

John Sule

Subject: FW: Request for Expert Advice - LUC-2018-644 - 16Coast Road

From: MWH Hazards Team [mailto:MWHHazardsTeam@stantec.com]

Sent: Tuesday, 27 November 2018 11:31 a.m.

To: John Sule

Cc: MWH Hazards Team

Subject: RE: Request for Expert Advice - LUC-2018-644 - 16Coast Road

Hello John

We have assessed the application in relation to the hazard register, street files and available aerial photography. We have not visited the site.

We have the following comments to make regarding the application.

Proposal

The proposed activity is to construct various commercial spaces including a material stockpile yard, a small house construction area, earthmoving equipment storage, etc.

Site investigation reports have not been provided.

Plans for the proposal are provided within the application

Hazards

From the Hazard Register, street files, and previously sent emails ; for both this title and nearby properties

- Hazard ID 10111: Intensified shaking, Earthquake Likely Amplification
- Hazard ID 11407: Liquefaction Domain C. The ground is predominantly underlain by poorly consolidated marine or estuarine sediments with a shallow groundwater table. There is considered to be a moderate to high likelihood of liquefaction-susceptible materials being present in some parts of the areas classified as Domain C.
- Hazard ID 10106 : Alluvial Fans – active floodwater

Global Setting

The underlying geology consists of alluvial materials and is sloping by less than 12 degrees.

Earthworks / Excavations / Retaining Structures

The proposed developments includes approximately 1m of fill placed across the entire site (approx. 8000m³) in addition to the 1400m³ of fill already transported to the site. The fill layer is proposed to be bounded by 2.5m high landscaping bunds with 40 degree batters.

Discussion

The proposed development earthworks are significant and may change overland flow paths. The proposed batter slopes are steep and we recommend reducing the batter to 2V:1H for fill material.

We recommend that the application not be declined on the ground of known natural hazards.

The proposal will not create or exacerbate instabilities on this or adjacent properties

Advice

We recommend that advice be made to the effect:-

- Temporary stability may be a concern on this project, and remains the responsibility of the developer

The site lies in an area where underlying soils have been identified as having potential for amplified movement and liquefaction during a significant seismic event.

- The cases for seismic loading are normally addressed at building control stage.
- The Dunedin City Council Building Control Authority will ask for verification that the site is 'good ground' in accordance with NZS3604, Section 3.1.

- Further to this, we recommend that specific engineering design be required to address recognised potential liquefaction hazards.
- Specific Engineering Design, or exclusion of liquefaction risk may require investigation testing to 10m depth to quantify the potential for liquefaction.

Conditions

We recommend that the following conditions be required:-

- Slopes may not be cut steeper than 1:1 (45°) without specific engineering design and construction
- Slopes may not be filled steeper than 2h:1v (27°) without specific engineering design and construction
- As-built records of the final extent and thickness of any un-engineered fill should be recorded
- This proposed works must address the potential for egress of water from the property via secondary flow paths, ensure that construction is not proposed in low-lying areas and that the path of storm water is not displaced from ephemeral flow paths into neighbouring properties.
- Normal building requirements exist to ensure that overland stormwater flows are not interrupted and any permanent structures should be situated to avoid any adverse effects from local ponding during storm rainfall events.

Regards,

Edward Guerreiro

BEng Civil (Hons)
Civil Engineer

Mobile: +64 21 866 028

Email: edward.guerreiro@stantec.com

Stantec New Zealand
134a Gorge Road,
Queenstown 9300, New Zealand
PO Box 13052,
Christchurch 8141, New Zealand



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From: John Sule <John.Sule@dcc.govt.nz>

Sent: Monday, 19 November 2018 11:57 a.m.

To: Logan Copland <Logan.Copland@dcc.govt.nz>; Grant Fisher <Grant.Fisher@dcc.govt.nz>; MWH Hazards Team <MWHHazardsTeam@stantec.com>; Environmental Health Administration <healthadmin@dcc.govt.nz>; Anna Johnson <Anna.Johnson@dcc.govt.nz>; Hannah Moodie <Hannah.Moodie@dcc.govt.nz>; Jessica Mackinlay <Jessica.Mackinlay@dcc.govt.nz>; Kathryn Ward <Kathryn.Ward@dcc.govt.nz>; Lisa Fitzgerald <Lisa.Fitzgerald@dcc.govt.nz>; Luke McKinlay <Luke.McKinlay@dcc.govt.nz>; Paula Myers <Paula.Myers@dcc.govt.nz>; Peter Christos <Peter.Christos@dcc.govt.nz>; Seta Sharif <Seta.Sharif@dcc.govt.nz>; Resource Consents WWS-BC Comments <resconsent.wwsbc-comments@dcc.govt.nz>

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