



# Staff Report to Council

Engineering Department

FILE: 4520-08-2023-01

**REPORT DATE:** April 25, 2024                      **MEETING DATE:** May 07, 2024  
**TO:** Mayor and Council  
**FROM:** Alina Torres, Manager of Engineering and Operations  
**SUBJECT:** Fill Deposit Application – Lot 39 McNeil Road

**CHIEF ADMINISTRATIVE OFFICER REVIEW/APPROVAL:**

**RECOMMENDATION(S):**

THAT Council:

- A. Approve the issuance of a Soil Removal and Fill Deposit Permit to import structural and preload fill for the construction of a single family dwelling and auxiliary farm structure at Lot 39 McNeil Road, as presented at the May 7, 2024 Regular Council meeting, with the following conditions:
  - 1. Issuance of a Highway Use Permit for hauling of fill, prohibiting roadside parking or staging; AND
  - 2. The proposed fill placement activities must be conducted in compliance with all applicable requirements as outlined in the City of Pitt Meadows Soil Removal and Fill Deposit Bylaw; AND
  - 3. The permanent fill placement activities are restricted to an area of 1488 m<sup>2</sup>; AND
  - 4. The total allowed volume of material to be placed is limited to 1290 m<sup>3</sup> of temporary preload fill and 1457.5 m<sup>3</sup> of permanent structural fill; AND
  - 5. All existing topsoil should be salvaged for use on the property where appropriate; AND
  - 6. Execution and monitoring of Erosion and Sediment Control (ESC) measures as prescribed by the qualified professional and as required per best management practices; AND
  - 7. Implementation of all geotechnical recommendations for site preparation, foundation design and field review as recommended by Able Geotechnical Ltd.;

OR
- B. Other.

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## **PURPOSE**

The purpose of this report is to present for Council’s consideration a fill deposit application for Lot 39 McNeil Road, to import structural and preload fill for the construction of a single family dwelling and auxiliary farm structure.

Information Report

Decision Report

Direction Report

## **DISCUSSION**

### **Background:**

PID: 010-790-365  
Property Size: 39453 m<sup>2</sup> (3.9 ha)  
OCP Designation: Agricultural  
Zoning: A-1(General Ag)

The subject site is bound by McNeil Road to the south and similar adjacent properties to the west, north and east. The site is generally flat, with existing grades near El.1.0 m. The property is part of the Agricultural Land Reserve (ALR), and is within the City of Pitt Meadows designated floodplain. The property currently has farm status with no existing structures.

### **Soil Removal and Fill Deposit Proposal**

The purpose of the proposed fill placement activities is to provide permanent imported structural fill to achieve the required Flood Construction Level (FCL) of 2.45m. Per the Geotechnical Report dated July 20, 2023, the geotechnical investigation concluded that due to the combination of loadings from the proposed structure, and fill required to raise the site, soil improvements with a preload surcharge will be required prior to construction, to mitigate long-term settlement. The following is a summary of the application data:



Structure	House	Farm Structure/Driveway
Fill Volume	Preload Fill: 1070 m <sup>3</sup> Structural Fill: 1070 m <sup>3</sup>	Preload Fill: ~220 m <sup>3</sup> Structural Fill: ~220 m <sup>3</sup> Driveway Fill: ~167.5 m <sup>3</sup>
Fill Area	713 m <sup>2</sup>	Structure: 440 m <sup>2</sup> Driveway: 335 m <sup>2</sup>
Fill Depth	Preload Fill: ~1.5 m Structural Fill: ~1.5 m	Preload Fill: ~0.5 m Structural Fill: ~0.5 m Driveway Fill: ~0.5 m
Fill type	Non-organic and clean (less than 8% fines passing 0.075 mm sieve by weight) 75 mm minus pit run sand and gravel or other granular material approved by the Geotechnical Engineer.	
Preload Duration	~ 6 months	

Agricultural Advisory Committee (AAC):

The intent of the soil removal and fill deposit works was presented to the AAC on April 25, 2024. The Committee participated in a discussion with the following main themes noted:

- i) There were no concerns raised around this application as the parcel and the footprints were within the allowable parameters;
- ii) the question was raised whether the home size met the requirements - staff to look into this (not typically on the Geotechnical report);
  - a. Staff confirmed after meeting that finalized house plans are not yet available.
- iii) Discussions were held around the changes to the historical features of Pitt Meadows with addition of many estate homes being built on the north side of Lougheed Highway on smaller parcels.

It was MOVED and SECONDED THAT the Agricultural Advisory Committee:

Supports the fill deposit application to import structural and preload fill for the construction of a Single Family Dwelling and Farm Structure at Lot 39 of McNeil Road.

Agricultural Land Commission

The application meets the exemption requirements of the Agricultural Land Commission Act; notification to the Agricultural Land Commission is not required.

### Archaeological Sites:

According to mapping data made available by the Ministry of Forests, Lands, and Natural Resource Operations, no archaeological sites are identified on the site. It is expected that, if archaeological artifact finds are discovered during the fill process, the contractor would report these finds directly to appropriate provincial authorities.

### Riparian Areas Protection Regulation:

The proposed development triggered the Riparian Areas Regulation, requiring a Riparian Areas assessment to be submitted to the Ministry of Water, Land and Resource Stewardship. On April 19, 2024, the City was notified that the report met the requirements for the Riparian Areas Protection Regulation.

### **Relevant Policy, Bylaw or Legislation:**

All Soil Permit applications that the City receives undergo a thorough interdepartmental review process to ensure the proposed project meets applicable bylaw and code regulations.

