Fraser Valley Regional District

STAFF REPORT

To: Electoral Area Services Committee
Date: 2025-09-04
From: Andrea Antifaeff, Planner II
File No.: 3060-20-2025-02

Subject: Development Permit 2025-02 for land alteration (soil deposit) at 38482 Bell Road, Area G

Reviewed by: Katelyn Hipwell, Manager of Planning
Graham Daneluz, Director of Planning & Development
Jennifer Kinneman, Chief Administrative Officer

RECOMMENDATION

THAT the Electoral Area Services Committee issue Development Permit 2025-02 as drafted.

BACKGROUND

The applicant has applied for a development permit for land alteration, which includes soil deposit (see Appendix B for application). A portion of the property falls within Geologic & Stream Hazard Development Permit Area (DPA) 1-G, designated to protect development from hazardous conditions. Additionally, the entire property is within the Riparian Areas Development Permit Area (DPA) 2-G, designated for the protection of the natural environment, its ecosystems, and biological diversity. The applicant has submitted a geohazard site assessment prepared by a Qualified Professional to satisfy the requirements of the development permit area guidelines.

The sole purpose of the development permit is to address geohazard aspects of the work. It does not regulate or prohibit soil deposit.

Key technical details of the proposed soil deposit are as follows:

- Total proposed soil deposit area: 8.62 ha
- Estimated depth of soil: ~4 m
- Estimated volume of soil deposit: ~250,000 m^3
- Estimated timeline for soil deposit: ~2 years

For perspective on the scale of the soil deposit activities, the deposit of 250,000 m^3 of soil would require approximately 20,800 dump truck trips (assuming a tandem axle dump truck carrying 12 m^3 of soil). This amounts to over 40 trips each weekday for two years (exclusive of statutory holidays). The

use of truck and trailer combinations would reduce the number of trips required. It would be one of the largest soil deposits in FVRD's electoral areas.

Submitted Technical Reports

- 38482 Bell Road, Deroche, BC – Flood Hazard Assessment and Development Permit Application, dated April 16, 2025, prepared by Jamie Stirling, P.Geo. of Stirling Geoscience Ltd.
- Accompanying Letters of Assurance and Commitment for Undertaking Field Reviews:
    - Assurance & Commitment for Undertaking Field Reviews & Post Construction Reporting, dated April 16, 2025, prepared by Jamie Stirling, P. Geo., of Stirling Geoscience Ltd. & Wladyslaw Wojcik, property owner.
    - Assurance & Commitment for Undertaking Field Reviews & Post Construction Reporting, dated April 16, 2025, prepared by Sean Reilly, P. Eng., of Reilly Engineering Associates Ltd. & Wladyslaw Wojcik, property owner.
    - Assurance & Commitment for Undertaking Field Reviews & Post Construction Reporting, dated April 15, 2025, prepared by Monte Anions, P.L. Geo., EP, CSAP, of Keystone Environmental Ltd. & Wladyslaw Wojcik, property owner.
    - Assurance & Commitment for Undertaking Field Reviews & Post Construction Reporting, dated April 15, 2025, prepared by Jeremy Nilson, R.P. Bio., of Keystone Environmental Ltd. & Wladyslaw Wojcik, property owner.

Staff worked extensively with the applicant to ensure the submitted technical report meets the development permit area guidelines. As a result, the applicant has submitted a comprehensive technical report prepared by a qualified professional along with required letters of assurance and commitment for undertaking field reviews in support of the development permit application. These letters confirm ongoing involvement from four qualified professionals, including their intention to conduct field reviews during and after development to ensure compliance with the technical report. Further details regarding the scope and content of these letters are provided in a subsequent section of this report.

Authority to Issue Development Permits

The *Fraser Valley Regional District Development Procedures Bylaw No. 1377, 2016* delegates authority to the Director of Planning to consider development permit applications and provides alternative methods for their consideration. Under section 4.3.4 (c) of *Bylaw No. 1377, 2016*, the Electoral Area Director has requested that the application be referred to the Electoral Area Services Committee (EASC) for consideration. Accordingly, the Director of Planning has referred the Development Permit to EASC for a decision.

