



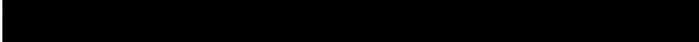
**Site Specific Erosion, Sediment & Dust Control Plan  
MGC Yard**

Southern Seawall Project

Wellington International Airport Limited

January 2026

## Document Control

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## 1. INTRODUCTION

This Site-Specific Erosion, Sediment & Dust Control Plan (**SESDCP**) relates to the activities associated with the establishment of the Miramar Golf Course Construction Yard (**MGC Yard**). The location of the yard is shown in Figure 1 and the features are shown in Figure 2.



Figure 1: Location of MGC Yard

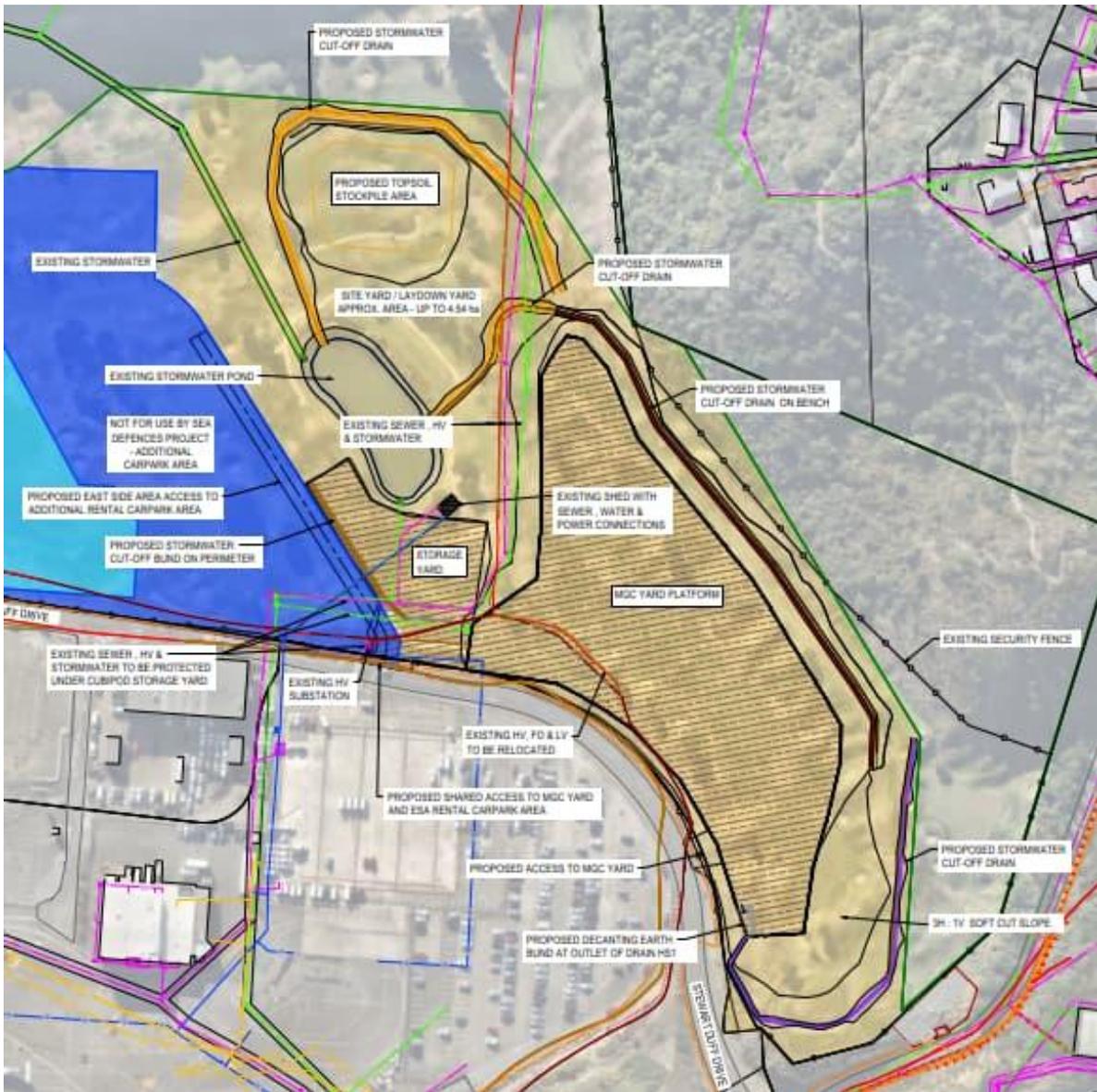


Figure 2: Features of MGC Yard

This SSESDCP provides design erosion and sediment control (**ESC**) measures indicating how the site will manage runoff during these construction activities.

