Memorandum

To	Russell Butchers; Vanessa Leddra; Michele Schitko-Saboonchi (Auckland Council)
Copy	Belinda Petersen; Nitin Sahare; Graham Taylor (NZTA); Alisdair Simpson (WSP)
From	Tina Kalmar
Office	Auckland
Date	22 April 2024
File/Ref	5C4353-WRP-04-MM-PL-1003
Subject	BOMBAY CVSC NOTICE OF REQUIREMENT AND RESOURCE CONSENT APPLICATION: RESPONSE TO FURTHER INFORMATION REQUESTS FROM AUCKLAND COUNCIL (APRIL 2024)

Bombay CVSC NOR and RC Application Processing - Summary of further information requested:

Auckland Council requested further information in relation to specific matters concerning the Resource Consent (RC) for the Bombay Commercial Vehicle Safety Centre (CVSC) in an email dated 9 April 2024.

The matters in the request related to:

- Mana Whenua values (including consultation and engagement)
- The indicative Erosion and Sediment Control Plan

These matters are responded to in the following sections of this memo.

This followed an earlier request received on the 4 April 2024 for further information on the above matters, as well as a technical document/drawing summary, and that had also provided an update on the landscape specialists view on landscape effects, discussed next in section 1.1.

All other RC matters have been closed out following two formal RMA s92 requests responded to by the applicant in February and March 2024.

1.1 Landscape (NOR) matters

In the 4 April email, Auckland Council confirmed that landscape matters are resolved, however adverse landscape effects have been identified by the specialist, which may necessitate limited notification.

The 4 April email outlined identified parties that the Council's landscape specialist considers have low or low-moderate adverse landscape effects. This does not constitute the reporting planners determination on whether these parties are affected and formal notification

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determination. In lieu of that information, WSP and Council's landscape specialists will confer on their assessments at an expert meeting scheduled for 23 April 2024.

1.2 Memorandum Overview

To clarify, our response to Council's 4 April and 9 April emails is set out in the following:

This memo, including:

- Application documents: technical assessment summary (section 1.3)
- **Table 1**: Document and Drawing Schedule Register (April 2024)
- Further Information Requests and Applicant Responses – Erosion and Sediment Control, and Mana Whenua matters (sections 1.4 and 1.5)
- **Table 2**: Further Information Requests and Applicant Responses

Attachments:

- Attachment A: Updated Erosion and Sediment Control Plan with 'Appendix A: Updated ESC drawing C-3100'
- Attachment B: Mana Whenua Consultation and Engagement summary information – Notes of site visit with Southern Iwi Integration Group representatives March 2022

1.3 List of technical assessments and drawing register

Council's email of 4 April requested a short document "setting out which technical documents and drawings relate to the RC and which to the NoR (and any crossover documents)". This information is set out below and within **Table 1.**

For the NOR, the supporting technical assessments are as follows:

- Traffic Impact Assessment
- Archaeological Assessment
- Landscape and Visual Assessment
- Operational Noise and Vibration Assessment
- Operational Lighting Assessment

For the RC, the supporting technical assessments are:

- Erosion and Sediment Control Plan (report and plans)
- Ecological Impact Assessment
- Stormwater and Flood Assessment
- Contaminated Land Assessment (Detailed Site Investigation)

The list of drawings provided with the lodged NOR and RC package (October 2023), and the s92 responses (26 January and 18 March 2024) are listed below in **Table 1.** The right hand column indicates which drawings relate to the NOR, the RC, or to both.

REGISTER CODE:	AS LODGED
	NEW APPENDIX/ATTACHMENT (ADDED POST LODGMENT)
	DOCUMENT REVISION CHANGE (POST-LODGEMENT) DOCUMENT DELETED ~~(STRIKETHROUGH)~~

Table 1 - Document and Drawing Schedule Register (April 2024)

DOCUMENT CODE	DRAWING TITLE	REV	DRAWING RELATES TO (NOR), (RC) or BOTH
ARCHITECTURAL			
5C4353-WRP-54-SK-AB-1001	COMPLIANCE BUILDING DESIGN (GHD PLANS)	B	NOR
5C4353-WRP-54-SK-S-1001	INSPECTION SHED	A	NOR
GENERAL ARRANGEMENT PLANS			
5C4353-WSP-54-DR-C-0300	GENERAL NOTES AND LEGEND	0A	BOTH
5C4353-WSP-54-DR-C-1000	GENERAL ARRANGEMENT OVERALL PLAN	0A	BOTH
5C4353-WSP-54-DR-C-1100	EXISTING SITE PLAN	0A	BOTH
5C4353-WSP-54-DR-C-2000	OVERALL SITE PLAN	0A	BOTH
5C4353-WSP-54-DR-C-2001	DETAILED LAYOUT PLAN	0B	BOTH
5C4353-WSP-54-DR-C-2010	GREAT SOUTH ROAD RIGHT TURN BAY	0A	NOR
5C4353-WSP-54-DR-C-2300	TRACKING CURVES – SHEET 1 OF 8	0B	NOR
5C4353-WSP-54-DR-C-2301	TRACKING CURVES – SHEET 2 OF 8	0B	NOR
5C4353-WSP-54-DR-C-2302	TRACKING CURVES – SHEET 3 OF 8	0B	NOR
5C4353-WSP-54-DR-C-2303	TRACKING CURVES – SHEET 4 OF 8	0B	NOR
5C4353-WSP-54-DR-C-2304	TRACKING CURVES – SHEET 5 OF 8	0B	NOR
5C4353-WSP-54-DR-C-2305	TRACKING CURVES – SHEET 6 OF 8	A	NOR
5C4353-WSP-54-DR-C-2306	TRACKING CURVES – SHEET 7 OF 8	A	NOR
5C4353-WSP-54-DR-C-2307	TRACKING CURVES - SHEET 8 OF 8	A	NOR
5C4353-WSP-54-DR-C-1300	FENCING PLAN	OB	NOR
5C4353-WSP-54-DR-C-2210	ACCESS ROAD SECTION VIEWS	A	RC
5C4353-WSP-54-DR-C-2100	EOS HARDSTAND LONGSECTION	A	RC
5C4353-WSP-54-DR-C-2110	ACCESS ROAD LONGSECTION	A	RC
5C4353-WSP-54-DR-C-2220	GREAT SOUTH ROAD SECTION VIEWS – SHEET 1 OF 2	A	RC

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5C4353-WSP-54-DR-C-2221	GREAT SOUTH ROAD SECTION VIEWS – SHEET 2 OF 2	A	RC
5C4353-WSP-54-DR-C-2200	EOS HARDSTAND SECTION VIEWS – SHEET 1 OF 3	A	RC
5C4353-WSP-54-DR-C-2201	EOS HARDSTAND SECTION VIEWS – SHEET 2OF 3	A	RC
5C4353-WSP-54-DR-C-2202	EOS HARDSTAND SECTION VIEWS – SHEET 3 OF 3	A	RC
5C4353-WSP-54-DR-C-3005	RETAINING WALL ELEVATIONS SHEET 1 OF 2	A	BOTH
5C4353-WSP-54-DR-C-3006	RETAINING WALL ELEVATIONS SHEET 2 OF 2	A	BOTH
5C4353-WSP-54-DR-C-3010	RETAINING WALL DETAILS	B	BOTH
5C4353-WSP-54-DR-C-3011	RETAINING WALL DETAILS- TYPE 1 AND 2 GREEN TERRAMESH WALL	0D	BOTH
5C4353-WSP-54-DR-C-3000	EARTHWORKS PLAN	0A	RC
5C4353-WSP-54-DR-C-3100	INDICATIVE EROSION SEDIMENT CONTROL PLAN 1	0C	RC
~~5C4353-WSP-54-DR-C-3101~~	~~INDICATIVE EROSION SEDIMENT CONTROL PLAN 2~~	~~0B~~	~~RC~~
5C4353-WSP-54-DR-C-4100	COMBINED DETAILED SERVICES PLAN	0A	RC
5C4353-WSP-54-DR-C-4200	STORMWATER DRAINAGE PLANS	0B	RC
5C4353-WSP-54-DR-C-4300	WASTEWATER PLAN	B	RC
5C4353-WSP-54-DR-C-4300	WASTEWATER PROFILE	0A	RC
5C4353-WSP-54-DR-C-4400	OVERALL POTABLE WATER PLAN	0A	RC
5C4353-WSP-54-DR-C-7010	SIGNAGE AND MARKINGS - CVSC	0B	NOR
5C4353-WSP-54-DR-C-7011	SIGNAGE AND MARKINGS - GREAT SOUTH ROAD	0B	NOR
5C4353-WSP-54-DR-C-8001-8002	FENCING PLANS	OB	NOR
5C4353-WRP-04-SK-C-0040	GEOLOGY SECTION	A	RC
5C4353-WSP-04-SK-C-0041	GEOLOGICAL SECTION A-A	B	RC
5C4353-WRP-04-SK-C-0030	NGAKAROA STREAM RIPARIAN MARGIN	A	RC
LANDSCAPE			
5C4353-WSP-54-L-1000	LANDSCAPE GENERAL ARRANGEMENT PLAN	C	BOTH
5C4353-WSP-54-L-1001	LANDSCAPE GENERAL ARRANGEMENT PLAN - WIDER CONTEXT	C	BOTH
5C4353-WSP-54-L-2000	LANDSCAPE PLANTING PLAN	C	BOTH
5C4353-WSP-54-L-3000	LANDSCAPE PLANT SCHEDULE AND NOTES	C	BOTH
5C4353-WSP-54-L-4000	LANDSCAPE TYPICAL PLANTING DETAILS	C	BOTH
5C4353-WSP-54-L-5000	LANDSCAPE SECTIONS	C	BOTH
5C4353-WSP-54-L-5001	LANDSCAPE SECTIONS	B	BOTH
5C4353-WRP-04-GH-AB-1000	BOMBAY VISUAL SIMULATIONS	B	NOR

ADDITIONAL STORMWATER DRAWINGS			
CM-SDR-STD-CRO-1	CHAMBERMAXX COMBINED STORMWATER DETENTION & RETENTION STANDARD DETAIL CONTAINMENT ROW OPTION	A	RC
ESK-STD-MH-ALL-1	ESK COALESCENCE OIL/WATER SEPARATOR STANDARD MANHOLE CONFIGURATION GENERAL ARRANGEMENT	A	RC
SF-V-69-4715-20	STORMWATER CARTRIDE FILTRATION SYSTEM GENERAL ARRANGEMENT	A	RC
5C4353-WRP-04-SP-SW-1000	ACO DRAIN- POWERDRAIN IRON EDGE RAIL CHANNEL SYSTEM	A	RC

1.4 Responses to the further information requests regarding the updated indicative ESCP and Mana Whenua matters

The responses to the further information requests regarding the updated Indicative Erosion and Sediment Control Plan (ESCP)(RFI 42 [44]) and Mana Whenua values (RFIs 65-57) matters are provided in **Table 2** and section 1.5.

