

Staff Report to Council

ENGINEERING DEPARTMENT

FILE: 11-5240-01/22

REPORT DATE: June 13, 2022 **MEETING DATE:** June 21, 2022
TO: Mayor and Council
FROM: Alina Torres, Manager of Engineering and Facilities
SUBJECT: **Soil Removal and Fill Deposit Application- 13000 Harris Road (ENV00042)**

CHIEF ADMINISTRATIVE OFFICER REVIEW/APPROVAL:



RECOMMENDATION(S):

THAT Council:

- A. Approve the issuance of a Soil Removal and Fill Deposit permit application for 13000 Harris Road to import 694 m³ of temporary preload fill and 707 m³ of permanent structural fill, with the following conditions:
1. Issuance of a Highway Use Permit for hauling of fill, prohibiting roadside parking or staging; AND
 2. Prohibiting fill 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
 3. Execution and monitoring of Erosion and Sediment Control (ESC) measures as prescribed by the qualified professional and as required per provincial best management practices; AND
 4. Implementation of all geotechnical recommendations for site preparation, foundation design and field review as recommended by Golden Summit Geotechnical Engineering Ltd.; AND
 5. Approval is received from the Agricultural Land Commission, for the Non- Adhering Residential Use Application (File ID: 64647) and all other 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 Dwelling for 40 migrant farm workers.

☐ Information Report

☒ Decision Report

☐ Direction Report

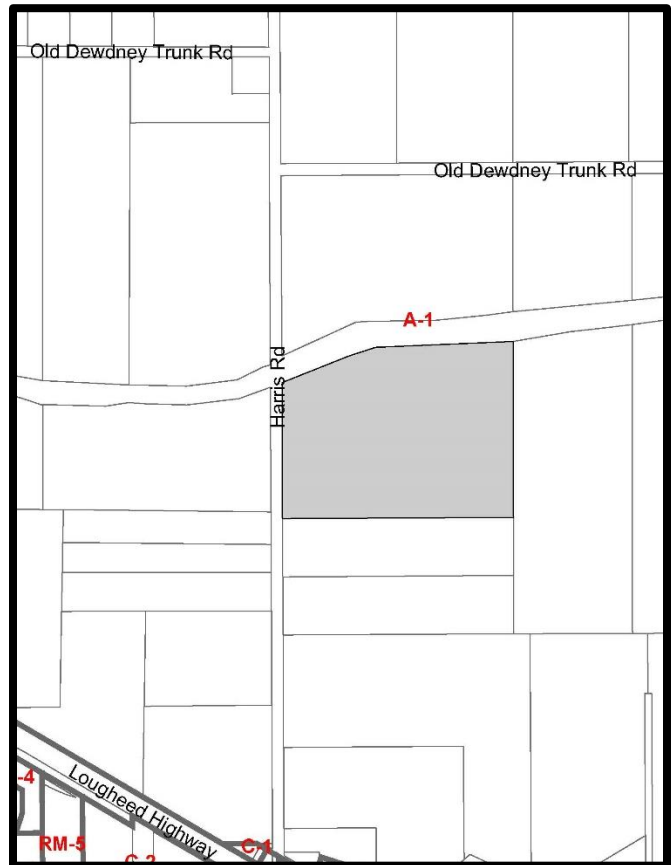
DISCUSSION

Background:

The subject property fronts Harris Road and is located within the Agricultural Land Reserve, adjacent to the Katzie Slough. The parcel has a generally flat topography, averaging approximately 1.8m geodetic and is within the City of Pitt Meadows designated flood plain. It is occupied by an existing residential dwelling, a barn and agricultural land (blueberry crops). The property owner intends to build an additional dwelling to house 40 seasonal, migrant farm workers; the dwelling will be located towards the west end of the lot, just southwest of the existing barn.

Applicant: Ryan Thiara
Civic Address: 13000 Harris Rd, Pitt Meadows
Property Size: 13.81 ha (34.12 acres)
OCP: Agricultural (20 acre min)
Zoning: A-1 (General Agricultural)

Soil Removal and Fill Deposit Proposal:



The purpose of the proposed fill placement activities is to provide imported structural fill to achieve the required Flood Construction Level (FCL). A geotechnical investigation concluded that, due to the potential compressibility of the foundation soils underlying the stiffer upper crust, the placement of grading fills to meet the flood construction levels would cause unacceptable long-term settlements. In order to minimize the consolidation settlements due to the construction of the granular pad, the installation of a temporary preload surcharge is recommended.