This SSESDCP has been prepared in accordance with the principles of the Greater Wellington Regional Council *Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Wellington Region*, February 2021 and the NZTA *Erosion and sediment control guidelines for state highway infrastructure*, September 2014 (the **ESC Guideline**) and addresses the following earthwork activities:

- Establishment of erosion and sediment control measures (clean water control, sediment retention devices and dirty (site) water control);
- Initial vegetation clearance and topsoil stripping;
- Earthworks to recontour the site to a level surface suitable for yard activities;
- Installation of drainage works; and
- Establishment of laydown and working yard areas.

## 2. CONSTRUCTION PROGRAMME

To be included prior to Council certification.

## 3. DESCRIPTION OF WORKS

The MGC Yard will be established in advance of the seawall construction site, in order for Wellington International Airport Limited (WIAL) to commence rock and armour unit stockpiling. The MGC Yard establishment works are expected to commence as soon as consent is granted and will take up to 7 years to complete progressively as storage area is required.

The proposed specifications including earthworks of the MGC Yard works are shown in Table 1, with detailed design drawings included in Part C of the application documents.<sup>1</sup>

Parameter	Specification
Yard area	< 4.5 ha
Earthworks area	~4 ha
Earthworks cut volume	~100,000 m <sup>3</sup>
Earthworks fill volume	2,000 m <sup>3</sup>
Earthworks cut to be removed offsite	100,000 m <sup>3</sup>
Paved area (yard entrance and exit)	up to ~400 m <sup>2</sup>
All-weather (permeable granular) pavements	30,000 m <sup>2</sup>
Yard buildings	~500 m <sup>2</sup> , approximately 4 – 5 m high

Table 1 - Proposed specifications of the MGC Yard (source WIAL Southern Seawall Renewal Draft Description of Proposal July 25)

### 3.1. Earthworks

Refer to ESCP-001, 003, 004 and 005, which show the erosion and sediment controls for the MGC Yard, the design details of the sediment retention pond (SRP) and typical details of each control.

The MGC Yard earthworks are to be undertaken in stages (staging to be determined by contractor), comprising the Main MGC Yard (Area A) and the Northern Stockpile (Area B) as shown in Figure 3.

<sup>1</sup> These figures are approximate and subject to detailed design.