Table 2 - Further Information Requests and Applicant Responses – Erosion and Sediment Control, and Mana Whenua matters

COUNCIL FURTHER INFORMATION REQUEST (4 AND 9 APRIL 2024)	APPLICANTS RESPONSE (22 APRIL 2024)
Earthworks (RC)	
RFI 42 [~~44~~ in SME's list] 1. Please show the location of an Emergency Spillway in the Indicative Erosion and Sediment Control Plan 1, Sheet No C-300, Revision 0B, and describe the supporting methodology in the Erosion and Sediment Control Plan (Indicative) prepared by WSP. 2. Please provide a detailed methodology and supporting ESCP re controlling the works area (approx. ~2,000m2) of Cut/Fill shown to the immediate north of the main 1ha earthworks area. Currently there is an Earth Bund only shown around the perimeter of this area of works. 3. Please provide detail of the quantum and type of vegetation to be removed for the temporary earthbund along the northern site boundary which is within 10m of the Ngakoroa Stream and would thus trigger consent under 15.4.1(A17). Please provide assessment and detail of any proposed mitigation planting. 4. What works are required for the 'cleanwater discharge as overland flow' within the adjoining site to north (area circled in red below). Please provide detail and assessment on how works in this area may affect the neighbouring site? *[see **Figure 1**]*	**Item 1:** The emergency spillways for the Sediment Retention Pond (SRP) and the newly introduced decanting earth bund (DEB) are located on the western edge of the devices. We have updated the indicative ESCP drawing (see Appendix A of **Attachment A**) to include arrows that clearly indicate the direction of the spillway flow. Supporting methodology introduced to the ESCP report, as per **Attachment A** to this memo: • The final design of the emergency spillway needs to be robust and efficient. It should be capable of accommodating a 1% Annual Exceedance Probability (AEP) event without any erosion. • The level of the emergency spillway should be set at a minimum of 300 mm lower than the top of the SRP's embankment. This is to ensure proper flow control and safety. • For the construction of the spillway crest and the downstream batter, a high level of stabilisation is required. This can be achieved using well-compacted fill material, which will provide the necessary strength and durability. • The final design should also consider the bottom width of the spillway. The minimum width should be 6 m or

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COUNCIL FURTHER INFORMATION REQUEST (4 AND 9 APRIL 2024)	APPLICANTS RESPONSE (22 APRIL 2024)
	equivalent to the width of the pond floor, whichever is greater. However, if specific design calculations suggest that a smaller width can accommodate the 1% AEP event, then that width can be considered by the contractor during development of the final ESCP for construction. Item 2: To control the works area of cut/fill shown to the immediate north of the main earthworks area, the following methodology has been introduced to the ESCP, provided as Attachment A to this Memo: *4.6 Erosion and Sediment Control — North of the Main Earthworks Area* • The erosion sediment controls outlined below are designed to effectively treat sediment-laden runoff from the site, addressing potential environmental impacts associated with construction activities. To ensure their effectiveness, the proposed controls should be monitored at least weekly during construction and adjusted as necessary to accommodate changing site conditions. • Indicative locations of the controls are provided in Appendix A of the ESCP, offering a visual reference for their placement and implementation. The appointed contractor will develop a comprehensive ESCP tailored to the final construction staging and methodology and incorporating monitoring and adaptive management. • The indicative ESCP illustrates a dirty water diversion channel within the designation extent, and a sediment retention pond providing treatment prior to discharge of clean water as overland flow to the Ngakaroa stream. No works are proposed within the adjoining site, and this proposed outlet utilises the same location as the permanent stormwater outlet.

COUNCIL FURTHER INFORMATION REQUEST (4 AND 9 APRIL 2024)	APPLICANTS RESPONSE (22 APRIL 2024)
	• The outlet of the SRP will be stabilised using temporary riprap at the point clean water is discharged to the stream, ensuring clean and controlled discharge during construction. *4.6.1 Stabilisation techniques for erosion control* • Prompt stabilisation of disturbed soils and exposed earthworks areas is crucial after each stage of work and at specific milestones within those stages. This can be achieved by introducing vegetation or applying mulch. For instance, surface mulching, such as straw, can be used as a temporary measure to cover stockpiles or other areas that are not being worked on for an extended period. • Alternatively, mulch can be progressively applied in conjunction with permanent revegetation works. This practice not only prevents soil erosion and sediment runoff but also aids in the recovery of the disturbed area. *4.6.2 Dirty Water Diversion* • A dirty water diversion channel will need to be constructed to divert dirty water towards DEB for containment and treatment. It must be designed to accommodate flow from the 5% annual exceedance probability (AEP) storm, with a minimum freeboard of 300 mm. The channel must remain operational until land disturbed areas are permanently stabilised. Continuous maintenance and monitoring of the channel are essential. *4.6.3 Decanting Earth Bund* • Constructing a DEB to the west of the site will effectively manage runoff feeding into the road

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	channel along Great South Road. This DEB will serve as a crucial control measure, addressing potential sediment-laden runoff and minimising environmental impacts. • The design and capacity of the DEB are paramount to its effectiveness in treating runoff. As per GD05, the DEB must have a minimum of 2% of the total contributing catchment area, with a minimum capacity of 26 m^3. This capacity is aimed at treating approximately 0.13 Ha catchment area discharged to the road channel, ensuring adequate treatment for sediment-laden water. • Additionally, an emergency spillway is essential for the DEB, ensuring its resilience during extreme weather conditions. The spillway must be capable of accommodating the 1% AEP event without eroding, enhancing the DEB's effectiveness in managing runoff and preventing erosion. **Item 3:** Both the Application AEE and Ecological Impact Assessment describe the vegetation clearance that will be required in this area is limited to grass and pest species and does not require consent under Rule E15.4.1. The relevant landscape plan sheet L-2000 (see **Table 1** register above) shows the proposed mitigation planting in this area, as provided previously with the 18 March 2024 applicant response to the s92 further information request (February 2023). **Item 4:** A clean water outfall has been located on the north-western corner, within the proposed designation boundary. • To further minimise any adverse impacts to the neighbouring site, temporary riprap will be installed within the site to capture any

COUNCIL FURTHER INFORMATION REQUEST (4 AND 9 APRIL 2024)	APPLICANTS RESPONSE (22 APRIL 2024)
	residual silt from the clean water outlet. Supporting text introduced to the ESCP report, provided as **Attachment A** to this Memo: • *The outlet of the SRP will be stabilised using temporary riprap. This will help capture any residual silt, thereby further reducing adverse impacts on the neighbouring site.*
Mana Whenua (RC)	
RFI 65 - 67 Unresolved if regional earthworks consent application is proposed to be unbundled from NoR process. Refer email from Russell Butchers (4 April 2024) as follows: *If the RC is to be unbundled and not subject to a notification process, then we would like more details of your engagement with mana whenua.* *It appears from your s92 response that comprehensive consultation has been undertaken, however, we have no written feedback from iwi at all and no real knowledge as to what was discussed at the hui.* *With consent being triggered for regional earthworks, stormwater discharge and ground water diversion, these all have the potential to adversely affect Mana Whenua values and we have no documentation to confirm that these aspects of the proposed CVSC were discussed with Mana Whenua. Ideally, there would be an email trail itemising the information shared and inviting written feedback from Mana Whenua on the regional consent applications.* *Please provide this correspondence to us and any feedback received. Alternatively, we could use the Council's mana whenua engagement facilitation process, however*	Please refer to section 1.5 of this Memorandum for further detail on the engagement with mana whenua. In summary, the AEE and s92 responses have confirmed the key matters of discussion and feedback received. No written feedback has been provided by iwi with the Southern Iwi Integration Group (SIIG) hui being the main forum, as well as the additional hui with Ngaati te Ata and their CVA provided to NZTA/WSP. The applicant has discussed all matters of the proposed work with mana whenua to identify potential adverse effects on mana whenua values and to ensure these were addressed in the application. The applicant's February 2024 s92 response to RFI 69 outlined that following on from the protocol established on NZTA's Southern Corridor Improvements project, Waikato Tainui defer to local Tainui related iwi Ngāti Tamaoho, Ngaati te Ata, Te Ahiwaru, and Te Akitai Waiohua, who have representatives at the SIIG and who have had opportunity to provide feedback on the project. The last SIIG hui attended to date was in February 2024.

COUNCIL FURTHER INFORMATION REQUEST (4 AND 9 APRIL 2024)	APPLICANTS RESPONSE (22 APRIL 2024)
we appreciate that NZTA will have its own relationship with Mana Whenua.	