In addition, in July 2025, the FVRD Board directed staff to apply the revised *Framework for Consideration of Soil Related Development Applications and Referrals* (Appendix D) to guide the assessment of development permit applications involving soil deposits. While staff have used this framework to guide the evaluation of the current application, it is not binding on EASC or the FVRD

Board. The framework identifies the Director of Planning and EASC as the delegated decision-making authorities for these types of decisions.

Given the scale of the proposed land alteration, its potential community impacts, and strong concerns raised by nearby residents, the Electoral Area Director has exercised their authority under the Development Procedures Bylaw to have the development permit application considered by EASC.

Previous Related Application for a Temporary Use Permit

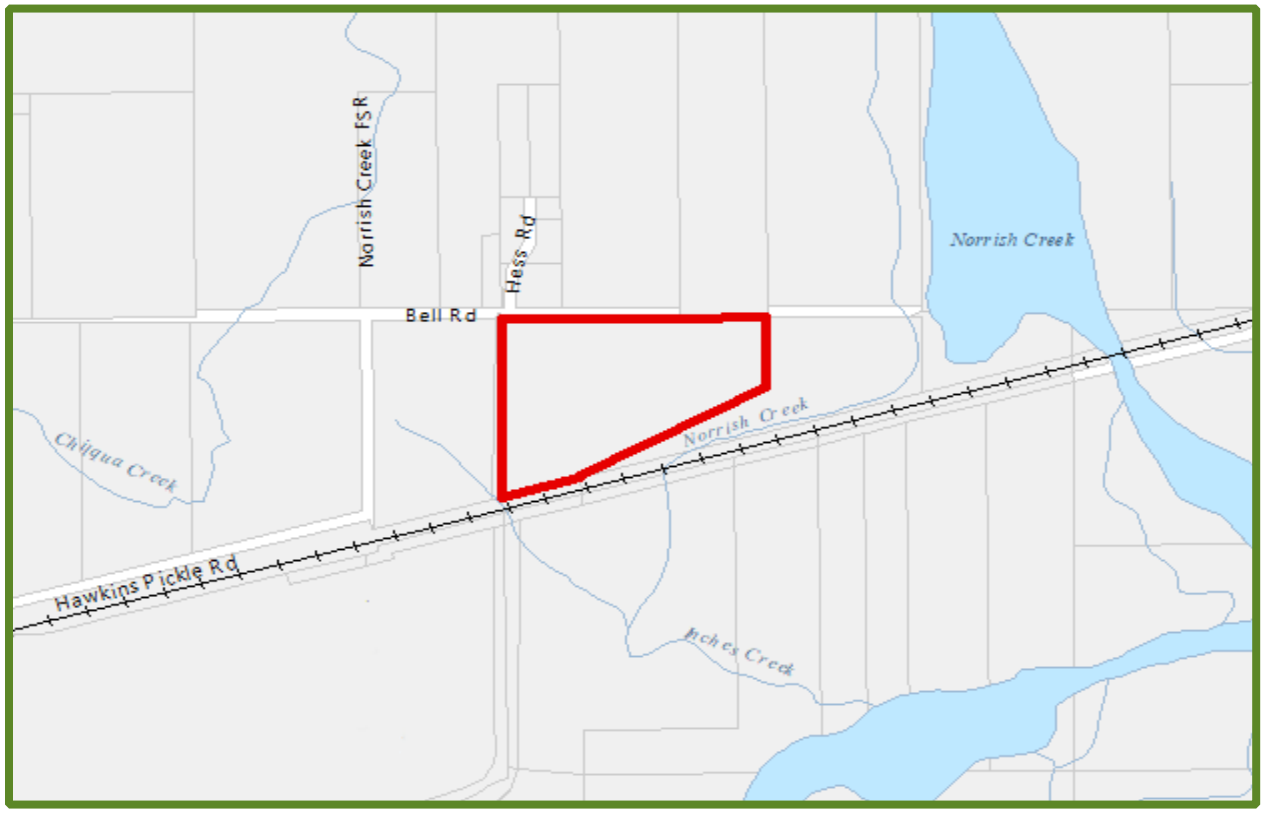
In February 2025, the FVRD Board refused Temporary Use Permit (TUP) 2024-01, which proposed the outdoor storage of recreational vehicles. The permit presented significant feasibility concerns, as achieving the required flood construction level would necessitate a substantial soil deposit estimated to take approximately two years – nearly the full TUP term – rendering the proposal impractical. (see Appendix C for the staff report).