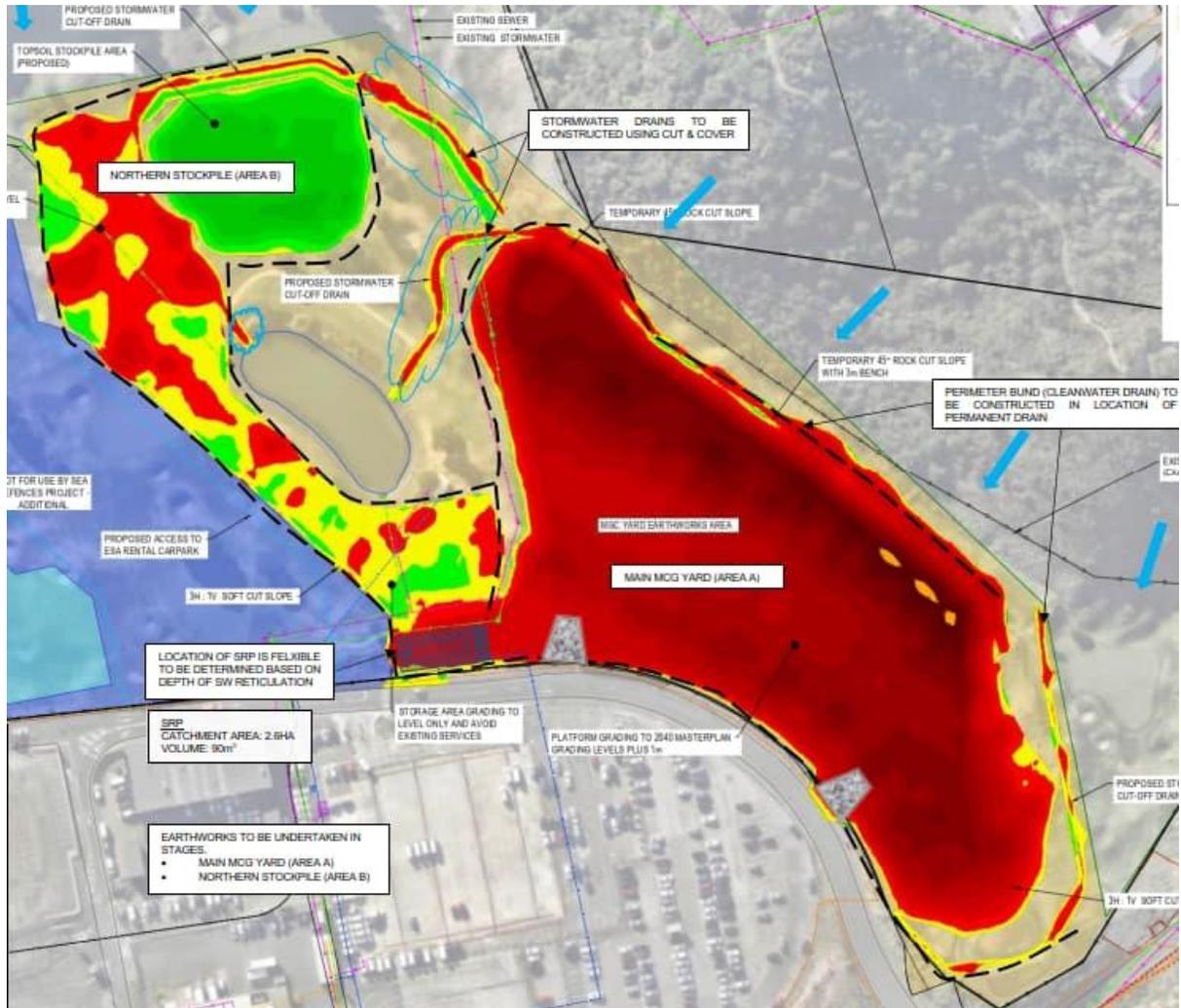


Figure 3: Location of Main MGC Yard (Area A) and Northern Stockpile (Area B)

### Main MGC Yard (Area A)

The Main MGC Yard is an area of approximately 2.6ha.

Stabilised construction entrance will be installed in the approximate locations as shown on ESCP-001

A cleanwater diversion will be installed in the location of the permanent stormwater cutoff drain (designed by Beca). Dirty water diversions will be installed to direct sediment laden runoff to SRP1. These are shown as perimeter bunds on ESCP-001.

SRP 1 has been designed in accordance with the NZTA *Erosion and sediment control guidelines for state highway infrastructure*, September 2014 given the sites sandy soils.

The earthworks will be undertaken progressively as a cut to waste operation. As design levels are achieved the surface will be stabilised with aggregate.

### Northern Stockpile (Area B)

The Northern Stockpile is an area of approximately 1.9ha.

A perimeter bund (clean and dirty water) will be constructed to divert sediment laden runoff to SRP1.

SRP 1 has been designed in accordance with the NZTA *Erosion and sediment control guidelines for state highway infrastructure*, September 2014 given the sites sandy soils.

The earthworks will be undertaken progressively as a cut to waste operation. As design levels are achieved the surface will be stabilised with aggregate.

Three stormwater drains will need to be constructed using cut and cover.

### 3.2. Contaminated Soil

Beca has prepared a preliminary site investigation (“PSI”) and detailed site investigation (“DSI”) for the site. Analytical results identified per-and poly-fluoroalkyl substances (“PFAS”) and concentrations of perfluorooctane sulfonic acid (“PFOS”) in the western part of the site that appears to correspond with the historical NAC apron and immediately surrounding area.

Any contaminated material encountered will be managed in accordance with the recommendations of those reports.

The contaminated material will be either:

- Removed from site and disposed of to an approved landfill; or
- Temporarily stockpiled and covered in an impervious lining or contained within a sealed and bunded area.

