



Waterfall Park Developments Ltd
Level 2, 11 Westhaven Drive
Cracker Bay
Auckland 1010

Attention: Lauren Christie

Engineered Batter Planting Stability Memo Ayrburn Screen Hub, Arrowtown

Dear Lauren,

This memo is in response to the Landscape Peer Review by Bridget Gilbert dated 17 December 2025. This response relates to the geotechnical matters as raised within paragraph's 4.2 and 4.4. The review of commentary and preparation of this memo has been undertaken as an extension to our existing agreement dated 17 October 2024 in accordance with the same terms and conditions.

The issues raised in the Landscape Peer Review listed below in *italics*, with the response following each item.

Paragraph 4.2 - *"I do not consider that it is appropriate to leave the design of this aspect of the project to the detailed design stage, for the following reasons:*

- a) *It is my understanding that for most geogrid reinforcement products, holes need to be cut into the system to allow for the planting of large tree specimens (as proposed in the development). The frequency of planting holes may compromise the integrity of the system or necessitate the downsizing of the mitigation planting strategy which could be an issue from a landscape effects perspective.*

GeoSolve Response: The proposed geogrid reinforcement design will comprise of horizontally laid geogrids without a surficial wrap or 'hard' facing product (e.g. Terramesh baskets). Instead, an erosion protection matting e.g. Biomac CJ450 (or similar) will be used as the facing product therefore the surface will be able to be planted through as required.

- b) *It is my understanding that for some geogrid reinforcement products, it is only possible to use small plants, so roots don't damage the integrity of the system. This could result in a quite different and potentially unsatisfactory mitigation planting strategy, which again, may be an issue from a landscape effects perspective.*

GeoSolve Response: A sketch is provided detailing two options for installing the proposed beech trees on the geogrid reinforced engineered spur. Sketches detailing these two options are attached. It is noted that a combination of these options could be used so trees (proposed at 2 m centres) aren't planted in a 'line'.

The remaining plants proposed (excluding the beech trees) can be planted through the surficial matting on the proposed spacing as detailed within the Winton planting plan (without the considerations of the attached sketches).

c) *The slope profile of overlain fill may be vulnerable to washing off, potentially undermining plant establishment.*

GeoSolve Response: The fill will be placed and completed in accordance with standard earthworks construction methods which will include regular testing to confirm compaction and keying the fill into sloping ground. An earthworks specification will be provided at detailed design detailing all inspection and testing requirements. In addition to the fill construction works, surficial erosion protection matting will be installed across the slope to assist with establishment of planting.

Paragraph 4.4 – *“In terms of the earthworks cut and landscape strategy along the northwestern side of the site I note that the Appendix 20 Proposed Contour Overlay Plan advises that the final cut batter grade behind (or to the north of) the film studio buildings is “subject to detailed design”, and that there is “provision for soil nails in this area”. In my experience, soil nails are typically used in combination with shotcrete, geotextile membrane or steel mesh which may make the planting proposed in this area practicably infeasible. In a similar vein to my comments in relation to the stabilisation of the spur landform, I do not consider that it is appropriate to leave the design of this aspect of the project to the detailed design stage because, depending on the design solution proposed, this aspect of the development may be of such a scale and/or character (including precluding the proposed native margin planting) that it creates adverse landscape effects or reduces the landscape mitigation benefits of the development.”*

GeoSolve Response: Any soil nail reinforced area is considered to be of sufficiently low enough angle to have a mesh matting product (e.g. MacMat R) installed rather than shotcrete. The mesh matting product can be cut if the incision is reinforced around the outside with two steel cables and the limitations on spacing is adhered to. A sketch is attached detailing the remedial detail for the proposed matting to allow planting to occur as per the proposed landscaping plans.

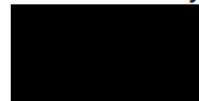
The matting can be planted or grassed which will effectively hide the matting product once vegetation is established.

To confirm, there is no change from a visual perspective or earthworks design/shaping perspective as shown on the Engineering Plans within Appendix 20.