The prior refusal of the TUP does not affect the consideration of Development Permit 2025-02. The applicant was advised that proceeding with soil placement does not guarantee approval of any future temporary use permits, including those for the outdoor storage of recreational vehicles. The development permit for land alteration (soil deposit) is an independent process. Any future land use proposals will be evaluated independently.

PROPERTY DETAILS			
Address	38482 Bell Road	**Area**	G
PID	009-064-885	**Owner**	Wladyslaw Wojcik
Folio	775.02616.000	**Agents**	Jamie Stirling
Lot Size	10.3 hectares		
Current Zoning	Rural 4 (R-4)	**Proposed Zoning**	No change
Current OCP	Limited Use (LU)	**Proposed OCP**	No change
Current Use	Residential	**Proposed Use**	No change
Development Permit Areas	1-G Geologic & Stream Hazard & 2-G Riparian Areas		
Agricultural Land Reserve	No		

ADJACENT ZONING & LAND USES		
North	^	Rural 4 (R-4), Rural 3 (R-3), General Industrial (GI), Civic Institutional; SFD, Storage Facility, Agricultural & Crown Land
East	>	Rural 4 (R-4); Inch Creek Hatchery (DFO)
West	<	Rural 4 (R-4); Vacant, SFD & Agricultural
South	v	Agricultural 4 (AG-4); CPKC Railway; Agricultural

NEIGHBOURHOOD MAP



PROPERTY MAP

DISCUSSION

FVRD Authority for Soil Deposit

Most soil deposit activities are not regulated by zoning bylaws, as they are not considered land uses. In rare cases, soil treatment facilities may fall under zoning regulations. As a result, applications involving soil deposits fall outside the FVRD's land use regulatory framework and cannot be addressed through zoning bylaws. In the absence of a soil deposit bylaw, the FVRD's ability to regulate soil deposit activities is very limited.

However, the FVRD Board has directed staff to develop a soil deposit bylaw. Once adopted, any soil deposit activities occurring after its adoption will be subject to the provisions of the new bylaw. There are no grandfathering rights applicable to soil deposit bylaws. Land alteration authorized by a development permit may need to be modified to meet the future requirements of a soil deposit bylaw. Compliance with the bylaw will be mandatory from the date of adoption, regardless of when the soil deposit commenced. The applicant has been advised of this.

Development Permit Areas and Soil Deposit

Development permits have a limited scope of review, focusing exclusively on compliance with applicable development permit area guidelines. In this case, the Development Permit Area (DPA) is for the protection of development from hazardous conditions. The property is subject to flood hazards (including erosion and avulsion). As such, the Development Permit can only address the flood hazards as they relate to the proposed development of the property. Development permits are not a comprehensive approval for all aspects of the soil deposit works, but instead address only specific elements identified within the guidelines.

If an application for a development permit meets the guidelines outlined in the applicable DPA, the applicant is entitled to receive the permit. Limited discretion is available to the decision-maker to interpret the DPA guidelines and determine whether the application satisfies the guidelines. This can create challenges with public perception, as there is often an expectation that broader community impacts or the overall merits of a proposal, such as soil deposit, can be considered, when in fact, development permits cannot address those concerns.

Property Description and Proposed Development

The subject property is 10.23 hectares in area. It is located in the Fraser River floodplain and the Norrish Creek alluvial fan. It is not protected by a standard diking system.

The proposed land alteration covers 8.62 hectares (the central and western portions of the property), while the remaining 1.61 hectares (the eastern portion) contains the existing residential dwelling.

The development involves placing approximately 250,000 m^3 of imported soil on the site.

Geologic & Stream Hazard Development Permit Area (DPA) 1-G

Hazard Assessment Overview

Approximately 2 hectares of the proposed land alteration area are located within DPA 1-G (see Figure 1 below). However, the applicant has submitted a flood hazard assessment that evaluates the entire property, not just the portion within the designated DPA. The flood hazard assessment, prepared by Stirling Geoscience Ltd., primarily examines risks associated with:

- Erosion and clear water flooding from the Fraser River; and,
- Erosion, avulsions, and clear water flooding from Norrish Creek.