## 4. EROSION AND SEDIMENT CONTROL DETAILS

### 4.1. Construction Entrances

Stabilised construction entrances will be installed off Stewart Duff Drive. The entrances will be constructed and maintained in accordance with Section E2.6 of the ESC Guidelines. The typical details are shown on ESCP-004.

### 4.2. Cleanwater Diversions

Upper catchment clean water will be diverted using clean water diversions, at the approximate locations depicted on ESCP-001

The ESC Guidelines recommends that clean water diversions are designed to carry the flow from the 20% annual exceedance probability (AEP) rain event (plus 300mm freeboard). As the contributing catchments are less than 5ha in area, the typical details as shown in Figure 2 and contained with the ESC Guidelines can be relied on.

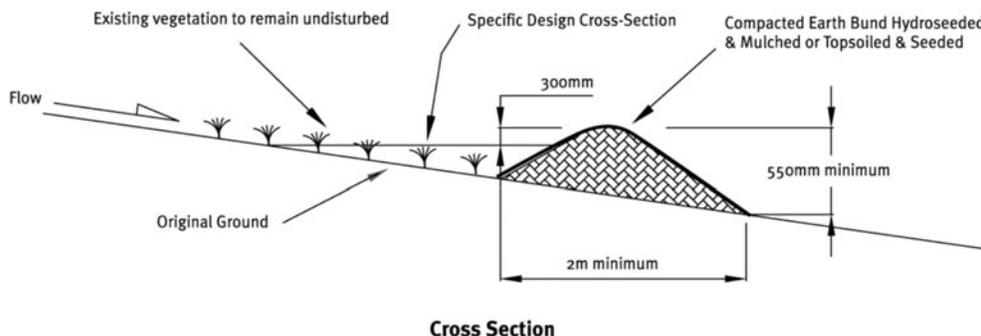


Figure 12: Cross-section of a clean water diversion bund.

### 4.3. Dirty Water Diversions

Dirty water diversions will direct sediment laden runoff to the sediment control measures. The ESC Guidelines recommends that dirty water diversions are designed to carry the flow from the 20% annual exceedance probability (AEP) rain event (plus 300mm freeboard). As the contributing

catchments are less than 5ha in area, the typical details as shown in Figure 3 and contained with the ESC Guidelines can be relied on.

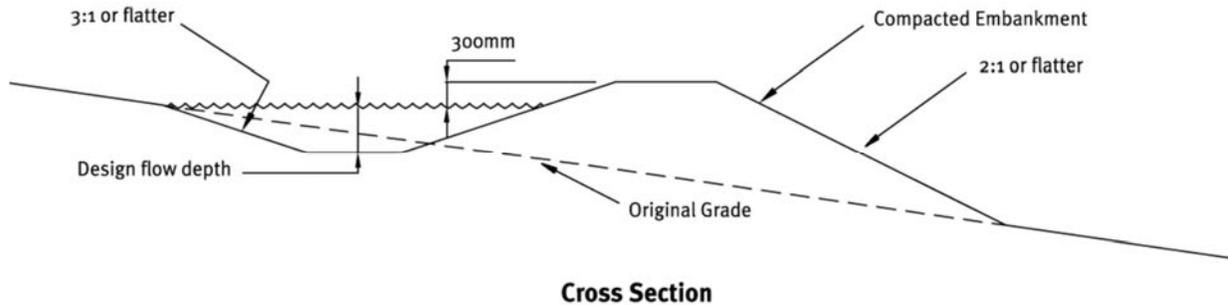


Figure 3: Cross-section of a dirty water diversion.

#### 4.4. Cut and Cover

The stormwater drains will be constructed using a 'cut and cover' approach in accordance with the ESC Guidelines (Section G3.1.2). This approach means that the contractor can only strip an area of the drain where the surface will be stabilised on the same day.

#### 4.5. Sediment Retention Pond

The sizing of the Sediment Retention Pond (SRP) has been undertaken using NZTA *Erosion and sediment control guidelines for state highway infrastructure*, September 2014 given the sites sandy soils.

Section 6 *Hydrological design criteria* of the NZTA ESC Guidelines outlines the approach to sizing SRP's based on the hydrological design. This is based on the following parameters:

- Soil,
- Slope;
- Rainfall;
- Ground cover; and
- Risk associated with the design.

