

## **Technical Memorandum – Fast-track Application**

### **Waikanae North Development Limited Urban Subdivision Development**

**Date:** 16 July 2026

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**Discipline/expertise:** Civil engineering, earthworks, construction management

**Issued to:** Monique Leith, Consultant Planner for Kāpiti Coast District Council

### **Introduction**

This memo responds to a request for comment from the expert panel assessing Waikanae North Development Limited's ("WNDL") substantive application to undertake an urban subdivision development at 169-171 Peka Peka Road, Kāpiti, under the Fast-track Approvals Act 2024 (the Act).

This memo provides comments on the effects of the project on civil engineering matters insofar as they relate to earthworks, geotechnical matters, and construction management. Other civil engineering matters i.e. three waters and transport, are covered in separate technical memos for Council, which have been taken into account in preparing this memo.

The Development Engineering position is that the application provides sufficient information to understand the broad engineering concept. However, several matters remain unresolved and require further information, revised reporting, modelling confirmation or specific consent conditions before Council could support the proposal from a civil engineering / asset acceptance perspective. These matters should not be deferred to EPA unless the consent includes clear hold points preventing works, connections, vesting or stage release before the relevant matter is resolved.

### **Pre-lodgement feedback on the draft application**

The initial Development Engineering feedback requested to confirm that the proposal is feasible, compliant with KCDC requirements, and capable of being delivered without creating unresolved asset or maintenance risks. The key matters raised, in relation to the engineering disciplines covered by this memo, were:

- Earthworks cross-sections and long-sections, peat volume reconciliation, engineered fill specification, geotechnical QA, compaction reporting and staging hold points.
- Service trenching recommendations, combined services corridor sections, service clearances, public/private asset ownership, stream/wetland crossings and easements.

### **Review of application (and regulatory assessment)**

Following lodgement of the application, some of the outstanding matters have been addressed at concept level. However, concept-level drawings and references to future detailed design are not sufficient where the matter affects consent-stage assessment of effects, servicing feasibility, asset acceptance or legal deliverability.

This review has been undertaken against the relevant engineering expectations in KCDC Land Development Minimum Requirements 2022, NZS 4404:2010, NZS 4431:2022, the KCDC LIUDD stormwater guidance, NZS 1547:2012, SNZ PAS 4509:2008, WSA 04 and relevant KCDC standard drawings and asset requirements.

### **Earthworks and Geotechnical Assessment**

- The application provides a consent-stage preliminary earthworks/geotechnical assessment, including bulk earthworks, peat removal/replacement, staged filling, Ngarara Stream works, wetland interfaces and road/service formation. The geotechnical material also addresses peat/organic soils, groundwater, settlement, liquefaction and dune slope stability, with Appendix 33 proposing related geotechnical conditions.

However, due to the scale of peat works, groundwater, soft soils, flood storage interaction and staged construction, stronger conditions than proposed are required for the detailed earthworks specification, ITP, trenching methodology, peer review and staged certification before EPA/construction.

- A project-specific Earthworks / Engineered Fill Specification and Inspection and Test Plan should be required before any structural fill is placed. General reference to NZS 4431:2022 is not sufficient for a site of this scale. The specification must address material acceptance, unsuitable material removal, peat excavation and reuse limits, lift thickness, moisture conditioning, compaction targets, test types, testing frequency, hold points, non-conformance procedures and reporting.

A condition requiring this at EPA must be imposed.

- Peat handling should be controlled through the final CEMP / earthworks specification. The application identifies the broad peat removal and replacement approach, but a peat reconciliation note should still distinguish excavated, dried, reused, stockpiled and disposed volumes. Peat reuse in structural or engineered fill should not be accepted unless testing, trials and geotechnical approval confirm suitability.

A preliminary strategy should be provided at consent stage or otherwise a suitably worded condition of consent in order to defer this to detailed engineering design stage.

- A condition requiring stage specific detailed geotechnical assessment, engineered fill specification, trenching methodology and slope-specific must be imposed including requirement for independently peer reviewed by a suitably qualified external geotechnical reviewer at the applicant's expense before EPA.

To conclude, this matter has been partially addressed. The application provides a consent-stage earthworks and geotechnical basis and includes draft geotechnical conditions. However, the detailed controls needed to manage Council risk are not yet provided. The resource consent decision should secure conditions requiring detailed geotechnical assessment, engineered fill specification, peat management controls, independent external peer review at the applicant's cost and staged completion reporting. Final construction drawings, detailed modelling, ITPs and Geotechnical Completion Reports can be provided at EPA / detailed design, but only through specific conditions and hold points before bulk earthworks, structural fill, high-risk trenching or works adjacent to dune faces commence.

### **Outstanding matters**

The following matters remain outstanding from a Development Engineering perspective. These matters are not general detailed design details because they affect effects assessment, servicing feasibility, Council asset acceptance, legal deliverability and long-term maintenance responsibility:

- Provision of earthworks feasibility information, including representative/ constrained earthworks sections, peat management basis, and conditions for detailed geotechnical assessment, engineered fill specification, independent peer review and staged completion reporting.
- Provision of a geotechnical trenching assessment and recommendations addressing trench stability, bedding, backfill, temporary support, groundwater control, reinstatement, settlement risk, and works near wetlands, streams, roads and existing services.

This information should be provided at the consenting stage, or otherwise a suitably worded condition of consent is needed in order to defer this to detailed engineering design stage.

### **Proposed conditions**

Feedback will be provided on the proposed consent conditions when the updated set is received, as per Minute 1 from the Expert Panel.

### **Other matters (if relevant)**

This Development Engineering assessment is limited in scope so as not to duplicate matter address in other technical engineering-related assessments, namely Council's technical memos on Water & Wastewater and Stormwater, Flooding & Hydrology. Where another engineering-related memo requests further information, modelling, asset acceptance or confirmation, this memo does not supersede that requirement.

Several matters may require development agreements, including water and wastewater modelling costs, staged bulk water supply, downstream wastewater upgrades, future pump station upgrades and future road network / active mode interfaces.