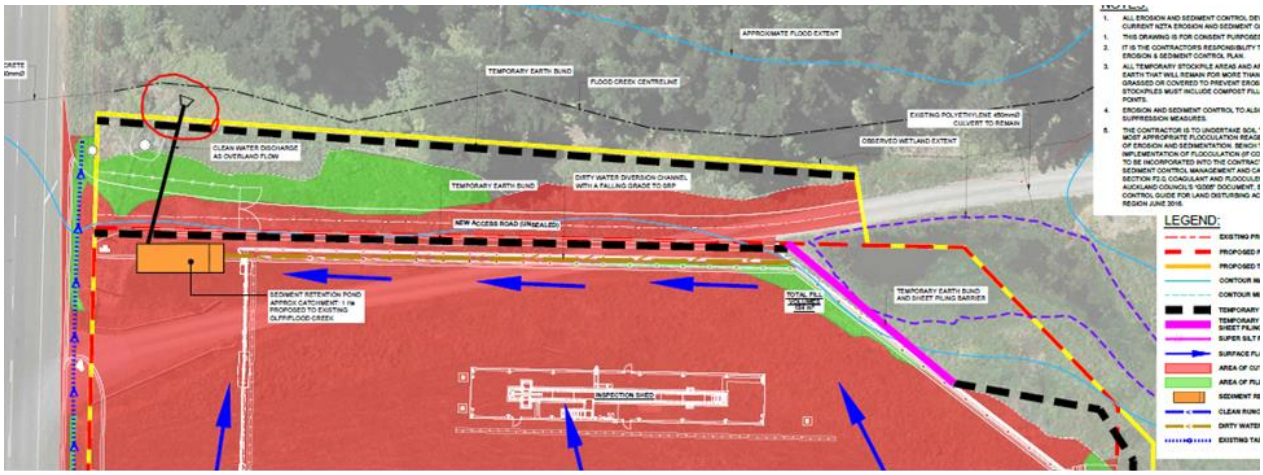

Figure 1 - circled area as provided with s92 request (RFI 42 - item 4)

1.5 Summary of Engagement with Mana Whenua

The application AEE summarised in section 3 the consultation and engagement (C&E) that has been undertaken by the New Zealand Transport Agency Waka Kotahi (NZTA) and WSP New Zealand on its behalf, and any responses received with respect to the proposed works.

C&E undertaken by NZTA specifically with the SIIG Hui and its respective mana whenua representatives as relevant stakeholders identified for this proposal, was summarised in the AEE section 6.3. The response to the views and desired outcomes relating to the project expressed by any persons consulted at this forum or via other means (i.e. separate hui) was also documented in the AEE, namely 'Table 16'.

Engagement is ongoing as the project approaches construction commencement, with the SIIG representatives who wish for continued involvement with the project implementation.

NZTA considers that sufficient information has already been provided with the lodged package and in the response to the Council's s92 requests for further information since lodgment. The further detail requested in Council's emails are responded to below so that processing of the resource consent can be completed.

As described in the project AEE and s92 response, rohe maps (held by Auckland Council) indicated six iwi with potential interest in the site: Ngāti Tamaoho, Te Ākitai Waiohua, Ngāi Tai ki Tāmaki, Ngāti Te Ata, Ngāti Maru, and Waikato-Tainui.

Ngāti Tamaoho have a statutory acknowledgement over the Ngakoroa Stream and its tributaries.

The SIIG has been the main forum for engagement with Southern Iwi at the regular monthly regional hui between the period November 2021 through to February 2024 (to date and since lodgment at the time of this report).

The SIIG is comprised of:

- Ngāti Whanaunga
- Ngāti Te Ata
- Ngāti Tamaoho
- Te Ahiwaru-Waiohua
- Ngāti Maru
- Ngāi Tai ki Tamaki
- Te Ākitai Waiohua; and
- Ngāti Tamaterā (receive monthly meeting invitation and agenda but do not attend)

Ngāti Tamaoho kaitiaki representatives have been present at many of the SIIG hui to date.

As noted in RFI 67, **Table 2** above, Waikato-Tainui defer to other SIIG mana whenua representatives.

A summary of SIIG hui dates and key discussion points is set out in **Table 3**. 'Table 16' included in the AEE summarised the outcomes of that engagement and the project responses. 'Table 16' is repeated in this memo as **Table 4** for clarity to Council.

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The information presented is a summary of the records from NZTA and WSP. While notes are recorded, no formal minutes are taken by the SIIG coordinator and this is the responsibility of project attendees presenting to the SIIG to do so.

While the majority of formal feedback was provided during the hui, WSP also made formal requests for feedback after supplying the application documents. No further feedback was provided via other channels (i.e. email).

Table 3 - Summary of SIIG Hui Discussion items and project responses

DATE	DISCUSSION	RESPONSE
Friday 19 November 2021	Project introduction; Multi criteria analysis Scope and design Anticipated timeframes	Confirmed strategic site objectives and site requirements; Specialist involvement on project confirmed (based on site conditions/ context and anticipated effects)
Friday 17 December 2021	Project update; Consent requirements and planning pathways; Initial specialist reporting and request for archaeological specialist	Site layout options reviewed based on effects mitigation hierarchy; CFG Heritage engaged for archaeological assessment; Site visit organised
Friday 18 March 2022	Site Visit	Mana Whenua representatives in attendance
Thursday 14 April 2022	Planned Hui rescheduled to May	Specialist reporting undertaken during this period
Friday 20 May 2022	Project update; Site visit summary; Technical report summary findings; Additional investigations (pending); Programme; Archaeological review	Further development of site layout option; CFG completed site survey and archaeological report CVA from Ngaati Te Ata Waiohua received and design responses considered
Friday 21 October 2022	Project update and presentation of concept design; Specialist reporting (SW and Ecological focus); Progression to developed design	Reviewed wetland reclamation (N-E corner) and retaining wall options. AEE has addressed and responded to these design decision outcomes. Landscape Planting Plan developed in response to CVA and SIIG Hui feedback.
Friday 17 February 2023	Project update and presentation of detailed design; Overview of specialist reporting (LVA and SW focus); Presentation of proposed landscape plan and discussion of plant selection;	Preparation of Final Application drafts at this time incorporating feedback to date (Note: Pre-application meeting with Auckland Council held in April 2023). Further design optioneering during this intervening period.

DATE	DISCUSSION	RESPONSE
Friday 15 September 2023	Project update and presentation of updated detailed design following significant design amendments. Run through of key aspects to the proposal prior to lodgment of NOR and RC.	Application updated to reflect new design and feedback from SIIG and as received during Auckland Council pre-application. Final design for lodgment confirmed with NOR and RC lodged in October 2023. Waka Kotahi provided the SIIG Iwi a copy of the NOR and consent application (i.e. AEE and technical assessments) and proposed conditions. Final feedback has been considered, and addressed, as summarised in the application.
Friday 15 December 2023	NOR and RC were lodged in late October 2023. This hui was to ensure all SIIG representatives who wished to could access the application documents provided and provide overview of next steps. SIIG were presented with a summary of the key s92 further information request matters requested by Council in November. Appropriate close-out on pre-lodgement consultation and engagement with discussion on next steps including consent feedback and relevant conditions; and further design matters	SIIG representatives requested to provide feedback by mid-February 2024 for further consideration and provision to Council when responding to further information requests/as Council processes the application. Table 16 in the AEE reflects the key matters raised by Iwi during the engagement process and the project response documented for these matters. The SIIG representatives had full access to the application documentation as lodged, were explained of its contents and did not express any concern about the AEE record.
Friday 16 February 2024	Close-out hui post-lodgment of application to capture final comments and update on stage of consent processing (S92)	No further comments received as per WSPs request to SIIG coordinator on 16 February 2024. Some matters to be taken out of the SIIG forum with NZTA to meet relevant mana whenua independently and discuss project implementation going forward (ongoing). That further discussion is continuing and does not affect the resource consent process. For example, it includes consideration of site naming and opportunities for cultural design detail or pou.

A site visit was held with WSP's special matter experts and Iwi in March 2022. A copy of the feedback and key matters raised at the site visit were recorded, and provided as **Attachment B**. Particular matters raised at the site visit related to stormwater management, source controls and treatment, the northern Ngakoroa Stream and the wetland.

A separate hui was held on 11 August 2022 at the request of Ngaati Te Ata Waiohua and attended by WSP's project manager, senior Iwi engagement specialist and the project planner. Expressions of interest and opportunities in further design phases were raised at this time. In addition, naming of the site as Pukekura was raised.

Table 4 details the desired kaitiaki outcomes and summary of project responses. This is copied from the AEE (Table 16).

Table 4 - Kaitiaki Outcomes and summary of project responses

DESIRED KAITIAKI OUTCOMES	PROJECT RESPONSE
Road safety: General support conveyed of projects that promote road safety especially with regards to heavy vehicles, however, this must not be to the diminishment and or violation of cultural values, tikanga, waahi tapu and taonga.	The Project aligns with the desire for road safety while considering cultural values and the natural environment.
Stormwater and freshwater management that does not compromise cultural values including: • Mauri (innate energy such as in water and on land) • Taonga (including flora and fauna and fish species) • Ngaa tikanga (including traditional customary practices such as harvesting and resource gathering)	Site stormwater will be discharged to the stream following treatment and detention, to ensure the ecological condition and cultural use of the stream is not compromised. Erosion and sediment control measures will be implemented during construction of the proposed work and an indicative Erosion and Sediment Control Plan (ESCP) has been provided to Auckland Council. These matters are also addressed in section 7.6 of the AEE
Land disturbance that does not compromise cultural values including: • Whakapapa (including any recorded or unrecorded cultural heritage/sites of significance) • The removal or bringing in of soil from the site • Where flocculation is necessary during the earthworks phase of construction, the use of organic flocculants is preferred.	As addressed in section 2 of the AEE, the bulk earthworks will entail use of fill from cut, wherever the actual site conditions allow and are suitable for the proposed work. The ESCP will be implemented during construction. The ESCP has outlined the need for use of flocculants during construction and other measures such as silt (or super silt) fencing.
Improved natural character of the area to provide a better habitat for birds, and enhance water quality for freshwater species.	The Project incorporates stormwater treatment measures and planting of indigenous vegetation to enhance site habitat. Proposed site landscaping has been developed with Iwi input.
Support for restoration of wetlands and riparian margins in and around the local area of Pukekura in recognition of their	Mitigation planting is proposed in and next to the wetland, within the site boundary. This planting will assist with improving water quality in the freshwater environs

