

Managing construction runoff



Design

A big focus of the O Mahurangi Alliance is to mitigate and manage potentially adverse environmental impacts during construction. We do this through considered temporary works design, best practice erosion and sediment control and water treatment techniques, such as sediment retention ponds (pictured above).

Erosion and Sediment Control (ESC) design is and will be constant and ongoing throughout the construction of O Mahurangi - Penlink. We are always working to improve our ESC Design and often adjust our design as works progress to best work with the site characteristics and activities occurring at the time. Our ESC Design is also specific to the work in our construction programme. When designing and updating ESC, we look to a few documents for help. The

overarching ESC Plan provides us with the minimum standards, ESC philosophy, and various options to use when managing stormwater. The Construction Erosion and Sediment Control Plan (CESP) provides us with more specifics, such as what devices are available to use. We created our ESC Plan in collaboration with Mana Whenua and more specific plans are approved by regulators as well as shared with kaitiaki for their input.

We design everything to **Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region**, known as GD05. GD05, created by Auckland Council, provides technical guidance for the selection, design and use of ESC practices and measures for land disturbing activities in an Auckland context. We go above the GD05 standards where we can.

Construction

During construction, the soil is exposed due to earthworks. ESC devices provide an important solution to protect the area. The devices are designed for specific catchments and rainfall events. Some of the devices we use are sediment retention ponds, flocculant, and decanting earth bunds. We also use:

- diversion bunds and channels
- silt fences
- drop out pits
- sediment treatment tanks
- stabilised construction site entrance ways
- wheel washes

We focus on minimising open areas to reduce erosion and are constantly stabilising bare earth. To do this we use hay, grass, aggregate and sometimes cloth. Our environmental team closely monitors site as well. Local authorities make regular checks to ensure our compliance with relevant consent conditions.



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Weather

Auckland weather can sometimes mean four seasons in one day. For this reason, we use multiple forecasts to try and stay ahead of what's coming and share them with the team daily. When preparing for a weather event, we may close out an area of our construction site if needed. Consistent weather forecasting, and maintenance of our devices, including before and after rainfall events, ensures peak performance of ESC devices and the best environmental outcomes.

Regular monitoring of the surrounding environment takes place during construction to track any potential impacts. If any impacts are found, we review construction activity and methods to see if we can change anything.

Sustainability

Our Sustainability Policy details the way O Mahurangi Alliance is committed to delivering positive sustainable, environmental and social outcomes. This policy recognises the importance of values as part of the holistic approach to a Te Ao Māori lens and perspective.

The Sustainability Policy touches every part of O Mahurangi - Penlink, including the way we design and carry out ESC across the project. For example, when we consider what ESC devices and materials to use, we try and limit single use materials and use sustainable options instead.

Through resource efficiency and waste minimisation, we will minimise our environmental footprint and leave a positive legacy in the community and within the wider industry. We will be guided by the following Waka Kotahi strategy documents:

- Te Hiringa O Te Taiao | Our Resource Efficiency Strategy
- Toitū Te Taiao | Our Sustainability Action Plan
- Te Tāruke-ā-Tāwhiri | Auckland's Climate Plan

Read more on the sustainability work underway on our website: www.nzta.govt.nz/projects/penlink



For more information and to sign up for project updates, go to our website www.nzta.govt.nz/penlink
Contact the O Mahurangi project team via email omahurangi@nzta.govt.nz or phone 0800 7365 465.



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