remain the property of the Village, any rule of law or equity to the contrary notwithstanding.

6. Should the Owner omit, fail, or neglect to carry out one of its obligations contained in this Agreement or do some act contrary to its obligations contained in this Agreement, the Village may give the Owner 14 days' written notice in the manner provided in the Agreement requiring the default to be cured; if the Owner fails to cure such default to the satisfaction of the Village within the time specified, the Village may enter onto the Lands and rectify such default to the extent considered necessary by it and the cost of doing so shall be a debt due and owing to the Village by the owner with interest to accrue at the prime rate of the Bank of Nova Scotia as of the date of the notice.

7. The Owner shall, after execution of this Agreement by it, at the expense of the Owner, do or cause to be done all acts reasonably necessary to grant priority to this Agreement over all financial charges and encumbrances which may have been registered against the title to the Lands in the Land Title Office save and except those as have been specifically approved in writing by the Village or have been granted in favour of the Village.

8. The Owner shall at all times and does hereby indemnify, save harmless, release and forever discharge the Village from and against all manner of actions, causes of action, claims, debts, suits, damages, demands and promises, at law or in equity, whether known or unknown, including without limitation for injury to persons or property including death, of any person directly or indirectly arising or resulting from, or attributable to, any act, omission, negligence or default of the Owner in connection with or in consequence of this Agreement, save and except to the extent caused by any act, omission, negligence or default of the Village, in which case the Village shall indemnify the Owner under section 9 of this Agreement.

9. The Village shall at all times and does hereby indemnify, save harmless, release and forever discharge the Owner from and against all manner of actions, causes of action, claims, debts, suits, damages, demands and promises, at law or in equity, whether known or unknown, including without limitation for injury to persons or property including death, of any person directly or indirectly arising or resulting from, or attributable to, any act, omission, negligence or default of the Village in connection with or in consequence of this Agreement, save and except to the extent caused by any act, omission, negligence or default of the Owner, in which case the Owner shall indemnify the Village under section 8 of this Agreement.

10. Notwithstanding anything contained in this Agreement the Village reserves all rights and powers of expropriation otherwise enjoyed by the Village.

11. Waiver of any default by either party shall not be deemed to be a waiver of any subsequent default by that party.
12. This Agreement runs with the Lands.
13. Whenever it is required or desired that either party shall deliver or serve a notice on the other, delivery or service shall be deemed to be satisfactory if and deemed to have occurred when:
  - (a) the Clerk of the Village or a director of the Owner has been served personally, on the date of service; or
  - (b) mailed by prepaid registered mail, on the date received or on the sixth day after receipt of mailing by any Canada Post office, whichever is the earlier, so long as the notice is mailed to the party at the address provided in this Agreement or to whatever address the party may from time to time provide to the other party.
14. Wherever the singular or masculine is used in this Agreement, the same is deemed to include the plural or the feminine or the body politic or corporate as the context so requires.
15. Every reference to each party is deemed to include the heirs, executors, administrators, successors, assigns, employees, agents, officers and invitees of such party wherever the context so requires or allows.
16. Any opinion which the Village is entitled by virtue of this Agreement to form may be formed on behalf of the Village by the Approving Officer in which event the opinion of the Approving Officer shall be deemed to be the opinion of the Village for the purposes of this Agreement.
17. Nothing in this Agreement grants to the Village any interest in the riparian or littoral rights of the Owner to the Lands which may accrete to the Lands.
18. If any section, subsection, sentence, clause or phrase in this Agreement is for any reason held to be invalid by the decision of a court of competent jurisdiction, the invalid portion shall be severed and the decision that it is invalid shall not affect the validity of the remainder of the Agreement.
19. This Agreement shall enure to the benefit of and be binding on the parties notwithstanding any rule of law or equity to the contrary.
20. This Agreement may be assigned by the Village without the consent of the Owner.
21. This Agreement shall be governed and construed in accordance with the laws of the Province of British Columbia.
22. Notwithstanding anything contained in this Agreement, neither the Owner named herein nor any future owner of the Lands or any portion of the Lands shall be liable under any of the covenants and agreements contained herein where such liability arises by reason of an act or omission occurring after the Owner named herein or any future owner ceases to have a further interest in the Lands.





23. Wherever this Agreement creates a power or obligation of the Village to make a decision or to exercise any contractual right or remedy, the Village may do so in accordance with the provisions of this Agreement and no public law duty, whether arising from the principles of procedural fairness or the rules of natural justice, shall have any application.

IN WITNESS WHEREOF the parties acknowledge that this Agreement has been duly executed and delivered by the parties executing Part 1 of Form C attached to and forming part of this Agreement.