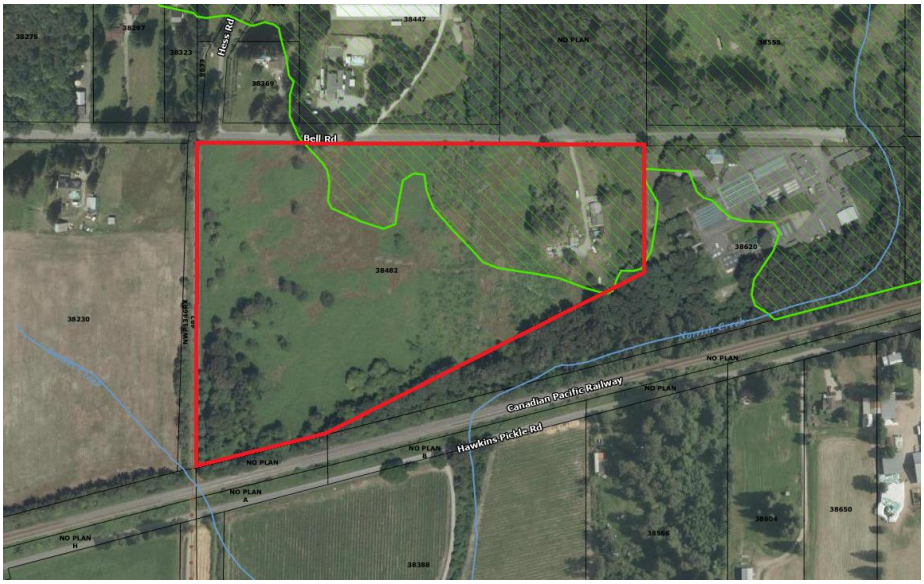


Figure 1: The hatched area indicates the portion of the property within DPA 1-G

Potential Transfer of Flood Risk Review

The Qualified Professional (QP) assessed the potential transfer of flood risk to adjacent properties due to the proposed land alteration. The findings are summarized below:

Watercourse	Location & Context	Discussion	Risk Level
Fraser River	The Fraser River floodplain spans over 4 km perpendicular to the river, while the subject property is approximately 300 m at its widest point.	Given the site's size relative to the floodplain, floodwater direction during major events, and the presence of the Dewdney Dike (west) and railway embankment (south), the proposed soil deposit is not expected to transfer flood risk.	No expected transfer of risk
Inch Creek	Groundwater-fed	Backwatering is unlikely due to the size	Extremely low

	watercourse that daylights 80 m east of the subject property at the DFO Inch Creek Fish Hatchery.	of the railway embankment culvert and the creek's groundwater-fed nature. Additionally, a nearby bridge downstream reduces obstruction risk. The proposed soil deposit is 115 m from Inch Creek and 140 m from the culvert inlet, further mitigating any potential impact.	
Chilqua Creek	Dewdney Dike separates the creek from the subject property.	While historical debris flows have affected the Chilqua Creek fan, the Dewdney Dike provides a barrier. An upstream avulsion could theoretically reach the site, but the likelihood of it causing a significant impact or transferring flood risk is low.	Low
Norrish Creek	Right bank near Bell Road, southwest of the subject property.	A creek avulsion or dike failure could direct floodwaters southwest, potentially inundating the site. Water would pool in the southwest due to the Dewdney Dike, with drainage limited by a 450 mm culvert in the floodbox. However, the proposed fill design includes a 7.5 m wide non-filled portion of the infiltration gallery that is located slightly below the elevation of the adjacent existing ground by approximately 0.1 metres on average, which will function as a flood corridor, reducing flood transfer risk. Floodwaters may also flow north of Bell Road, toward Inch Creek, or along the railway embankment.	Low

The QP also states that:

