

Staff Report to Council

Engineering Department

FILE: 11-5240-01/22

REPORT DATE: February 28, 2022

MEETING DATE:

March 08, 2022

TO: Mayor and Council

FROM: Alina Torres, Manager of Engineering and Facilities

SUBJECT: **Soil Removal and Fill Deposit Application- 17982 Ford Road (File ENV00040)**

CHIEF ADMINISTRATIVE OFFICER REVIEW/APPROVAL:



RECOMMENDATION(S):

THAT Council:

A. Approve the issuance of a Soil Removal and Fill Deposit Permit for 17982 Ford Road to remove 2430 m³ of soil and deposit 1254 m³ of fill, with the following conditions:

- A.1 Issuance of a Highway Use Permit for hauling of fill, prohibiting roadside parking or staging; AND
- A.2 Prohibiting filling activities on Saturdays, Sundays and statutory holidays and restricting operations to the hours between 7:00 a.m. and 5:00 p.m. any other day of the week; AND
- A.3 Execution and monitoring of Erosion and Sediment Control (ESC) measures as prescribed by Able Geotechnical Ltd. and as required per provincial best management practices; AND
- A.4 Implementation of all geotechnical recommendations for site preparation, foundation design and field review as recommended by Able Geotechnical Ltd.; AND
- A.5 Compliance with all relevant legislation and permitting requirements, including municipal, regional, provincial and federal jurisdictions; OR

B. Other.

PURPOSE

The City has received a Soil Removal and Fill Deposit application to implement geotechnical design recommendations to sufficiently prepare the subgrade soil prior to the construction of a farm structure.

☒ Information Report

☒ Decision Report

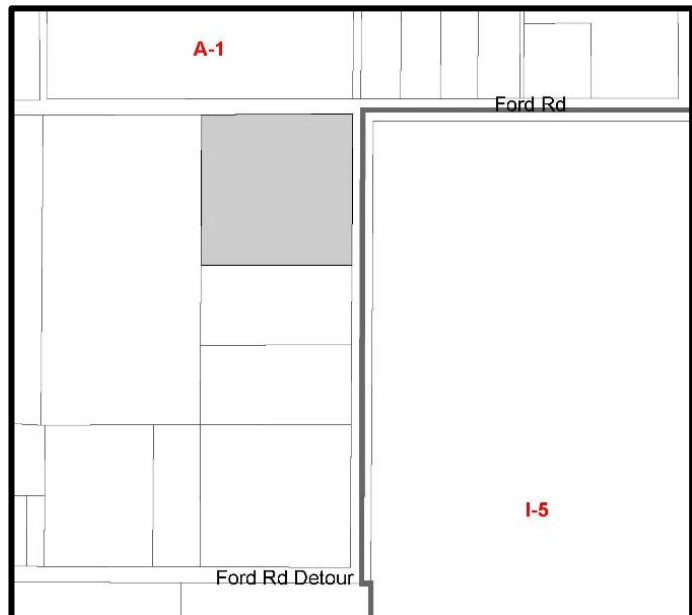
☐ Direction Report

DISCUSSION

Background:

The subject property is at the corner of Ford Rd and Ford Rd Detour and surrounded by neighboring agricultural properties to the north, south and west. The parcel is located within the Agricultural Land Reserve, and is adjacent to the Pitt Meadows Regional Airport, situated approximately 900 meters north of the Fraser River. The current site elevation is relatively flat at approximately 2.0 m geodetic and is within the City of Pitt Meadows designated flood plain.

Applicant: Dilip K Viridi
Civic Address: 17982 Ford Road
Property Size: 36475 m² (3.6 ha)
OCP: Agricultural
Zoning: A-1 (General
Agricultural)



Soil Removal and Fill Deposit Proposal:

The purpose of the proposed fill deposit and soil removal activities is to remove unsuitable organic/peat soil and subsequently import structural and preload fill, in anticipation for the construction of a Farm Structure.

Staff received and reviewed the soil permit application with the following summary of details:

Application Summary	
Fill Volume	Preload Fill: 836 m ³ Structural Fill: 418 m ³
Fill Area	999 m ²
Fill Depth	Preload Fill: ~2 m Structural Fill: ~3 m
Fill type	75mm clean, free draining sand and/or sand and gravel or equivalent with less than 8% fines
Peat Volume	~2430 m ³ (Peat removed will be imported to 17890 Ford Detour Rd for Agricultural purposes)
Preload Duration	~6 to 8 months

Qualified Professional reports and plans submitted with the application include:

- Geotechnical Report, Able Geotechnical Ltd.
- Preload Plan, Able Geotechnical Ltd.
- Qualified Professional sign off and letter of commitment on Erosion and Sediment control plan, Able Geotechnical Ltd.
- Architectural Plans, I Design Inc.

Flood protection:

In accordance with the City's *Floodplain Designation and Construction Control Bylaw No. 2384, 2008*, the designated floodplain for rural areas is 1.85m geodetic datum and the associated flood construction level (FCL) is 2.45m geodetic datum. Although Farm Structures are exempt from meeting the FCL, the anticipated final elevation of fill will be 2.4m.