DESIRED KAITIAKI OUTCOMES	PROJECT RESPONSE
purification role and for the improvement and protection of mauri.	and provide ecological connection between the site and the Ngakoroa Stream outside it. Fencing is proposed along the site boundary (which passes through the wetland) to protect the proposed planting area from livestock.
Use of eco-sourced plants and trees from within the Pukekura, Pukekohe, Paeraataa and Drury areas.	Eco-sourcing is proposed, and the proposed planting list reflects the ability to source these species as well as their ecosystem extents.
Establish new, and enhance existing, ecological corridors as a high priority.	The proposed planting will facilitate and enhance an ecological corridor between the induced wetland and the Ngakoroa Stream environs.
Encourage use of mechanisms such as rainwater harvesting, rain gardens, roof gardens, and onsite storage and retention.	The CVSC will include a rainwater tank for on-site uses.
Remove or reduce pest plant and animal species.	Pest plant removal is proposed to support the establishment of native planting within the site.
Enable ongoing engagement with iwi on environmental, cultural and ecological management plans, water management, heritage, biodiversity and cultural monitoring.	Waka Kotahi will continue to engage with iwi and provide opportunity for ongoing input from the SIIG representatives as the site proceeds to construction phase.
Greater understanding of iwi history, values and connection to place. Respect for tikanga and kaitianga obligations during construction of the Project.	An Archaeological assessment with site survey has been undertaken ahead of construction to address concerns that waahi tapu, taonga and or kooiwi may be discovered, especially near undisturbed waterways and or in undeveloped areas. Site protocols will be implemented pre-commencement and as the site proceeds to construction phase. Appropriate provision will be made for a cultural induction of the contractor's staff prior to the start of construction to support greater awareness of cultural values and potential for undiscovered waahi tapu (sites) and or taonga. An Accidental Discovery Protocol will apply in the event of any unexpected discovery of archaeological material.

As noted in the first RMA s92 further information request response to Auckland Council (February 2024), Ngaati Te Ata Waiohua do not wish to provide their CVA document to Council. The CVA has informed project development to date, and it's recommendations are subject to further discussion between NZTA and each respective iwi who wishes to be involved going forward. For example, this includes discussion on site naming and opportunities for cultural design detail or pou.

Current status of consultation and engagement

Requests for feedback were verbally communicated to the SIIG multiple times by the project team and conveyed via the SIIG coordinator. No further comments were provided following supply of the lodged application documentation to Iwi, and close-out hui. Conversations with individual iwi are ongoing as referred to earlier, and as part of the pre-construction phase.

ATTACHMENTS

Attachment A. Erosion and Sediment Control Plan & ESCP Drawing C-3100

Project Number: 5-C4353.54
Document Number: 5C4353-WRP-04-RP-W-1000

WEIGHT RIGHT PROGRAMME

BOMBAY COMMERCIAL VEHICLE SAFETY CENTRE

EROSION AND SEDIMENT CONTROL PLAN (INDICATIVE)

19 April 2024

Issue

wsp

150 YEARS IN AOTEAROA

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Disclaimers and Limitations

This report ('Report') has been prepared by WSP exclusively for Waka Kotahi NZ Transport Agency ('Client') in relation to the proposed Weight Right site in Bombay, Auckland as part of the Weigh Right Programme ('Purpose') and in accordance with the NZ Transport Agency Professional Services Contract No: 5302 Weight Right Programme Pre-implementation and implementation dated 9 September 2021. The findings in this Report are based on and are subject to the assumptions specified in the Report and WSP's revised Offer of Service dated 10 August 2021. WSP accepts no liability whatsoever for any reliance on or use of this Report, in whole or in part, for any use or purpose other than the Purpose or any use or reliance on the Report by any third party.

In preparing the Report, WSP has relied upon data, surveys, analyses, designs, plans and other information ('Client Data') provided by or on behalf of the Client. Except as otherwise stated in the Report, WSP has not verified the accuracy or completeness of the Client Data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in this Report are based in whole or part on the Client Data, those conclusions are contingent upon the accuracy and completeness of the Client Data. WSP will not be liable in relation to incorrect conclusions or findings in the Report should any Client Data be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to WSP.

1 Introduction

The proposed Bombay Commercial Vehicle Safety Centre (CVSC) will be located at 253 Mill Road, with access to the site from Great South Road. Upon commencement of operations, Heavy Commercial Vehicles will access the facility via Mill Road from the Bombay Interchange off-ramps, as illustrated in Figure 1. The CVSC will include a Tier 1 control building, inspection shed, weighbridge, six inspection bays, staff and visitor parking facilities, as well as an off-loading area. During the construction and site preparation phase, the following activities will be undertaken:

- Earthworks for the establishment of foundations, retaining walls, and embankments.
- Earthworks within and in proximity to a modified intermittent stream (classified induced wetland, sometimes referred to simply as “the wetland” elsewhere in this document) and permanent stream.

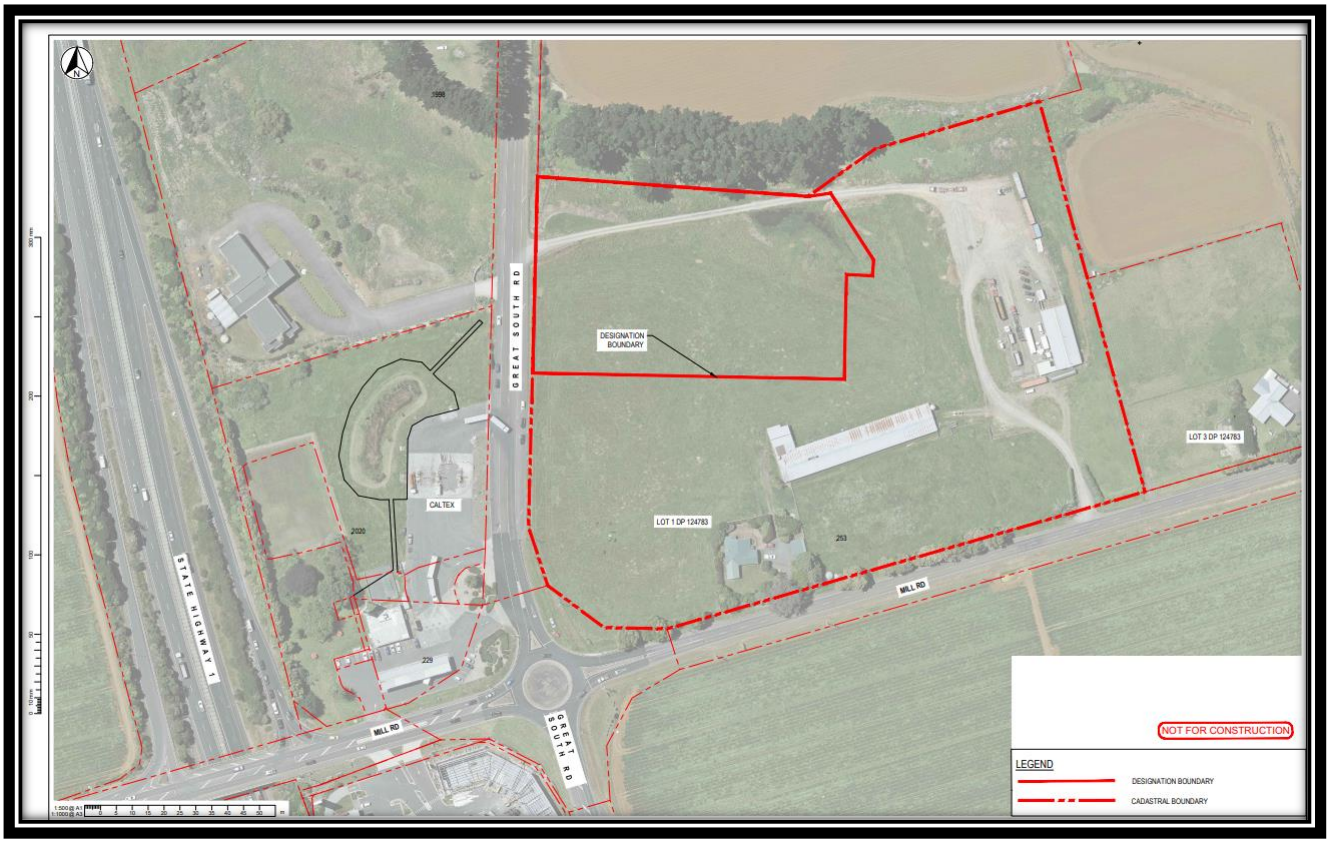


Figure 1: Approximate Project Designation Boundary and Surrounding Road Network

Stormwater flowing over the work site poses multiple threats, including short-term flooding, sediment mobilisation, and off-site transport into the adjacent stream, ultimately leading to contamination of the Manukau Harbour. The sediment-laden runoff not only diminishes water quality but also poses a direct threat to aquatic life by smothering the water body's base.

To address these concerns, it is imperative to implement effective erosion and sediment control (ESC) practices throughout the construction process. These practices are vital for mitigating erosion and sediment generation, safeguarding both the construction site and surrounding areas. The project will adhere to erosion and sediment control (ESC) practices outlined in the Auckland Council’s Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05). Of particular importance is the management of construction activities around watercourses, which will be a primary focus for the contractors at this site. By prioritising ESC

measures, the project aims to minimise environmental harm and ensure compliance with regulatory standards, promoting sustainable construction practices and protecting local waterways.

2 Purpose

This Indicative Erosion and Sediment Control Plan (ESCP) serves as a comprehensive framework for managing sediment generation and its impact on receiving environments throughout the construction phase of the project. Aligned with best practice methods, the ESCP outlines key principles to be adhered to and provides strategies for addressing soil erosion, sediment runoff, and sediment deposition in watercourses.

Central to the ESCP are procedures aimed at avoiding, remedying, and mitigating the effects of these processes, ensuring the preservation of water quality and ecological integrity. Additionally, provisions for contaminated ground management are recognised, reflecting a proactive approach to environmental stewardship.