- "*The area of the development footprint is 8.62 ha, the area of the infiltration gallery (sum of both the filled and non-filled area) is 2.36 ha, and the area of the fill within the crest (e.g., filled area that is not part of the infiltration gallery) is 6.26 ha. Hence, the area of the infiltration gallery represents 38% of the filled area that will drain to the infiltration gallery.*"
- "*The Subject Property slopes downward slightly to the southwest corner but runoff or ponding water is not an issue due to the predominantly sand and gravel ground material. During the November 2021 ARE there was no reported runoff or ponding water issues on the Site nor was it reported that the gate on the floodbox had to be opened during this extreme*

event. Since the area of the proposed infiltration gallery represents 38% of the filled area that will drain to the infiltration gallery, runoff or ponding water is expected to continue to not be an issue on the Site. In the unlikely event that excess runoff from the fill area is not absorbed in the infiltration gallery during an extreme precipitation event, water would flow to the floodbox in the southwest corner of the Site. This is currently where runoff would potentially leave the Site as the Subject Property naturally drains from northeast to southwest and this would continue to be the potential runoff pathway under the proposed development. As discussed earlier, the field assessment did not identify any evidence of overland flow paths on the Subject Property approaching the inlet of the floodbox culvert suggesting precipitation that falls on the Site is absorbed into the ground locally and does not likely enter the floodbox."

Further analysis from the QP concludes that the proposed land alteration maintains adequate flood storage and site drainage capacity, with negligible impact anticipated under both normal and extreme precipitation conditions. If the floodbox or Inch Creek culvert reaches capacity or becomes blocked, spillover would occur at Bell Road at an elevation of 9.3 metres. Most of the proposed fill area lies below this elevation, with the ground averaging 8.5 metres. Additionally, flood storage capacity will be enhanced by the 7.5-metre-wide non-filled portion of the infiltration gallery, which will be excavated below the surrounding ground level.

<u>Flood Storage and Drainage Considerations</u>

The QP reports that the subject property is situated on the alluvial fan of Norrish Creek, with subsurface material consisting of well-draining sand and gravel. The site naturally drains toward the southwest corner, which is the lowest point on the property. In the unlikely event of surface water pooling in this area, drainage could occur through the Dewdney Dike floodbox, a 450 mm diameter concrete culvert with an invert elevation of 6.35 metres GD, located adjacent to this low point.

Key findings from the QP include:

- Field assessments confirmed no significant ditches or overland flow paths on the property.
- The subject property is predominantly composed of sand and gravel, contributing to high infiltration rates.
- No runoff or ponding issues were reported during the November 2021 Atmospheric River Event.
- The floodbox gate, managed by the Dewdney Area Improvement District (DAID), is normally closed and intended for use only during major flood events.
- Precipitation is expected to continue infiltrating locally without generating surface runoff.

Additional observations:

- Flow through the floodbox is controlled by a manually operated gate located near the crest of the dike.
- Field investigations during the wet season (December/January) confirmed the culvert was dry and the gate was closed.
- David Scott, Operations Manager of DAID, verified that the floodbox gate remains closed under normal conditions and has no record of it needing to be opened.
- The floodbox is designed to manage extreme flood events, such as overtopping of the Dewdney Dike due to flooding from the Fraser River or Norrish Creek.

No evidence of ditches along the east side of the dike, along Bell Road, or the southern boundary near the railway embankment. Additionally, no signs of overland flow paths were observed on the subject property. These observations suggest that precipitation infiltrates into the well-draining soils rather than generating surface runoff.
Therefore, the QP concludes that the primary function of the floodbox is to manage floodwaters from extreme river or creek events, not to accommodate runoff from the subject property itself.

Stormwater Management

The QP acknowledges that the site's permeability may decrease post-development due to the replacement of the existing organic soils with structural fill, which could reduce infiltration and increase surface runoff. To mitigate this, the QP has incorporated stormwater management measures, including an infiltration gallery, into the development. Further comments regarding stormwater management from the QP include:

- Infiltration gallery design
    - The gallery consists of a 3H:1V sloped transition from the crest of the soil deposit to the existing ground and a 7.5 m wide buffer zone around the soil deposit area to aid in runoff management.
- Excess runoff management
    - During extreme precipitation events, excess runoff may discharge into the floodbox in the southwest corner or flow into Inch Creek in the southeast.
- Potential backwatering and flood pathways
    - If the flood box under the Dewdney Dike reaches capacity, the excess water could backflow onto the property, enter Inch Creek, and potentially spill onto Bell Road, affecting neighbouring properties.
- Flood storage impact
    - The proposed soil deposit is expected to have a negligible impact on flood storage volume. The lowest spillover point is at Bell Road near the Dewdney Dike at an elevation of 9.3 m, whereas the average site elevation is 8.5 m. As a result, the development is unlikely to significantly affect overall flood risk.

