Jackson, Andrew

From: Cottam, Rachel
Sent: Wednesday, 10 May 2023 10:08 am
To: 'Sonja Perrin'
Cc: Ward, Sean; Hebert, Marie-Claude; McDonald, Yvonne; Deepani Seneviratna
Subject: RE: TRIM: RMA/2023/597 Request for further information
Attachments: RMA2023597 - Request for further information.pdf

Hi Sonja,

I hope you had a good weekend. The geotechnical engineer has reviewed the application and has the following RFI questions. Please ensure that these are answered alongside the RFI attached:

1. Can the applicant please extend and expand their typical road and right of way sections to show a series of typical sections including the retaining walls on each side, the existing ground profile and the design finished surface.

2. The applicant state they are going to allow for site accesses where walls are uphill by leaving a gap. Please confirm this and how will erosion be controlled over time in these areas?

3. Will the end of ROWs also contain retaining?

4. The stormwater line along the bottom of lots 4-8 will require a bench to install and to allow maintenance access. Please include this in the earthworks assessment as well as an assessment on how secondary flow paths will be addressed.

5. Will the rockfall fence need earthworks – for construction access, maintenance access benching etc? It is not shown on the plans.

6. The geotechnical report talks about remediation to address earthflows. This has not been shown on the earthworks plan. Please provide details, depths, setbacks from lots etc

7. As mentioned in the original RFI, a SOPO has yet to be provided. When it is provided please include confirmation of the subdivision layout to support the geotechnical report. The site testing seems light with the variation in subsoil depths and conditions and in light of the earthflows and gullies, particularly in the south end. It is considered more testing will be required in order to be able to confirm that all building platforms are appropriate.

8. The applicant states cut batters will be formed at 60 degrees and faced with gabion baskets, with batters over 4.0m height requiring ’reinforcement’. Geotechnical advice supports this gradient for permanent batters. Can the geotechnical engineers please comment on the choice of gabions on these faces and specific design features/advantages/disadvantages. Can they also address the ‘reinforcement’ referred to in the Subdivision Design Report. How will this interact with the earthworks limits shown, with rock foundations, with house platform locations and accesses?

9. Engeo have determined limited aeras where source treatment to address rockfall risk is appropriate. One of these areas is in the neighbouring land and will require ongoing permission and a right to access for future remediation. Can they confirm this will be available?

10. Engeo note the subsoils in the earthflow areas ‘may need to be removed or stabilised’. That is the limit of the information. These ‘flowpaths’ and their maintenance will be key to the ongoing safety of those lots previously affected. Please provide further information on how this matter will be addressed.

11. Engeo state for lots 22, 23 and 30 (the earthflow areas above), that rock is expected within the upper three meters and pile foundations, potentially designed for lateral movement, may be required. What about earthflow busting out?/height of bund to stop it/ interaction with building platform and setbacks. More detail is required on the form of the engineering waterways, their expected design assumptions and how they interact with the surrounding land.

12. Engeo have provided recommendations for earthworking, cut off drains on the uphill side of all accesses, extending to the hard loess (0.3-1.5m depth). Can they please provide a typical cross section at 0.3 and 1.5m depth, indicating the existing and design ground surface. Please confirm if these are intended as a permanent measure above all roads? Under what circumstances would they apply to the building platforms.

13. Engeo recommend the installation of rockfall protection fences to mitigate the risk to the upslope lots. These fences cross the gullies. There is no comment about the interaction between the gullies, the watercourses and the rock fences. Please provide further clarification on this point.

14. Please confirm the building platforms location and then confirmation that the fence design will function as intended.

    If rockfall fences are preferred, then these would need to be designed and located once the building platforms have been confirmed.

15. Please show identify the surveyed waterways on the application plan and their relevant setbacks.

16. The rockfall assessment by Engeo states that part of the site requires rockfall mitigation works (a combination of scale and fencing) to be suitable for residential development. Please provide additional details regarding the placement, design and maintenance of these rockfall mitigation works in conjunction with the proposed lot locations.

17. Council officers expect the AIFR to be sufficiently low on the entire lots (meaning parts of the lots cannot have remaining AIFR beyond the acceptable levels). Please a detailed maintenance schedule which includes responsibility involved.
    Some sites are affected by rockfall mitigation structures (fencing) that are beyond their property boundaries. These property owners must be assured that maintenance will occur on the rockfall mitigation structures that affect their properties and parts of 10 and 9 cannot be built upon. Maintenance considerations are provided in Section 8.4: "The fence will need to be inspected on an annual basis or following earthquake or storm events." Who will do this? Some items will need to be replaced after 25 years.

18. Regarding the earthflow instability hazard, Engeo state: *"… the soil within the earthflows is likely to be significantly weakened and, depending on foundation solution, may need to be removed or stabilised prior to development of building platforms. We recommend further testing, assessment and remedial works design be completed at the building consent stage for these lots."* Such uncertainty on the earthflow instability hazard and its potential effects cannot be left to be investigated at the building consent stage. Please provide detail on the earthflow instability hazard and what mitigations are proposed.
    The hazard must be understood now and considered sufficiently low for residential development. If the hazard can be mitigated with a specific foundation solution, this must be stated now. If additional remedial works are required, these must be outlined now.

19. Tunnel gulley erosion was observed at the site. Is the risk of erosion well understood and considered sufficiently low for residential development? Are subdivision wide mitigation works proposed or will these be addressed on a lot-by-lot basis? When will these mitigations occur? How much uncertainty is being left to be addressed at the building consent stage?

Comments
Overall the geotechnical report is low on detail and resembles more of a conceptual stage of reporting than information required at the application stage. Please ensure revisions are detailed in order to allow s106 and the District Plan to be assessed appropriately.

It appears that rockfall protection will require a private fence to be established on public lane. Easements on reserve are usually avoided if they are required for private use only. It is considered that with the requirements of maintenance of reserves, it is recommended that easement in gross are proposed in stead of public reserves on the application site. This may need to be further discussed at a round table meeting once the RFI has been completed.

It is noted the final AIFR will require verification by peer review, it is likely to be conditioned if the application is to be approved.

Thanks,

Rachel Cottam

Senior Planner
Planning Team 5

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Christchurch City Council

From: Cottam, Rachel
Sent: Thursday, 4 May 2023 1:23 pm
To: Sonja Perrin <sonjaperrin@outlook.com>
Subject: TRIM: RMA/2023/597 Request for further information

Hi Sonja,

Hope you are well. Please find attached the request for further information.

Feel free to get in touch if you would like to discuss anything further.

Thanks,

Rachel Cottam

Senior Planner
Planning Team 5

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