Integral to the effectiveness of the ESCP is ongoing monitoring and maintenance, which serve to identify and address potential issues promptly, safeguarding against adverse environmental impacts.

As the final construction methodology will influence the specifics of the ESCP, the Contractor's site-specific plan will be informed by their adopted approach. This draft ESCP has been developed to incorporate relevant technical assessments provided with the Resource Consent Application. Through this cohesive framework, the ESCP aims to promote responsible construction practices and uphold environmental standards throughout the duration of the Project.

2.1 Land Disturbance Activities

In assessing the magnitude of earthworks and selecting the appropriate erosion and sediment control measures, the project aims to effectively manage potential environmental impacts associated with soil disturbance. This evaluation considers the area and volume of earthworks, as outlined in Table 1. By aligning the extent of earthworks with the necessary erosion and sediment control measures, the project ensures that the chosen controls are customised to the specific requirements of the site, promoting efficient and sustainable construction practices.

Table 1: Earthwork Area and Volumes

Location	Type (cut/fill)	Area (m^2)	Volume (m^3)
Project Site	Cut	8,679	15,747
	Fill	1,552	1,260
	TOTAL:	**10,231 m^2**	**17,007 m^3**

3 Site

The natural topography of the designation site slopes gently towards the north, with elevations ranging from 171 meters RL (AVD-1946) at the highest point to 160 meters RL at the permanent stream. This gradient of approximately 10% dictates the flow of water across the site.

According to Landcare Research S-Map, the predominant soil type within the area is Orthic Granular (NO), which influences water infiltration and drainage characteristics.

The project site falls within the Ngakoroa Stream stormwater catchment, which covers an area of 4,106 hectares, primarily comprised of agricultural land. This catchment ultimately drains into the Manukau Harbour, making it crucial to manage any potential runoff or sedimentation.

Watercourses are integral features within and surrounding the site, serving as conduits for runoff and drainage. These watercourses include overland flow paths, a channelised overland flow path, a modified intermittent stream (classified induced wetland) with a raised culvert, and a permanent stream.

The permanent stream, a tributary of the Ngakoroa Stream, runs through the site from east to west, while a modified intermittent stream (classified induced wetland), drained to the permanent stream by a raised level culvert, pools behind the inlet to the northwest of the project site. Overland flow from the eastern portion of the site converges with this modified stream before flowing into the permanent stream. Conversely, runoff from the west drains into a channelised overland flow path along the edge of Great South Road at the site's frontage.

GeoMaps land cover data depicts the predominant land cover as grassland, interspersed with gravel accessways and scrub/shrub vegetation. These land cover types influence runoff patterns and sediment transport within the site.

Ultimately, the watercourses on the site contribute to the tributary system, which ultimately discharges into the Manukau Harbour at the Category 1 Marine SEA (SEA-M1-29b), highlighting the interconnectedness of the site's hydrological features with the wider coastal environment.

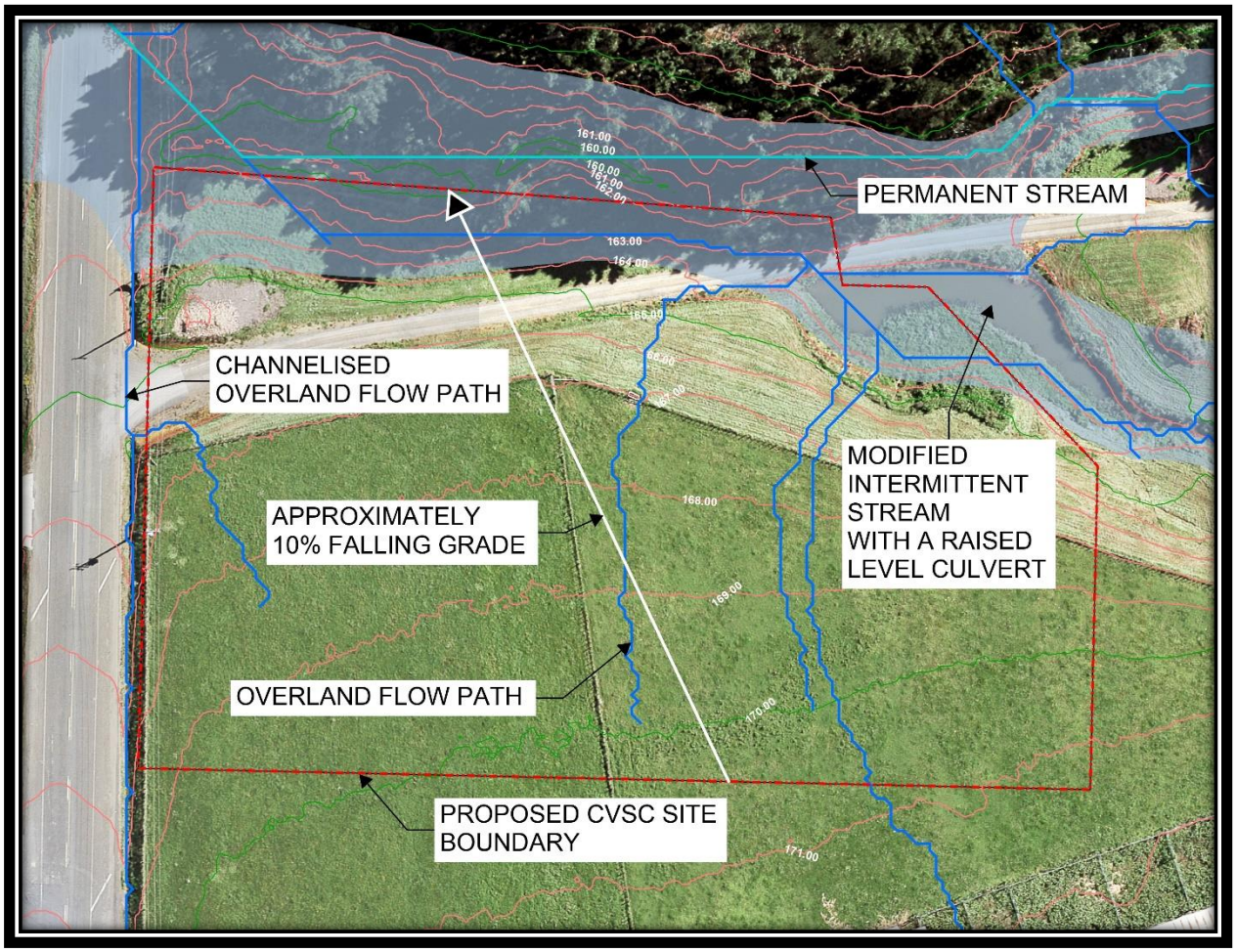


Figure 2: Site Map with Contours and Hydrological Features

4 Erosion and Sediment Control Principles

In the absence of proper controls, stormwater runoff poses significant risks to the site, including short-term flooding, sediment mobilisation, and downstream sediment transport. This runoff carries suspended sediments that can obstruct fish gills and hinder essential light penetration crucial for aquatic life processes. Additionally, sediment-laden water may infiltrate public utilities surrounding the site, posing operational threats. To address these potential issues, it is imperative to implement effective erosion and sediment controls during land-disturbing activities.

The erosion and sediment controls outlined in the subsequent section adhere to best practices outlined in GD05. These controls are designed to mitigate the adverse impacts of sediment runoff and ensure compliance with regulatory standards. The ten core principles of erosion and sediment control provided in GD05 serve as a comprehensive framework for implementing effective control measures. By aligning with these principles, the project aims to minimise environmental impacts and protect the receiving environment from the adverse effects of sedimentation.

These principles are as follows:

- Preserve existing environmental values and minimise earthworks to reduce disturbance.
- Stage construction activities to limit land disturbance at any given time.
- Protect steep slopes.
- Identify and map all existing watercourses on the plan to protect receiving environments.
- Promptly stabilise disturbed soils and exposed earthworks areas with vegetation or mulch after each stage and at specific milestones within stages.
- Implement perimeter controls to confine dirty water within the site and channel clean water away from the working area.
- Utilise sediment retention devices to capture and treat sediment-laden water from within the site, safeguarding surrounding watercourses.
- Employ trained and experienced personnel to execute erosion and sediment controls effectively.
- Adapt erosion and sediment control measures to the evolving needs of the site as the project progresses.
- Regularly inspect, monitor, and maintain erosion and sediment control measures to ensure operational effectiveness.

4.1 Erosion and Sediment Control Methods

The ESCP Drawing with indicative locations of controls is attached as Appendix A, providing a visual representation of the proposed erosion and sediment control measures. To ensure effective implementation, it is recommended that the appointed contractor reviews and builds upon this ESCP. The Contractor's ESCP should encompass various components:

- Details of all principles, procedures, and practices to undertake erosion and sediment control, minimising the potential for sediment discharge from the site.
- Design criteria, calculations, and dimensions for key erosion and sediment control structures.
- A site plan identifying waterway, soil disturbance areas, buffer zones adjacent to watercourses, cut and fill areas, stockpile locations, and other relevant site information.
- Construction timetable for erosion and sediment control works and bulk earthworks.
- Timetable and nature of progressive site rehabilitation and re-vegetation.
- Maintenance, monitoring, and reporting procedures.

- Rainfall response and contingency measures.
- Procedures for ESCP review and amendment.
- Identification and contact details of personnel responsible for operation and maintenance.

Based on the ESCP, the construction site will be demarcated by a network of clean water bunds and dirty water channels, effectively containing dirty water within the site boundaries.

Additional control measures recommended for implementation during the construction include:

- Stabilised construction entrance and exit for plant access.
- Wheel wash facilities to prevent sediment tracking.
- Perimeter security fencing.
- Cut and cover methodology to limit exposed areas.
- Protection of inlets to prevent contamination.
- Containment of stockpiles.
- Controlled dewatering, if required.
- Sediment retention pond(s) with clean water discharge(s)

The ESCP offers a range of options tailored to specific site requirements, including stormwater inlet protection, diversion channels and a sediment retention pond (SRP).