MEMORANDUM AS TO ENCUMBRANCES, LIENS AND INTERESTS  
MORTGAGES OR RIGHTS TO PURCHASE

Mortgage in favour of BANCORP BALANCED MORTGAGE FUND LTD. and BANCORP FINANCIAL SERVICES INC. registered under Number CA303259 (the "Mortgage").

CONSENT

BANCORP BALANCED MORTGAGE FUND LTD. and BANCORP FINANCIAL SERVICES INC., two of the Transferors named in Part 1 herein, being the holders of the encumbrance or entitled to the lien or interest referred to in the memorandum above written, by execution of the Form C, hereby approve of and consent to the granting of the within Statutory Right of Way and do covenant and agree that the same shall be binding upon its interest in or charge upon the lands and shall be an encumbrance upon the lands prior to the above noted Mortgage in the same manner and to the same effect as if it has been dated and registered prior to the Mortgage.

Mortgage in favour of BRIAN GRUSON and BRL CONSULTING INC. registered under Number CA722841 (the "Mortgage").

CONSENT

BRIAN GRUSON and BRL CONSULTING INC., two of the Transferors named in Part 1 herein, being the holders of the encumbrance or entitled to the lien or interest referred to in the memorandum above written, by execution of the Form C, hereby approve of and consent to the granting of the within Statutory Right of Way and do covenant and agree that the same shall be binding upon its interest in or charge upon the lands and shall be an encumbrance upon the lands prior to the above noted Mortgage in the same manner and to the same effect as if it has been dated and registered prior to the Mortgage.

**Date:** July 16, 2019

**To:** Chris Durupt, PEng  
McElhanney Consulting Services Ltd.  
495 Sixth Street  
Courtenay BC, V9N 6V4

**From:** Strategic Natural Resource Consultants Inc.  
321-1180 Ironwood Street  
Campbell River, BC, V9W 5P7

**RE:** Coal Valley Estates Phase 9 Stormwater Outfall Assessment

### Introduction

On July 16, 2019, a site assessment was completed for the stormwater outfall locations for Coal Valley Estates Phase 9 property development in the Village of Cumberland. The purpose of this survey was to comment on the potential effects of runoff from the outfalls on Aquatic Ecosystems downslope. The fieldwork was conducted by Cindy Hannah, RPBio of Strategic Natural Resource Consultants (SNRC).

### Site Description and Observations

Phase 9 is approximately 4ha in size. The bulk of the stormwater from the area will drain through the piped stormwater system that has its outfall off the end of Egremont Road (orange arrow in Figure 1). Two overland outlets located as shown in Figure 1 (blue and green shaded areas correspond with the coloured outfall arrows) are the surface runoff location for flooding only.



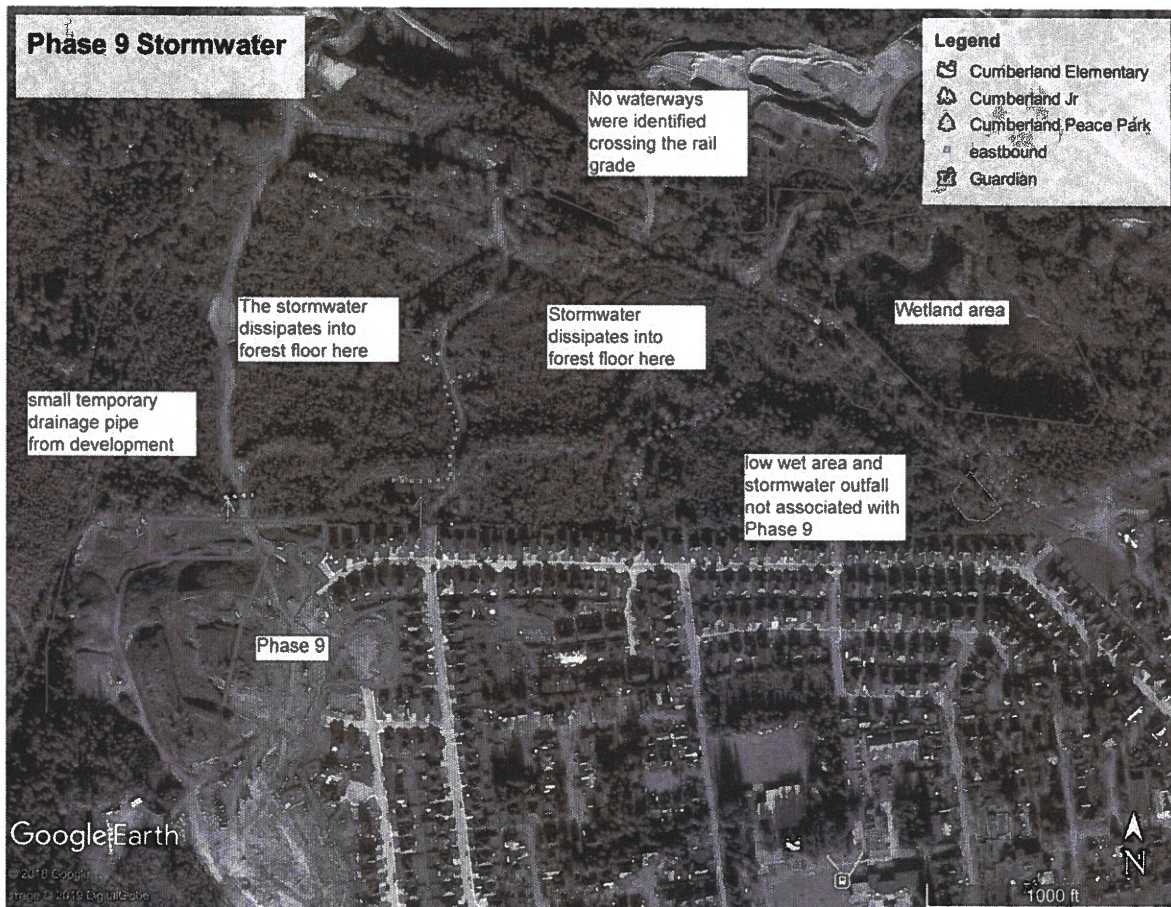
**Figure 1: Approximate Phase 9 boundary and stormwater outfall locations. (image provided by McElhanney Consulting Services Ltd.)**