The QP concludes that the development will maintain adequate flood storage and stormwater management performance under both normal and extreme precipitation conditions.

Letter of Assurance & Commitment

FVRD requires a letter of assurance and commitment for undertaking field reviews and post-construction reporting to ensure the recommendations as laid out in the submitted report 38482 Bell Road, Deroche, BC – Flood Hazard Assessment and Development Permit Application, prepared by Jamie Stirling, P. Geo. of Stirling Geoscience Ltd., have been completed to the satisfaction of the QP.

The applicant has provided four Letters of Assurance and Commitment for Undertaking Field Reviews. These letters provide assurance and commitment as outlined below:

Professional	Schedule	Scope of Assurance & Commitment
Stirling Geoscience Ltd. (Jamie Stirling, P.Geo.)	D	• Overall fill project design, including the infiltration gallery as detailed in the Issued for Development Permit drawings in Appendix G of the 38482 Bell Rd, Deroche – Flood Hazard Assessment and DP Application report by Stirling Geoscience Ltd. dated April 2025.
Reilly Engineering Associates Ltd. (Sean Reilly, P.Eng.)	E	• Geotechnical aspects of site preparation, fill placement, and site reclamation.
Keystone Environmental Ltd. (Monte Anions, P.L. Geo., EP, CSAP)	F	• Review of source and soil characterization information for soil to be imported to the property. • Evaluation of laboratory analytical results for soil samples compared to provincial standards for current and proposed future land (and water uses). • Summary report on soil characterization aspects of the Post Construction Report.
Keystone Environmental Ltd. (Jeremy Nilson, R.P. Bio.)	G	• Clearing of vegetation to be completed outside of the applicable critical nesting period for birds (i.e., outside of March 1 to August 31) or only following completion of a nesting activity survey and only if that survey determines that no active nests will be harmed by the proposed clearing. • Jeremy Nilson is to be consulted prior to the start of clearing to confirm if a nesting activity is required. If necessary, Jeremy Nilson will arrange for a nesting activity survey, review the results, and advise as to whether clearing can be initiated and if additional measures are required. The results of this

		determination will be provided to the Fraser Valley Regional District in writing prior to the start of clearing.

Riparian Areas Development Permit Area (DPA) 2-G

The entire property is located within DPA 2-G. As part of Temporary Use Permit 2024-01 (which was refused by the FVRD Board on February 27, 2025), the applicant submitted an environmental assessment titled *Environmental Constraints Assessment – Rev 2 38482 Bell Road, Dewdney, Fraser Valley Regional District, BC Project No. 18314,* prepared by Jeremy Nilson, R.P. Bio of Key West Environmental, dated October 10, 2024.

Findings include:

- The proposed land alteration is more than 30 metres away from any watercourse;
- No further Riparian Area Protection Regulation (RAPR) assessment is required; and,
- The development is exempt from requiring a permit under DPA 2-G.

Future Development Considerations

Any future development or land alteration beyond the scope of the current development permit (2025-02), including activities not covered by the conditions assessed by Stirling Geoscience Ltd., will require a new development permit application. The new application must:

- Include an updated geohazard assessment conducted by a qualified professional.
    - The updated assessment must specifically evaluate the proposed development or activities to ensure that all associated risks are thoroughly assessed and appropriately mitigated in compliance with regulatory requirements.
    - Confirm that the previously placed soil maintains sufficient stability, drainage and structural integrity to support the proposed development.

Additionally, if the FVRD adopts a soil deposit bylaw during the land alteration, any soil deposited would be subject to the new bylaw requirements, which may include obtaining a permit, paying associated fees, and submitting technical reports.