All erosion and sediment control measures and devices are to be removed upon completion of works, as decided by the Engineer and Auckland Council's representative, ensuring the site is restored to its original condition.

4.2 Dust Control Procedures

To mitigate dust generation, the Contractor will implement comprehensive dust control procedures, ensuring a proactive approach to environmental stewardship. These procedures encompass various measures:

- Timing of works will be coordinated with careful consideration of prevalent wind direction, minimising the potential for dust dispersion.
- During dry or windy conditions, exposed soils will be dampened with water to suppress dust effectively.
- Wheel wash facilities will be strategically positioned at the site exit, facilitating the thorough cleaning of vehicles before leaving the site, thus preventing dust accumulation on roadways and nearby areas.
- To further reduce dust levels, stockpiles will be stabilised and covered, minimising the potential for airborne particulate matter.

Through the implementation of these dust control measures, the Contractor is to uphold environmental standards and ensure compliance with regulatory requirements, promoting a safe and sustainable construction environment.

4.3 Water Management During Construction

4.3.1 Overland Flow Paths and Flood Plains

Stormwater management during construction is an integral component of the ESCP, ensuring comprehensive environmental protection throughout the project. To effectively manage stormwater runoff, diversion bunds or structures will be constructed to redirect clean water flows arriving at the site around construction activities and areas. By incorporating these measures into the ESCP, the project aims to mitigate the risk of environmental degradation and ensure the preservation of natural hydrological processes. Proposed diversion of overland flow paths will be conducted in strict accordance with the Contractor's ESCP and GD05 (incorporating Amendments 1 to 3).

Temporary diversion drains capable of conveying the 1 in 20-year Average Recurrence Interval flows will be required. In implementing these measures, priority will be given to maintaining, as far as possible, the natural drainage paths.

Given the nature of the proposed earthworks, which include both cut and fill operations, careful management and control of ponding in excavations are essential. The Contractor is to implement appropriate measures, such as proper drainage and sediment control practices, to ensure containment of dirty water within the site until it has received sufficient treatment to be discharged.

All works associated with the Project, both permanent and temporary, are to take account of the nature and extent of existing floodplain areas throughout the construction process.

4.3.2 Fuel or Chemical Spill Management

On-site refuelling of plant and equipment near waterways is strictly prohibited. Instead, refuelling should only occur at a specially prepared area of hard stand, ensuring containment and preventing accidental spills or leaks from reaching watercourses.

Furthermore, the final ESCP will encompass comprehensive measures to address the storage of fuels, lubricants, hazardous, and/or dangerous materials on site. These measures will include stringent storage protocols and contingency procedures to manage emergency spill responses and clean-up efforts effectively.

4.4 Contaminated Land Management

The Bombay Site Investigation Report, appended to the Application, serves as a crucial document providing an assessment of land contamination effects. This report identifies areas of potential contamination that may pose risks to both the environment and public health during construction. It should inform the Contractor's E&SCP so as to mitigate risks associated with the release of contaminants.

4.5 Erosion and Sediment Controls — Main Earthworks Area

The erosion sediment controls outlined below are designed to effectively treat sediment-laden runoff from the site, addressing potential environmental impacts associated with construction activities. To ensure their effectiveness, the proposed controls should be monitored at least weekly during construction and adjusted as necessary to accommodate changing site conditions.

Indicative locations of the controls are provided in Appendix A, offering a visual reference for their placement and implementation. The appointed contractor will develop a comprehensive erosion and sediment control plan tailored to the final construction staging and methodology and incorporating monitoring and adaptive management.

4.5.1 Clean Water Diversion

To manage clean water runoff diversion bunds are to be constructed upslope of the site to intercept and divert clean water around the works area, reducing the volume of runoff to be treated and preventing contamination and sedimentation. Clean water diversion bunds must be engineered to safely accommodate flow from the 5% annual exceedance probability (AEP) storm, with a minimum freeboard of 300 mm. The bunds are to be lined with needle-punched geotextile to prevent them from becoming a source of sediment during operation. Clean water bunds must remain operational until disturbed areas are permanently stabilised.

Clean runoff from the south of Great South Road carriageway is assumed to be contained within the current table drain that flows past the site. A conduit for these flows must be maintained at all times.

4.5.2 Dirty Water Diversion

A dirty water diversion channel will be constructed to divert dirty water towards an SRP for containment and treatment. It must be engineered to accommodate flow from the 5% annual exceedance probability (AEP) storm, with a minimum freeboard of 300 mm. The channel must remain operational until land disturbed areas are permanently stabilised. Continuous maintenance and monitoring of the channel are essential.

4.5.3 Sheet Piles

In the northwest section of the site, where the intermittent stream (classified induced wetland) is located, a sheet piling barrier will be installed along with a temporary earth bund to divert dirty runoff:

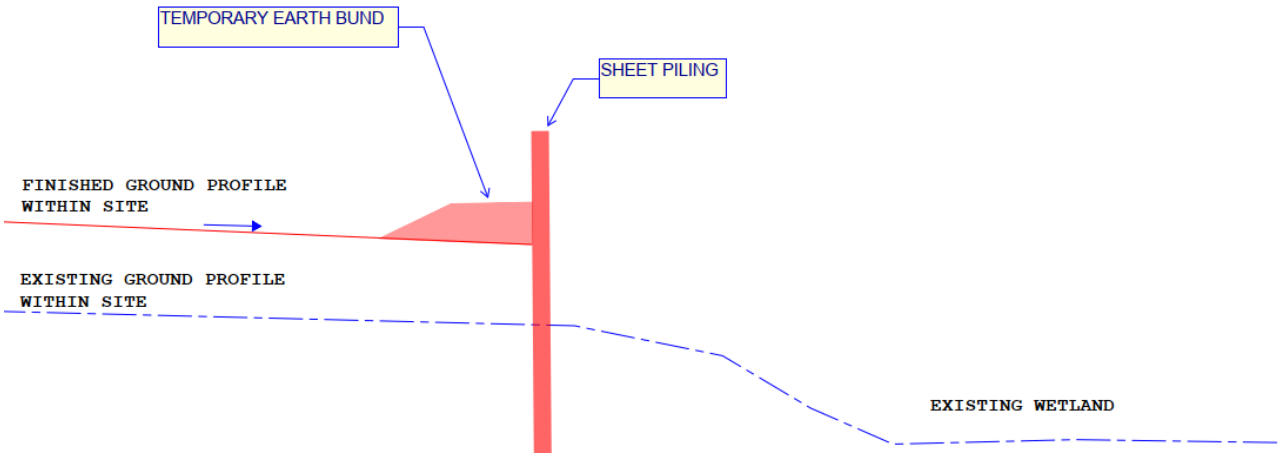


Figure 3: Sheet Piling at North-Eastern Corner, with Earth Bund

This barrier will effectively divert sediment-laden runoff from the construction site towards the dirty water diversion channel, ultimately directing it to be discharged into the SRP. The combination of the temporary earth bund and sheet piling barrier reinforces the protection of the wetland. The excavator driving the sheet piles into the ground must be positioned within the construction laydown area during installation, as far as practicable from the wetland. The Contractor is also to ensure that during the sheet piling operation a barrier is in place to prevent sediments from reaching the wetland. It is likely that dirty water from this operation will need to be pumped to the SRP.

4.5.4 *Sediment Retention Pond*

To treat sediment-laden water generated within the site, an SRP will be constructed as the primary retention and treatment device. Discharge will be to the northwest of the site via a stabilised outlet structure.

The design and capacity of the SRP is to be consistent with the requirements of Auckland Council's GD05 guidelines. The SRP must have a minimum volume numerically equivalent to 2% of the total contributing catchment area for the earthworks site, and with a capacity of not less than 200 m^3. This capacity is aimed at treating approximately 1 Ha catchment encompassing the site, ensuring adequate treatment for sediment-laden water.

If appropriate, chemical flocculation may be employed within the SRP. In this instance a flocculation management plan will be developed by the Contractor's engineer to guide the Contractors regarding the size and implementation of the flocculation device.

The SRP should remain in place until the disturbed area is permanently stabilised against erosion. It is expected that the appointed contractors will provide site-specific design details for the proposed SRP in accordance with the requirements outlined in GD05.

The SRP must feature a stabilised emergency spillway designed to convey runoff from a 1% AEP event.

The design of the emergency spillway needs to be capable of accommodating a 1% Annual Exceedance Probability (AEP) event without causing erosion.

The level of the emergency spillway should be set at a minimum of 300 mm lower than the top of the SRP's embankment. This is to ensure proper flow control and safety.

For the construction of the spillway crest and the downstream batter, stabilisation using well-compacted fill material will provide the necessary strength and durability.

The outlet of the SRP shall be stabilised using temporary riprap.

The minimum bottom width of the spillway should be 6 m or equivalent to the width of the pond floor, whichever is greater. However, if specific design calculations suggest that a smaller width can accommodate the 1% AEP event, then that width can be considered.

4.5.5 *Stabilised Vehicle Entry with Wheel Wash Station*

A temporary access path on the western boundary of the site has been proposed to facilitate the transportation of plant, labour, and materials. This path, along with all access points or entrances along Great South Road, must undergo adequate stabilisation in accordance with GD05 guidelines.

To further enhance sediment control measures, wheel wash-downs are to be installed to prevent unintended tracking of sediments from the site onto public roads.

4.6 Erosion and Sediment Control — North of the Main Earthworks Area

To ensure their effectiveness, the proposed controls should be monitored at least weekly during construction and adjusted as necessary to accommodate changing site conditions.

Indicative locations of the controls are provided in Appendix A, offering a visual reference for their placement and implementation. The appointed contractor will develop a comprehensive erosion and sediment control plan tailored to the final construction staging and methodology and incorporating monitoring and adaptive management.