Applicability

No parties other than the Client (Waterfall Park Developments Limited), a Hearing Panel acting under the FTAA (2024) addressing the matter that is the subject of this report, or the Queenstown Lakes District Council as the consent authority responsible for monitoring implementation of this consent (if granted), should use this report or any information contained within it without our prior review and written agreement.

Yours faithfully,



Mike Plunket

Senior Geotechnical Engineer

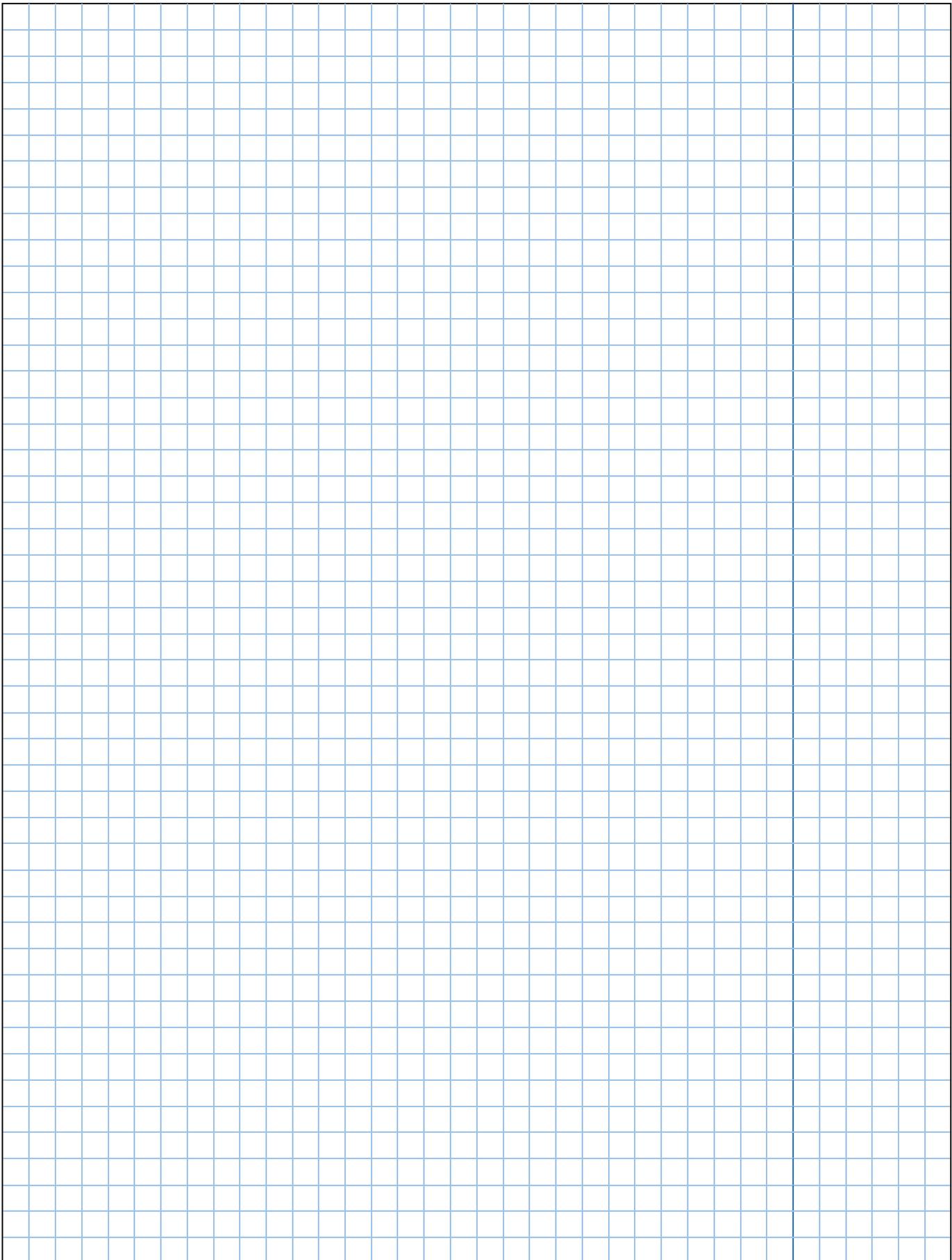
Reviewed by: Colin Macdiarmid, Principal Geotechnical Engineer