**Coal Valley Estates  
Phase 9 Stormwater Outfall Assessment**

The blue and green outfall locations for Phase 9 do not connect into the orange stormwater infiltration area, but do both eventually drain into a wetland area adjacent to Bevan Road.

The runoff from the two overland flood outlets drain northwards into a low lying area (Photos 1-5). This area collects water that then either infiltrates the ground during periods of low precipitation or during times of peak flows, drains east into a ditch along an old road flowing north for approximately 125m to a pipe culvert crossing (Photos 6-7). On the east side of the road, the water dissipates into the forest floor with no defined channel or waterway further downslope (Photos 8-9). There is a wetland that provides habitat for a variety of amphibians and birds located approximately 400m away from where the current drainage dissipates (Figure 2).



**Figure 2: Approximate location of stormwater drainage from Phase 9 in relation to downslope wetland area.**

The existing piped stormwater outlet (orange arrow in Figure 1) drains north in a marginally scoured channel with predominantly fines substrate with sections of gravel (Photos 10-11). This channel was followed downslope to a point where it could not be easily identified/followed. It becomes unconfined and disperses into the forest floor (Photos 12-13). There is no formalized channel crossing the old railway line adjacent to the wetland (Photos 14-15).

**Coal Valley Estates  
Phase 9 Stormwater Outfall Assessment**

There is an additional stormwater outlet at the easternmost end of the Coal Valley development (purple on Figure 2). There is a small low lying wet area on the west side of the rail grade. The stormwater flows down a ditch and into a channel that flows into the wetland (Photo 16). This waterway is the only defined water crossing along the rail grade and is not associated with the stormwater from the Phase 9 development or the stormwater sourcing from off the end of Egremont Road.

The drainages in the area flow/seep through numerous wetland areas including the Village stormwater and sanitary sewer outfall. Previous fish sampling by SNRC in 2018 in the drainage determined that there is a barrier to salmonids in this drainage located +8km downstream of the site, near the confluence with the Trent River.

**Conclusions and Recommendations**

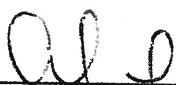
Based on the poor connection to downslope watercourses, it is anticipated that any sediment within the stormwater system will settle out and the risk of sedimentation reaching salmonid habitat would be considered very low. The high amount of gravel on the adjacent property promotes infiltration into the ground further reducing the risk of sedimentation downstream.

Given the low gradient in the area and the high infiltration, the risk is very low and it would be very unlikely that a scoured channel would be created on the piped outlet drainage (orange) connecting directly to more sensitive features downstream.

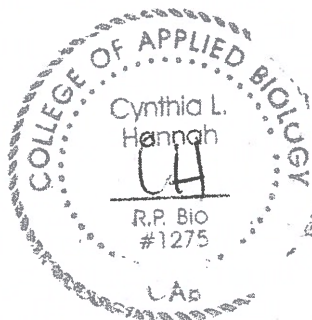
The proposed stormwater outfall locations for the Coal Valley Estates Phase 9 development, are suitable locations for stormwater. The outfalls drain to low lying areas that during most flows infiltrate the ground, allowing for any suspended sediment to settle out naturally. There is no direct connection to fish bearing water (which is +8km away) or the wetland/amphibian habitat (400m away).

Installation of the stormwater outfall is not subject to the Water Sustainability Act as there is no stream within the vicinity of the discharge points.