The following is a summary of the application data:

Application Summary	
Fill Volume	Preload Fill: 694 m ³ Structural Fill: 707 m ³
Fill Area	462 m ²
Fill Depth	Preload Fill: 1.5 m Structural Fill: 1.6 m
Fill type	clean, free draining sand and/or sand and gravel or equivalent with less than 5% fines
Preload Duration	~ 90 days

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 FCL is 2.45m geodetic datum.

Agricultural Land Commission (ALC):

On March 17, 2022, the applicant submitted a Non-Adhering Residential Use Application to the Agricultural Land Commission to construct an additional dwelling; once the ALC receives an application it is forwarded to the local government, requiring approval from the municipality having jurisdiction prior to ALC review and approval.

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 May 12, 2022. The committee passed the following motions:

- A. Supports the non-adhering residential use application for 13000 Harris Road, to construct housing for 40 migrant farm workers; AND
- B. Supports the fill deposit application to import structural and preload fill for the construction of a migrant farm-worker housing structure.

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.

Staff Comments:

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.

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.

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.

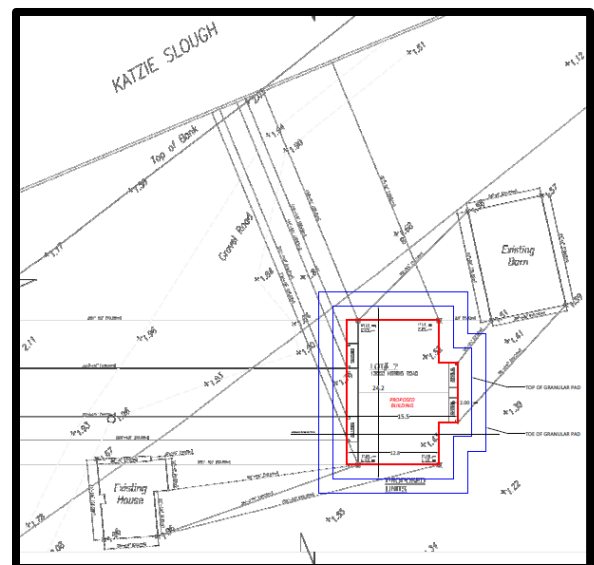
Analysis:

Geotechnical:

Placement of structural fill and subsequent preload shall conform to all recommendations and monitoring requirements, as outlined in the Geotechnical report submitted by Golden Summit Geotechnical Engineering Ltd (GSGE), dated April 4, 2022. A summary of fill placement and preload requirements as dictated by Golden Summit Geotechnical are as follows:

Site Stripping: Topsoil, loose or soft fills, organic or any unsuitable soils must be stripped to the depth of the upper layer of the native, stiff, medium plasticity silt, observed at depths between 0.3 m to 0.6 m below the existing ground surface.

Structural Fill: The granular pad shall be built using structural fill consisting of sound, durable, well graded granular material, free of earth lumps or deleterious materials, with a maximum size of 75 mm and fine contents less than 12%. The structural fill must be approved by GSGE prior to its use. The structural fill must be compacted to a minimum density of 95% Modified Proctor



Maximum Dry Density and must extend to a minimum horizontal distance beyond the edges of the footings equal to the greater of: (i) two times the footing width; (ii) the thickness of the structural fill or (iii) 2.0 m. Fill must be placed in 300 mm (1 ft.) thick loose lifts when compacted using large compaction equipment such as vibrating rollers. Lift thickness must be reduced to 150 mm if smaller plate compactors are used.

Preloading: The fill material shall consist of non-structural granular fill (sand or silty sand / sandy silt) with a minimum compacted unit weight of 18 kN/m³. The estimated duration of the preload is approximately 90 days, depending on the rate of soil consolidation.

Erosion and Sediment Control:

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 a registered 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 is via Old Dewdney Trunk Road and Harris Road; as such, the majority of hauling trucks will be confined to the City of Pitt Meadows truck route network.

The applicant is hopeful to complete the hauling activities for the placement of structural fill and preload surcharge within 2 weeks. This equates to approximately 14 trucks a day (1-2 trucks an hour), based on an average 10m³ truck load. Staff do not foresee an issue with the capacity of our road network, although we retain 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
-

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 imported and/or exported from the site. Should the permit be approved to deposit 1401m³ of preload and structural fill and remove 694m³ of preload material (once compaction is complete), levies of \$1047.50 would be collected into the Transportation Road Levies Reserve.

PUBLIC PARTICIPATION

☒ Inform ☐ Consult ☐ Involve ☐ Collaborate ☐ Empower

KATZIE FIRST NATION CONSIDERATIONS

Referral ☐ Yes ☒ No

SIGN-OFFS

Written by:

Ashley Seed,
Engineering Technologist

Reviewed by:

Alina Torres,
Manager of Engineering and Facilities

ATTACHMENT(S):

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