Agricultural Land Commission (ALC):

The scope of the project falls within the defined exemptions outlined in the Agricultural Land Reserve Use Regulation (the ALR Use Regulation), in relation to fill placement or soil or aggregate removal in the Agricultural Land Reserve (ALR). No engagement with the ALC will be required unless the project size and scope changes where the thresholds established under the ALC Act or Regulations are exceeded. Should the scope change, such that the project area exceeds 1000 m², the applicant will be required to file a Notice of Intent with the ALC.

Agricultural Advisory Committee (AAC):

The intent of the soil removal and fill deposit works was presented to the Agricultural Advisory Committee with specifics of the application, on February 10, 2022. Committee members participated in a discussion, with the following main themes noted:

- The question was raised whether the preload requested is for an agricultural building, confirming there is no housing component to this application (Staff confirmed there is no housing component to this application and will be used primarily for farm equipment storage with offices); and
- Support was given for the construction of a farm building which will support the farm operations.

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.

Relevant Policy, Bylaw or Legislation:

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. If the permit application meets the terms of the Bylaw, Council's authority generally involves modifications of specific conditions (timing, duration, etc).

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

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.

Analysis:

Geotechnical:

The following will be undertaken based on the recommendations by the Geotechnical Engineer of Record:

Site Stripping: Areas of the building envelope should be stripped and cleared of peat and unsuitable soils to expose an in-organic native subgrade consisting of soft clay. Based on the test pit information, stripping depth up to 1.8 m is expected. The native clays are highly sensitive to moisture accumulation and construction activity. Consequently, measures must be adopted to avoid subgrade disturbance. Construction activity will be directly over the native soils. Prepared subgrades must be sloped to drain water away from the stripped areas and use heavy duty sump pumps for removing the collected water.

Structural Fill: Imported structural fill should consist of well-graded, 75 mm minus pit run sand and gravel or other granular material approved by the Geotechnical Engineer. It should be non-organic and clean (less than 8% fines passing 0.075 mm sieve by weight). Structural fill should be placed in maximum 0.3 m lifts. Within the building envelope, it should be compacted to at least 95% of Modified Proctor maximum dry density or to the satisfaction of geotechnical engineer.

Preload: Achieved preload should be to a minimum elevation of 4.0 m. The preload may consist of any in-organic mineral fill. The preload top must cover the building footprint completely. It is estimated that the preload duration will be 6 months +/- 2 months. However, the actual preload duration will be based on the settlement rate of the preload, which will be determined by settlement readings obtained from the gauges installed in the preload. Preload material is generally taken off-site after completion. Hay should be placed over the slopes and preload to minimize the erosion during the rainy months. In order to determine the settlement rate of the preload, 3 settlement gauges should be installed. These should be placed on the native clay after stripping the peat. The pipe should extend approximately 1 m above the finished preload.

Erosion and Sediment Control:

Erosion and Sediment Control 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 Registered Qualified Professional.

Road and Site Access:

Adequate measures, as described by the Erosion and Sediment Control Qualified Professional of record, must be taken to mitigate tracking of material off the site onto the adjacent roads. Any debris that is conveyed onto the roads must be expeditiously removed.

Access to the subject property for fill activities is via Ford Road and Ford Road Detour; as such, all hauling will be confined to the City of Pitt Meadows truck route network.

There are two large fill sites in the vicinity of the project, both of which are currently inactive (expired permits). The applicant is hopeful to complete the hauling activities during the spring of 2022, with hauling estimated to be complete within 1 month. This totals approximately 18 trucks a day (1-2 trucks an hour), based on an average 10m³ truck load. As mentioned above, the exported peat is being relocated to the adjacent property. 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 ☐ Corporate Excellence
☐ Community Spirit & Wellbeing ☐ Transportation & Infrastructure Initiatives
☒ Not Applicable
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FINANCIAL IMPLICATIONS

- ☐ None ☐ Budget Previously Approved ☐ Referral to Business Planning
☒ Other

The City would receive a levy of \$0.50/m³ for the material being exported and imported onto the site. Should the permit be approved, to export 2430 m³ of peat, deposit 1254m³ of structural and preload fill and export 836 m³ of preload once surcharge is complete, levies of \$2260.00 would be collected into the Transportation Road Levies Reserve.

PUBLIC PARTICIPATION

- ☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower
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KATZIE FIRST NATION CONSIDERATIONS

Referral ☐ Yes ☒ No

SIGN-OFFS

Written by:

Ashley Seed,
Engineering Technologist

Reviewed by:

Alina Torres,
Manager of Engineering and Facilities

Samantha Maki,
Director of Engineering and Operations

ATTACHMENT(S):

- A. Neighbourhood OCP Map
- B. Aerial Photo Map
- C. Preload Plan, Able Geotechnical Ltd.