If you have any further questions, feel free to contact Cindy Hannah phone at 250-616-3758 or by email at [channah@snrc.ca](mailto:channah@snrc.ca).



Cindy Hannah, RPBio  
SNRC



**COPY**  
**Original signed and sealed on file**





**Coal Valley Estates  
Phase 9 Stormwater Outfall Assessment**

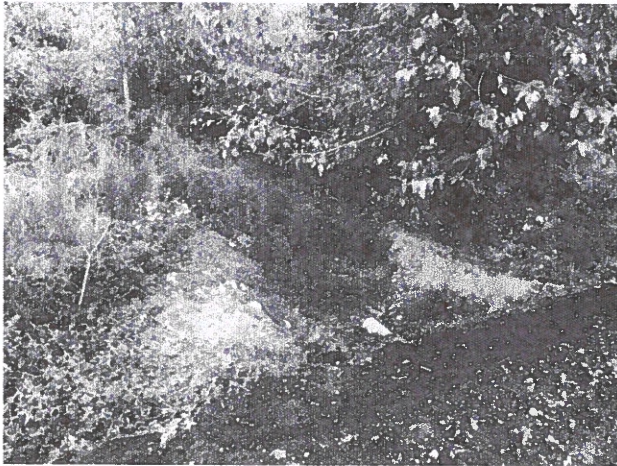


Photo 1: A small temporary pipe drains from the development on the west side of an access road. It then drains east.



Photo 2: East of the access road is a low area vegetated in grasses.



Photo 3: View of existing overland stormwater outlet location at end of Solport Street. There is a band of terrestrial vegetation including salal between the outfall and the low lying area.



Photo 4: View of low lying area where most water infiltrates the ground.



Photo 5: View west of low lying area from vicinity of old road.



Photo 6: View to east to where during peak flow surface water drains towards ditch on old road.



**Coal Valley Estates  
Phase 9 Stormwater Outfall Assessment**

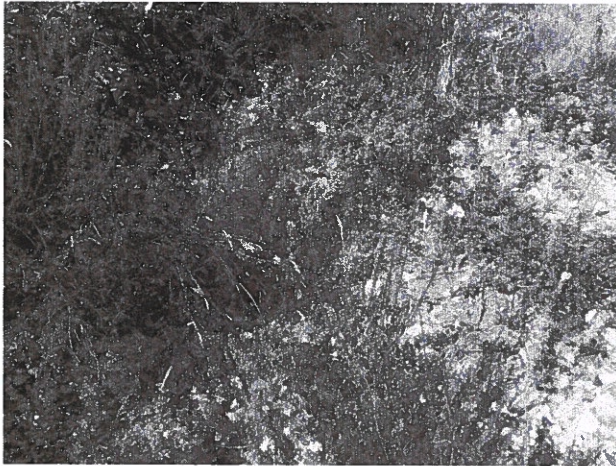


Photo 7: View of low ditch that is adjacent to the old road. It has infilled in vegetation.



Photo 8: View downslope of the road crossing. Water seeps into low area with abundant terrestrial vegetation species.



Photo 9: View of lowermost end of drainage. Beyond this point the area was vegetated in terrestrial vegetation species.



Photo 10: View of existing piped stormwater outlet near Egremont Road.

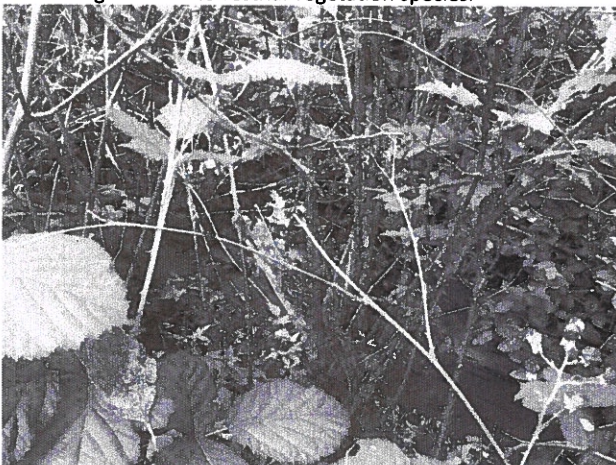


Photo 11: There is a small drainage with a fines/gravel substrate.



Photo 12: The stormwater drainage dissipates in an area vegetated in abundant terrestrial species. A channel could not be located downslope of this point.



**Coal Valley Estates  
Phase 9 Stormwater Outfall Assessment**



Photo 13: View from a higher elevation showing the area downslope of where it dissipates.



Photo 14: View of rail grade trail in the area that the orange stormwater would cross if there was a defined crossing. No waterway was located.



Photo 15: View of rail grade trail in the area that the orange stormwater would cross if there was a defined crossing. No waterway was located.



Photo 16: View of defined waterway that sources from stormwater at the easternmost side of Coal Valley.