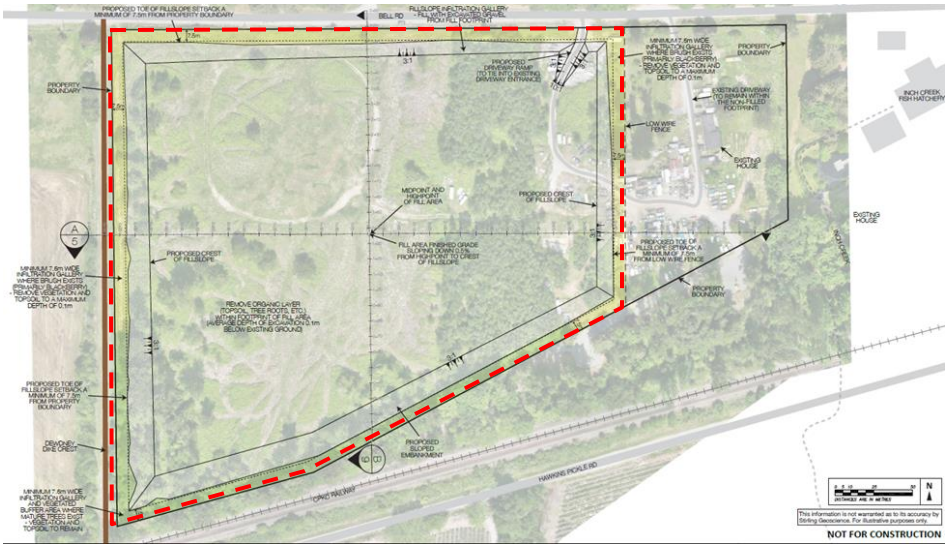


Figure 2: The area within the red border indicates the portion of the property where the land alteration is proposed.

COST

The $380.00 application fee has been received.

CONCLUSION

The submitted flood hazard and environmental assessments indicate that the proposed land alteration will not increase flood risk or negatively impact neighbouring properties. The site's stormwater management capacity will be maintained through the infiltration gallery and site grading.

The proposal is exempt from further riparian assessment, and any additional development beyond the land alteration (soil deposit) described within the geohazard report will require further geohazard review to ensure continued regulatory compliance and safety.

The applicant has submitted the required technical report to meet Development Permit Area 1-G guidelines. Staff recommend that the Electoral Area Services Committee consider the following options:

Option 1 – ISSUE (STAFF RECOMMENDATION)

Staff are of the opinion that the submitted technical report, along with the accompanying letters of assurance and commitment for undertaking field reviews, adequately address the development permit area guidelines.

MOTION: THAT the Electoral Area Services Committee issue Development Permit 2025-02 as drafted (Appendix A).

Option 2 – REFER TO THE FVRD BOARD

Per section 4.3.4 (d) of *Fraser Valley Regional District Development Procedures Bylaw No. 1377, 2016*, the Electoral Area Services Committee may refer a Development Permit application to the Board for a decision. If the EASC wishes to refer the application to the Board, the following motion would be appropriate:

MOTION: THAT the Electoral Area Services Committee refer Development Permit application 2025-02 to the FVRD Board for a decision.

Option 3 – REFER TO STAFF

If the Electoral Area Services Committee is of the opinion that the application may not meet all DPA guidelines, the EASC may wish to refer Development Permit 2025-02 back to staff to work with the applicant to resolve the unmet development permit area guidelines. In such a case, the Electoral Area Services Committee should identify the unresolved issues so that staff can work effectively with the applicant to resolve them. In this case, the following motion would be appropriate:

MOTION: THAT the Electoral Area Services Committee has identified concerns related to *[state concerns]* and refer Development Permit 2025-02 back to staff to work with the applicant to ensure development permit area guidelines are met.

Option 4 – REFUSE

The Electoral Area Services Committee may choose to refuse the issuance of Development Permit 2025-02 if it determines that the applicable development permit area guidelines have not been met. In such a case, the Electoral Area Services Committee should identify which specific development permit area guidelines it considers unmet.

MOTION: THAT the Electoral Area Services Committee refuse the issuance of Development Permit 2025-02.