The effect that soil, slope and groundcover have on runoff is well understood but a key element of sizing of practices relates to rainfall and the risk associated with the design. The risk relates to the sensitivity of the receiving environments as exceedance of design criteria could have a significant impact on them.

#### Design Steps

For sizing using the hydrological design criteria the following steps are to be taken:

1. Determine site location and from that determine latitude and longitude;
2. Determine project duration;
3. Using HIRDS or local data select the 1-hour storm using the appropriate frequency storm event risk factor for the receiving environments. (2-year, 5-year, 10-year, 20-year or 100-

year from Table 6-4);

4. Determine site soils and slope to select the C Factor;
5. Determine the site area that would drain to a storage practice;
6. Use the Rational Formula to calculate the peak discharge for the storm selected in step 1; and
7. Multiply the peak discharge by 3,600 seconds to get the volume of the sediment storage practice.

**MGC Yard Pond Sizing Calculation**

1. Drains to Lyall Bay so design risk factor is 75%, use a 5-year storm. Site latitude is -41.33351521405444, site longitude is 174.813259772435.
2. Project duration > 6 months
3. Rainfall is 22.1mm
4. Site soils are sand with slopes less than 10% – Flat gravel 0.15 (<10%) - Sand 0.1. Have assumed flat gravel as great volume of runoff.
5. Site area that would drain to a storage practice - 2.6ha.
6.  $Q = 0.00278(22.1)(0.15)(2.6) = 0.024\text{m/s}$
7. Storage Volume =  $0.024(3600) = 86.4\text{m}^3$

The full design details of the SRP are on ESCP-005 and shown in Figure 4.

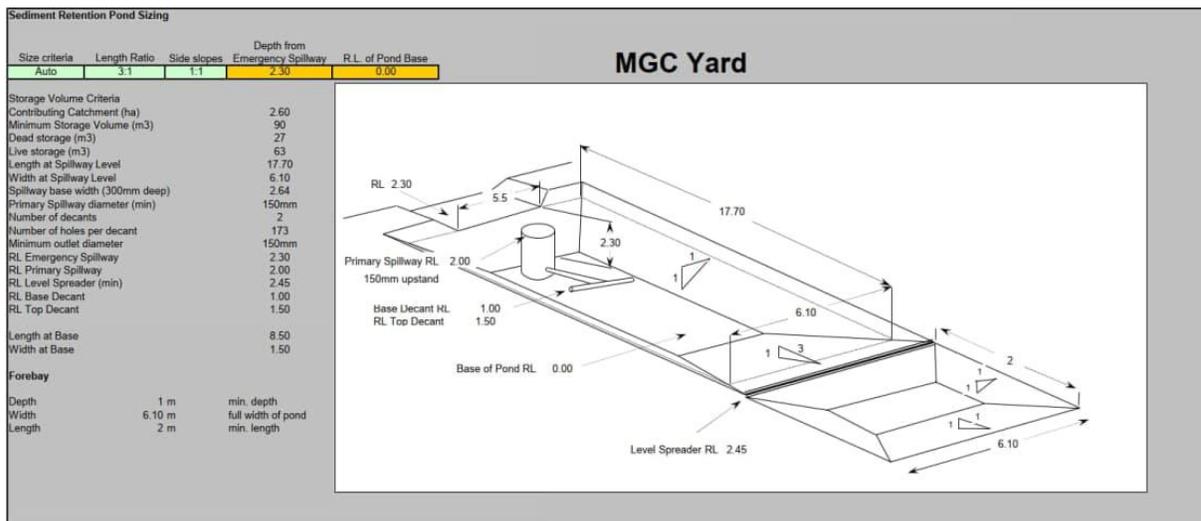


Figure 4: Design details of the Sediment Retention Pond.

**4.6. Chemical Treatment**

The Chemical Treatment Management Plan (CTMP) provided as Appendix A of the Erosion and Sediment Control Assessment Report provides the methodology for determining the effectiveness

and dose rates for chemical treatment to enhance the sediment retention efficiency of sediment retention ponds, decanting earth bunds and other water impoundment devices that will be used throughout the project. It is intended that all SRPs will be chemically treated if necessary and monitored in accordance with the CTMP.