4.6.1 *Stabilisation techniques for erosion control — mulch application*

Prompt stabilisation of disturbed soils and exposed earthworks areas is crucial at each stage of work and at specific milestones within those stages. This can be achieved by introducing vegetation or applying mulch. For instance, surface mulching, such as straw, can be used as a temporary measure to cover stockpiles or other areas that are not being worked on for an extended period.

Alternatively, mulch can be progressively applied in conjunction with permanent revegetation works. This practice not only prevents soil erosion and sediment runoff but also aids in the recovery of the disturbed area.

4.6.2 *Dirty Water Diversion*

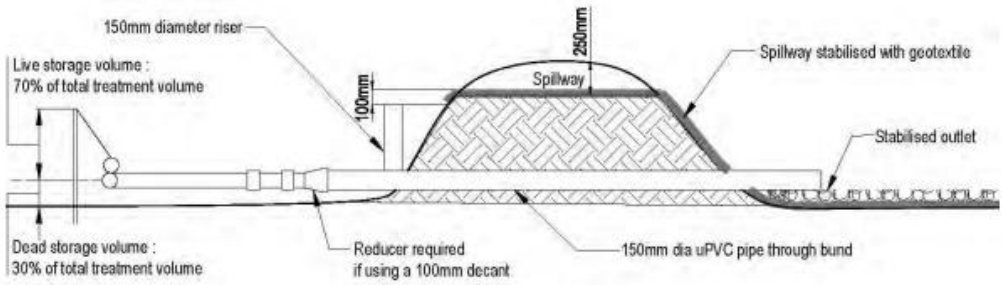
A dirty water diversion channel is to be constructed to divert dirty water towards a decanting earth bund (DEB) for containment and treatment. It must be designed to accommodate flow from the 5% annual exceedance probability (AEP) storm, with a minimum freeboard of 300 mm. The channel must remain operational until land disturbed areas are permanently stabilised. Continuous maintenance and monitoring of the channel are essential.

4.6.3 *Decanting Earth Bund*

Constructing a DEB in the west of the site will effectively manage runoff feeding into the road channel along Great South Road. This DEB will serve as a crucial control measure, addressing potential sediment-laden runoff and minimising environmental impacts.

As per GD05, the DEB must store a minimum volume (m^3) equivalent to 2% of the total contributing catchment area (m^2), with a minimum capacity of 26 m^3. This capacity is aimed at treating runoff from an approximately 0.13 Ha catchment, discharged to the road channel.

Additionally, an emergency spillway is essential for the DEB, ensuring its resilience during extreme weather conditions. The spillway must be capable of accommodating the 1% AEP event without eroding.



Cross - section

4.7 Earthworks Staging

To ensure effective management of earthworks, a staging strategy should be employed by the appointed contractor to minimise the area of exposed soils at any given time. The staging of

earthworks must adhere to guidelines outlined in GD05, emphasising the importance of rapid stabilisation measures to mitigate environmental impacts.

Further details regarding the staging plan, including the delineation of staged earthworks areas and proposed timeframes, are to be provided by the Contractor. Unless Council consent to work outside the earthworks season is obtained, all earthworks' activities are completed within the Auckland Council's designated earthwork season, spanning from October 1st to April 30th. Any extensions beyond this period would necessitate additional permits to ensure compliance with regulatory requirements.

The specifics of the staging plan should be updated by the Contractor as necessary to ensure that environmental safeguards remain consistent throughout the project lifecycle.

4.8 Dewatering

Given the propensity for low-lying areas at the site to become inundated with stormwater following rainfall, intermittent dewatering measures will be required. For smaller volumes of water, dewatering bags or pipe socks present viable solutions, effectively managing localised water accumulation. Conversely, larger volumes of water necessitate a more robust approach, with water being pumped into the SRP for containment and treatment.

In instances where direct offsite discharge is feasible, stringent clarity requirements of a minimum 100 mm must be followed. Where direct discharge is not viable, contaminated water will be channelled into the established SRP for comprehensive treatment prior to off-site discharge.

4.9 Heavy Rainfall Response and Contingency Measures

Erosion and sediment controls remain crucial during heavy rainfall events. To mitigate this risk, the appointed contractor must monitor weather patterns daily and ensure the maintenance and readiness of erosion and sediment controls ahead of forecasted rainfall. Following heavy rainfall, inspections of controls should be conducted promptly to identify and repair any damage.

In the event of heavy rainfall incidents, it is essential for the contractor to report these occurrences and maintain communication with Auckland Council as part of routine reporting procedures. Any serious incidents must be reported within 24 hours.

4.10 Monitoring and Maintenance

GD05 outlines indicative regimes for the maintenance of each proposed control, emphasising the importance of regular inspection and upkeep. It is recommended that each device undergoes inspection at least once a week and after every rainfall event to ensure correct operation. Additionally, regular removal of accumulated sediment from the device is important, with clearly identified disposal locations. Any damage to the devices must be promptly remediated to prevent further issues.

The contractor is expected to appoint a trained environmental manager to oversee the sediment controls and ensure compliance with maintenance protocols. This individual will play a vital role in supervising the implementation of maintenance procedures.

To facilitate accountability and compliance, the contractor must maintain comprehensive records of inspections and provide related reports upon request by the engineer. This documentation will serve as a crucial reference for monitoring the condition of sediment controls and addressing any maintenance requirements promptly.

Device-specific maintenance procedures are detailed in the table below, providing clear guidance for the ongoing upkeep of each control measure. By adhering to these maintenance protocols and

procedures, the contractor can effectively manage sediment controls and mitigate potential environmental impacts throughout the project duration.

Table 2: Indicative Maintenance Procedures

Erosion and Sediment Control Measure	Indicative Maintenance Procedure	Frequency
Clean and Dirty Water Diversions	• Conduct thorough inspections to identify tunnel gullies, water ponding and blockages; promptly reinstate any damaged components to ensure proper functionality. • Thoroughly examine inverts and outlets for any signs of scour and erosion, ensuring structural integrity and preventing potential damage. • Ensure complete stabilisation cover is always maintained; promptly reinstate any areas requiring additional stabilisation to prevent erosion. • Regularly remove sediment deposits from the diversion channel to prevent overtopping caused by insufficient freeboard, thereby maintaining effective water flow management.	Weekly and after every rainfall event
Sediment Retention Pond (SRP)	• Clean out before the accumulated sediment reaches 20% of the total SRP volume. • Clean SRP using high-capacity sludge pumps or using excavators loading sediment into sealed tip trucks or to a	Daily and before and after every rainfall event

	secured area adjacent to the SRP. • Maintain access to the forebay for sediment removal. • Clearly identify sediment disposal sites.	
Decanting Earth Bund (DEB)	• Regularly remove sediment from the DEB before it accumulates beyond 20% of the total volume, ensuring optimal functionality. • Utilise high-capacity sludge pumps or excavators to effectively clean the DEB, either by loading sediment into sealed tip trucks or depositing it in a secured area adjacent to the DEB. • Clearly mark and designate sediment disposal sites to streamline the disposal process and ensure proper management of removed sediment.	Daily and before and after every rainfall event
Stabilised Construction Entrances and Wheel Washes	• Conduct inspections to ensure ongoing functionality, performing maintenance as necessary to uphold effectiveness. • Remove sludge from the sump before it reaches 20% capacity to prevent overflow. • Reconstruct or resurface the construction entrance if surface contamination compromises its	Weekly and after every rainfall event

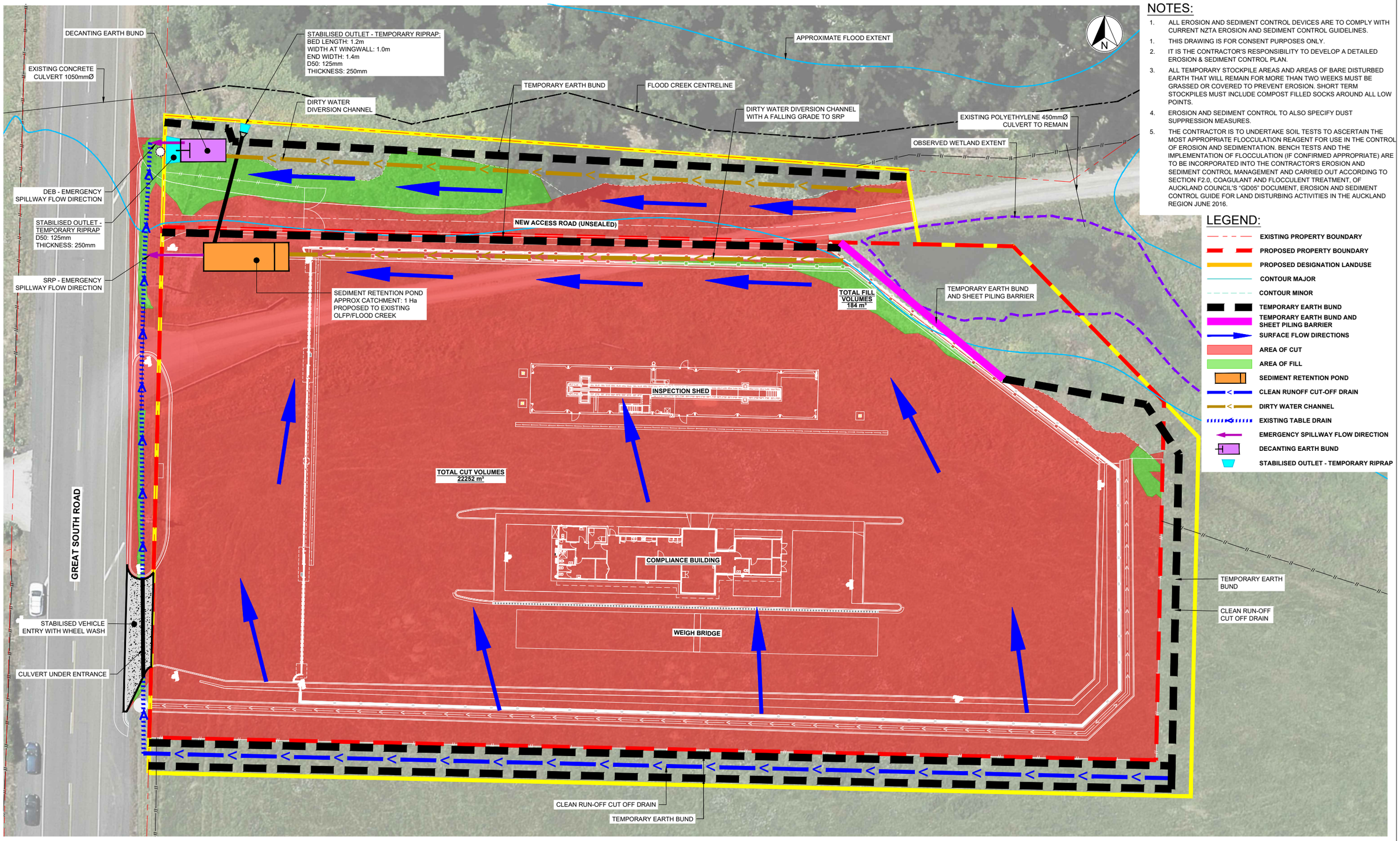
	effectiveness, ensuring continued functionality.	
Sheet Piles	• Regularly conduct an inspection to identify signs of wear and tear before they escalate into major issues. • Look for indications of metal corrosion, cracks and plant growth. • Address minor issues promptly. Repair small holes, cracks and plant growth to prevent damage escalation.	Monthly