### Zoning and Building Regulations:

Under the ALC regulations, the applicants are permitted to construct a principal single family dwelling (SFD) with a maximum of 500 m<sup>2</sup> of floor area. The City's Zoning regulations are the same as the ALC regulations; however, the Zoning Bylaw contains additional regulations that apply, including maximum: height (10 m), lot coverage (5%) and farm house footprint (600 m<sup>2</sup>).

### Soil Removal and Fill Deposit Regulation Bylaw

The Soil Removal and Fill Deposit Regulation Bylaw No. 2593, 2013 regulates the placement of fill or the removal of soil or other material on land in the City. This bylaw is currently under review and future amendments will be forthcoming.

### Floodplain Designation and Construction Control Bylaw

The City of Pitt Meadows Floodplain Designation and Construction Control Bylaw No. 2384, 2008 regulates construction in the floodplain, outlining Designated Flood Levels and associated elevation requirements based on geographical area.

### Highway and Traffic Bylaw

The Highway and Traffic Bylaw No. 2836, 2020 regulates traffic and the use of highways and other areas in the City.

### Geotechnical Report Guidelines

Council Policy C030, Geotechnical Report Guidelines, provides information to prospective applicants and their engineering professionals on when geotechnical reports are required and set out the standards and requirements to be addressed in those reports.

### Agricultural Land Commission Act

The *Agricultural Land Commission Act*, S.B.C. 2002, c. 36, sets the legislative framework for the establishment and administration of the agricultural land preservation program. The *ALC Act* takes precedence over, but does not replace other legislation and bylaws that may apply to the land.

## **ANALYSIS**

### **Geotechnical:**

Placement of structural fill and preload fill shall conform to all recommendations and monitoring requirements, as outlined in the Geotechnical report (Attachment C). A summary of fill placement requirements as dictated by Able Geotechnical Ltd. are as follows:

**Site Stripping:** The building footprint and 2 m beyond should be stripped and cleared of organics and unsuitable soils to expose an in-organic native subgrade consisting of native silt.

**Grade Reinstatement:** The building pad should be constructed in lifts, to elevation (EL) 2.6 m. Every lift should be compacted with a heavy ride on compactor. The compaction of the pad should be reviewed and approved by the Geotechnical Engineer, during compaction.

**Preload:** The preload be completed to EL 4.0 m. It may consist of any mineral fill. After completion of the preloading time, the preload will be removed. The height of preload and the required duration (for targeted rate of settlement) are related. The higher the preload, lesser will be its duration, and vice versa. The preload duration depends upon the thickness of the structural pad, permeability of the underling clay, building load, and cannot be accurately determined in advance. It is estimated that the preload duration will be 6 months +/- 3 months. However, the actual preload duration will be decided based on the settlement rate of the preload, which will be determined by settlement gauge readings obtained from the gauges installed in the preload. Also note that the preload material is taken off-site after completion, however the pad would stay.

**Erosion and Sediment Control (ESC):**

ESC measures will be implemented during fill placement and excavation. The implementation and maintenance of erosion and sediment control measures will be monitored and reported on an ongoing basis by the Environmental Professional.

**Road and Site Access:**

According to the provisions of the Soil Removal & Fill Deposit Regulation Bylaw, “dirt, mud, and debris resulting from a removal or deposit operation which is tracked onto public roads must be removed daily or as directed by the Director.”

Access to the subject property for fill activities shall utilize the City of Pitt Meadows truck route network via Old Dewdney Trunk Road and Neaves Road; as the project site is off the established truck route, trucks will be permitted on McNeil Road during the hauling time frame. The applicant is hopeful to complete the hauling activities for the placement of structural fill and preload surcharge within 1 month. This equates to approximately 13 trucks a day (1-2 trucks an hour), based on an average 10m<sup>3</sup> truck load. Staff do not foresee an issue with the capacity of our road network, although the City retains the right to monitor and revise the conditions, as needed.

**Operations Hours:**

The filling would be prohibited on Saturdays, Sundays and statutory holidays and restricted to the hours between 7:00 a.m. to 5:00 p.m. on weekdays.

**COUNCIL STRATEGIC PLAN ALIGNMENT**

- Principled Governance     Balanced Economic Prosperity     Infrastructure
- Community Spirit & Wellbeing     Corporate Pride     Public Safety
- Not Applicable

**WORKPLAN IMPLICATIONS**

- Already accounted for in department workplan / no adjustments required
- Emergent issue / will require deferral of other priority(ies)
- Other

**FINANCIAL IMPLICATIONS**

- None     Budget Previously Approved     Referral to Business Planning
- Other

The City would receive a levy of \$0.50/m<sup>3</sup> for the material being imported and/or exported from the site. Should the permit be approved to deposit 2747m<sup>3</sup> of preload and structural fill and later remove 1290m<sup>3</sup> of preload material (once compaction is complete), levies of \$2018.50 would be collected into the Transportation Road Levies Reserve.

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**PUBLIC PARTICIPATION**

Inform     Consult     Involve     Collaborate     Empower

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**KATZIE FIRST NATION CONSIDERATIONS**

Referral     Yes     No     Other

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**SIGN-OFFS**

**Written by:**

Ashley Seed,  
Engineering Technologist

**Reviewed by:**

Alina Torres,  
Manager of Engineering and Facilities

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**ATTACHMENT(S):**

- A. Aerial Map
- B. Preload Plan
- C. Geotechnical Report