#### 4.7. Stabilisation

Progressive stabilisation will be undertaken throughout the earthwork operations. Both temporary and permanent stabilisation measures will be employed on site. Common stabilisation measures include spreading of aggregate, grassing (with a full cover of grass), applying mulch and the use of geotextiles.

Once the catchment area for a particular ESC device is stabilised then the ESC monitoring and maintenance will cease, and the ESC device could be decommissioned.

#### 4.8. Dust Control

General principles to be adopted to ensure that potential dust effects are avoided include:

- Staging of earthworks activities as much as possible and progressive stabilisation of completed surfaces to ensure that exposed areas at any one time are minimised;
- Managing the route and speed of vehicles traversing the site taking into account potential dust mobilisation and effects;
- Monitoring and maintenance of potential nuisance dust effects;
- Implementation of appropriate control measures to suppress dust generation effects should dry/windy conditions be encountered.

Further details of these proposed dust management methods are outlined as follows:

##### 4.8.1. Earthworks Staging/ Progressive Stabilisation

A progressive approach to covering and stabilisation of earthworks surfaces will be undertaken with construction being undertaken as cut and cover, surfaces being covered with either aggregate or topsoil within 10 working days (as a maximum) of completion or as soon as practicable.

Once either an aggregate or topsoil cover is established on completed earthworks surfaces it is considered that the potential for dust effects will be significantly reduced and all efforts will be made to promote vegetation of completed surfaces as soon as possible once a topsoil cover is achieved.

Stockpiles should not have a single angular peak and should be oblong in shape at an angle into the prevailing wind.

##### 4.8.2. Vehicle/ Machinery Use

Specific site management requirements which will be implemented to minimise potential vehicle/traffic generated dust effects will include:

- Reducing vehicle movements through a well-planned and co-ordinated construction programme;
- Controlling all vehicle speed on site (max 30km/h);
- Location/use of haul routes to minimise dust generation taking into consideration current weather conditions;
- Regular maintenance of internal haul roads;

- Ensuring all traffic leaving the site is in a clean condition to avoid tracking of fine sediments onto public roads. However, if site monitoring identifies that sediment tracking is occurring, a contingency comprising immediate employment of a sweeper truck/power broom to clean the road surface will be implemented to prevent any further effects; and
- Ensuring any dry material being carted by trucks is adequately covered/secured;

At least one water cart will be established on site at the start of construction works to dampen down any potential dust generating surfaces during dry, windy conditions and will be kept on site at all times with additional water carts being available on call.

Polymer stabilisers may be used to protect the high-risk areas and be applied to surfaces where dust has been identified as a significant risk. The inert nature of these products makes them ideal as an environmentally friendly application.

#### 4.8.3. Restriction of Work

Where dry and windy conditions are severe enough then construction activities may cease or be restricted to mitigate any potential dust issues. The decision to restrict or cease work all together will be made by the Project Manager. The decision will be based on several factors including, but not limited to:

- Wind speed and direction
- Construction activities currently being performed
- Mitigation measures currently in place and potential additional measure available.

#### 4.9. As Builts

Prior to bulk earthworks commencing, as-builts for the erosion and sediment controls will be provided to the Greater Wellington Regional Council. The as-built certification will confirm that the controls have been constructed in accordance with the approved SSESDCP.

This SSESDCP is intended to be a live document and if the earthworks methodologies or erosion and sediment control measures for the anticipated work changes then an update / review of the SSESDCP drawings will be made before the earthworks commence. Any changes to the SSESDCP will be confirmed in writing and provided to the Greater Wellington Regional Council for certification, prior to the implementation of any changes proposed.

### 5. EROSION, SEDIMENT & DUST CONTROL MONITORING

All erosion and sediment control measures will be maintained in accordance with the ESC Guidelines throughout the works until the site is stabilised against erosion.

All erosion and sediment control measures and methodologies will be monitored during the works in accordance with the Erosion, Sediment & Dust Control Monitoring Plan (ESDCMP) provided as Appendix C of the Erosion, Sediment & Dust Control Assessment Report. Any required maintenance or improvements to control measures will be undertaken immediately.

The SRP will be cleaned out before accumulated sediment volume reaches 20% of the total volume. Forebays will be cleaned out if there is any evidence of sediment deposition.

Once an area is stabilised and the controls removed, the operational requirements commence and monitoring under the ESDCMP will cease.