GeoSolve Limited



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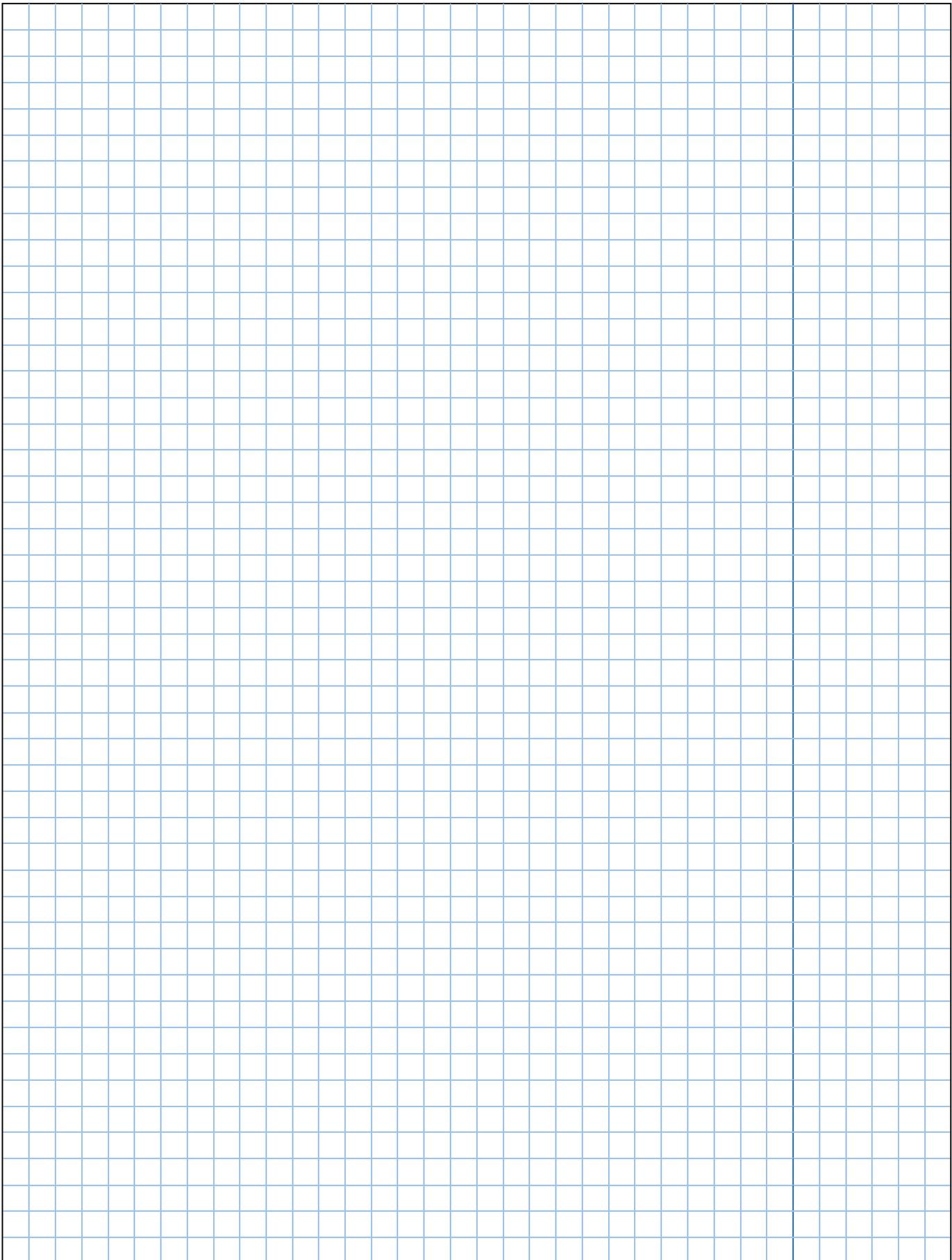
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