Comments on a Substantive Application under section 53 of the Fast-track Approvals Act 2024: Earthworks

Fast-track project name	**Wellington International Airport Southern Seawall Renewal**
Fast-track application number	FTAA-2510-1118
GW file number	FTA260318

Technical area	**Earthworks**
Author	Kerry Pearce, Land Management Consultant
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Documents considered	• B.17 Southern Skies Erosion and Sediment Control Assessment Report (October 2025) • G.02 Southern Skies Chemical Treatment Management Plan and Draft Site Specific ESCPs (October 2025) • D.04 Resource Consent Conditions (October 2025), specifically conditions ESC.1 to ESC.25 (Erosion management and sediment control) on PDF pages 45-51

Comments

Key issues

1. The application proposes using the *"New Zealand Transport Agency Erosion and Sediment Control Guidelines for State Highway Infrastructure"* (NZTA Guidelines) for the sizing of the sediment control structures to be implemented for the proposed works, as opposed to the *"Greater Wellington Regional Council Guideline Document Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region, February 2021"* (GWRC Guidelines). The NZTA Guidelines allow for the soil type to be taken into account when sizing sediment control structures such as sediment retention ponds. The NZTA Guidelines are proposed in this instance due to predominantly sandy soils on site, which results in a much smaller sediment retention pond that if the GWRC Guidelines were used. The GWRC Guidelines are a more modern document (2021 versus 2014) taking into account current best practice, and the GWRC Guidelines have been adopted by GWRC as the current standard for design and construction of Erosion and Sediment Control measures.

2. The application proposes undertaking earthworks in the winter season (June to September inclusive). The ESCP justifies this by limiting winter earthworks to the MGC Yard where the

soils are predominantly sand, and references the NZTA Guidelines and Environment Bay of Plenty's Environmental Guideline 2010/01. Both of these documents acknowledge that winter works may be appropriate on sand-based soils due to higher infiltration rates.

3. Care needs to be taken when considering controls and winter works in sand soils, as the Infiltration rates of sand soil can be altered through the effects of earthworks (compaction and clogging of porosity through sediment movement), and while this might be less extreme for sand soils there is still an increased risk in winter.

4. The documents provided include a Chemical Treatment Management Plan (CTMP) which contains the methodology for determining the chemical treatment of sediment control devices. However, while flow activated flocculation is mentioned, this CTMP is largely reliant on rainfall activated dosing. The design for rainfall activated flocculation devices is based on the runoff profile of clay soils. The runoff profile of sand is likely to be different to clay so rainfall activated flocculation may not be the best solution in this instance.

5. The Chemical Treatment Management Plan is a draft document that would be updated post-consenting and proposes that rainfall-activated sheds are set up to delay initial dosing with specific timings that can be further modified where appropriate, such as due to the presence of sandy soils. The CTMP also notes there are also other delivering systems that could be implemented onsite such as a flow-based system. The application proposes these details will be addressed in the draft Chemical Treatment Management Plan submitted for certification.

Matters in contention and proposed solutions

Use of NZTA Guidelines versus GWRC Guidelines

6. The predominant concern is the sizing of sediment control devices such as sediment retention ponds in the NZTA Guidelines results in device that are significantly smaller in volume than that which is required under GWRC Guidelines. These documents are considered the current 'best practice' ESC documents, with the GWRC Guidelines being a more recent document. The NZTA Guidelines have likely been proposed as they allow for smaller structures to be designed and implemented where there is greater infiltration. The site contains sand soils, being more permeable and therefore less likely to generate runoff, and have greater infiltration in their natural state thereby theoretically requiring less storage.

7. However, as earthworks are undertaken a generally more impervious surface is created through compaction, thereby increasing potential for runoff over the pre-existing site conditions. Construction of the sediment control devices with heavy machinery, and migration of soil particles through erosion can also decrease infiltration on site and in the impoundment devices.

8. While increased infiltration into the sand soils present on site does justify consideration of the NZTA Guidelines, based on the fact that the infiltration can deteriorate over the construction period there is sound reasoning for more robust monitoring of those devices with contingency actions should these controls be less effective and not meet discharge standards. If there are control measures proposed that could be considered of a lesser scale than control measures designed in accordance with GWRC Guidelines, greater monitoring and an escalating response to exceedances are considered necessary to ensure adverse effects are minimised.

9. The NZTA Guidelines specifically refer to compaction of sand soils and the resultant impact on infiltration, which states: "*Where compaction occurs, the effect is a significant reduction in water infiltration into the ground. This applies across the board to all soils, but to a lesser extent for sands and gravels.*" While the guidelines suggest that the reduction in water infiltration occurs to a "*lesser extent for sands and gravels*", this is not quantified, and it is not the case that it does not occur at all during construction.

Undertaking works in winter

10. As works outside of the summer construction season are more susceptible to sediment discharge, a seasonal restriction is considered appropriate. If a seasonal restriction is not imposed, then there needs to be consideration of winter works in the SSESCP certification process and appropriate additional controls (if required) considered through the SSESCP certification process. If the consideration of winter works is to be left to the SSESCP certification process, it is important that this is specifically raised and justified through the process.

Methodology of Chemical Treatment

11. The CTMP and consent conditions need to reflect that the current standard rainfall activated chemical treatment dosing system is designed for use in clay soils and may not be ideally suited for use in sand soils. Therefore, the CTMP needs to specifically consider the infiltration and runoff rates of sand soils, and ensure the CTMP system design reflects this. This may result in the use of flow activated chemical treatment on site, or changes to the rainfall activated dosing system to reflect the differing runoff profile of the sand soils on site. Otherwise there is a risk of over-flocculation of the sediment control devices.

Conditions

12. The use of the NZTA Guidelines in the sand soils present on site may be considered acceptable, provided there is a robust monitoring regime that will highlight any deficiencies in sediment control performance, and escalating response measures should exceedances be ongoing. This monitoring regime and escalation response can be implemented through consent conditions, and has been successfully used on other large construction projects in the past.

13. Winter works need to be considered through consent conditions due to the higher risk of undertaking earthworks during the wetter winter months. This can be through specific winter works conditions, or through the SSESCP certification process.

14. Consent conditions need to allow for the CTMP to consider all methods of flocculent dosing due to the differing runoff profile of sand soils.