5 Conclusions and Recommendations

The development of the Bombay CVSC carries the risk of sedimentation and erosion impacting the surrounding environment, particularly the adjacent wetland and the permanent stream. However, by implementing the control measures outlined in this Report, the project's environmental impact can be minimised to less than minor. This provisional Erosion and Sediment Control Plan, which lays the foundation for mitigating these effects, will be further refined and executed by the appointed contractor. The controls specified in the Contractor's ESC Plan must strictly adhere to the principles and guidelines outlined in Auckland Council's GD05. As such, it becomes the Contractor's responsibility to refine, submit, and obtain approval from the Council for their ESC Plan. Additionally, the Contractor has the flexibility to explore alternative ESC mechanisms, provided they can meet Council's approval criteria. This collaborative process ensures that environmental protection measures are effectively integrated into the project's implementation, aligning with regulatory standards and minimising adverse environmental impacts.

Appendix A
Drawings

Note: The Location of the erosion and sediment control measures are indicative only.



NOTES:

1. ALL EROSION AND SEDIMENT CONTROL DEVICES ARE TO COMPLY WITH CURRENT NZTA EROSION AND SEDIMENT CONTROL GUIDELINES.
1. THIS DRAWING IS FOR CONSENT PURPOSES ONLY.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP A DETAILED EROSION & SEDIMENT CONTROL PLAN.
3. ALL TEMPORARY STOCKPILE AREAS AND AREAS OF BARE DISTURBED EARTH THAT WILL REMAIN FOR MORE THAN TWO WEEKS MUST BE GRASSED OR COVERED TO PREVENT EROSION. SHORT TERM STOCKPILES MUST INCLUDE COMPOST FILLED SOCKS AROUND ALL LOW POINTS.
4. EROSION AND SEDIMENT CONTROL TO ALSO SPECIFY DUST SUPPRESSION MEASURES.
5. THE CONTRACTOR IS TO UNDERTAKE SOIL TESTS TO ASCERTAIN THE MOST APPROPRIATE FLOCCULATION REAGENT FOR USE IN THE CONTROL OF EROSION AND SEDIMENTATION. BENCH TESTS AND THE IMPLEMENTATION OF FLOCCULATION (IF CONFIRMED APPROPRIATE) ARE TO BE INCORPORATED INTO THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL MANAGEMENT AND CARRIED OUT ACCORDING TO SECTION F2.0, COAGULANT AND FLOCCULENT TREATMENT, OF AUCKLAND COUNCIL'S "GD05" DOCUMENT, EROSION AND SEDIMENT CONTROL GUIDE FOR LAND DISTURBING ACTIVITIES IN THE AUCKLAND REGION JUNE 2016.

LEGEND:

- EXISTING PROPERTY BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- PROPOSED DESIGNATION LANDUSE
- CONTOUR MAJOR
- CONTOUR MINOR
- TEMPORARY EARTH BUND
- TEMPORARY EARTH BUND AND SHEET PILING BARRIER
- SURFACE FLOW DIRECTIONS
- AREA OF CUT
- AREA OF FILL
- SEDIMENT RETENTION POND
- CLEAN RUNOFF CUT-OFF DRAIN
- DIRTY WATER CHANNEL
- EXISTING TABLE DRAIN
- EMERGENCY SPILLWAY FLOW DIRECTION
- DECANTING EARTH BUND
- STABILISED OUTLET - TEMPORARY RIPRAP

1:250@ A1
1:500@ A3
0 4 8 12 16 20 24 m

INDICATIVE EROSION SEDIMENT CONTROL PLAN 2

SCALE: 1:250

REVISION	AMENDMENT	APPROVED	DATE
0A	ISSUED FOR TENDER	F.R.	2023-11-13
0B	ISSUED FOR TENDER	F.R.	2024-03-12
0C	ISSUED FOR TENDER	F.R.	17/04/2024

WAKA KOTAHI NZ TRANSPORT AGENCY

wsp
Wellington Office
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PO Box 12-003
Wellington 6144
New Zealand

CIVIL

SCALES: 1:250 (A1), 1:500 (A3)
ORIGINAL SIZE: A1

DRAWN	DESIGNED	APPROVED
P. FIEREK	P. FIEREK	F. RAHMAN

DRAWING VERIFIED	DESIGN VERIFIED	APPROVED DATE
S. SAMAY	S. SAMAY	2024-12-03

TENDER

PROJECT
WAKA KOTAHI NZ TRANSPORT AGENCY
BOMBAY, AUCKLAND
WEIGH RIGHT PROGRAMME - BOMBAY CVSC

TITLE
INDICATIVE EROSION SEDIMENT CONTROL PLAN

WSP PROJECT NO. (SUB-PROJECT): 5C4353-WSP-54-DR-
SHEET NO.: C-3100
REVISION: 0C

Attachment B.
SIIG Site Visit record

Minutes of Meeting

Project Name	Weigh Right - Bombay
Project Number/ File Ref	5-C4353.04 / 5C4353-WSP-04-MI-GN-1000
Date	18/03/2022
Time	9:30am to 11:00am
Venue	253 Mill Road, Bombay
Subject	Site Visit – with Southern Integrated Iwi
Client	Waka Kotahi
Attendees	Southern Integrated Iwi Group - Eynon Dalamere, Martin Te Moni, Lucy Rutherfurd, Geoff Cook; Prasad Tala (Waka Kotahi); Kumeroa Pihama (WSP); Anna Liu (WSP); Sharon Carr (WSP); Robert Gordon (WSP); Caitlin Dodunski (WSP)
Apologies	
Distribution	Graham Taylor (Waka Kotahi); Brendan Sterling (WSP); Tina Kalmar (WSP); Belinda Petersen (Waka Kotahi); Jack Morris (WSP)

Discussion	Action
1. **CVSC Stormwater Management** – The creek to the north of the CVSC site is a tributary to Ngakoroa Stream that will flow to the north and discharging into Manukau Harbour. There has been historical oil spill upstream from CVSC site and that spill flowed downstream and affected all the way to Manukau.	WSP to provide Stormwater Management Device (SWMD) as source control.
2. **Great South Road Stormwater Management** – It does not appear to have any oil spill containment or SWMD at external catchment at Great South Road (GSR). SII expressed interests in having better SW management and spill containment for GSR. GSR is under Auckland Transport's jurisdiction.	WK & WSP to contact AT to understand existing SW management strategy at GSR and determine if there is any opportunity to improve stormwater quality and oil spill containment.
3. **Proposed CVSC Entrance and relocated Private Access Road** – The existing private access road will be relocated outside of the CVSC northern boundary.	WSP to assess the traffic impact to support Resource Consent.

	The proposed CVSC entrance will be at approximate location of the existing access road. The truck turning into the CVSC will block the traffic on NB GSR and traffic into the existing temple opposite of CVSC. SII were interested in options for improving ecology between realigned access road and the stream, through suitable planting.	WSP to contact Auckland Transport for pre-application design coordination. WSP to liaise with SII specialists and property owner over proposals.
4.	**Existing Wetland for Treatment** – The existing wetland cannot be used as primary stormwater treatment per the new national policy. SII is interested if the treated stormwater from CVSC can be discharged to the existing wetland for secondary treatment.	WSP to assess whether the existing wetland can be utilised for secondary treatment.
5.	**Ecology-** Risk of skinks in the wetland. Multiple IIG members noted that the stream bank planting will benefit from a clean-up.	
6.	**Existing Wetland off limit** – The CVSC development will stay away from the existing wetland as much as possible by improving internal layout and using engineering solution. Geoff noted that the wetland is the start of the considerable Manukau catchment. It therefore there is responsibility to improve it and reduce accumulative impacts downstream.	WSP to update CVSC design layout, and work with SII specialists to consider options for minimising impact on wetland.
7.	**Earthworks and retaining structures–** The site will be in cut & fill with retaining walls, raising the site levels on the northern side and lowering the level on the southern side. The design constraints include tie-in to existing GSR at entrance & exit and providing relatively flat gradients for CVSC, especially for the weigh bridge. Weigh Bridge will need to be built on cut to prevent differential settlement.	N/A
8.	**Archaeology** – A desktop study has been undertaken, but Lucy from SII mentioned that radar penetration scan	WSP to send draft Archaeology desktop study for SII to review.

may discover artifacts underground. Lucy noted sites of significance to Iwi and of archaeological value in the area. The project area could have been a site of occupation.	SII will develop action plan regarding archaeology after the review.
9. **Emergency Exit** – The CVSC site will require to have pedestrian emergency exit for police officers.	WSP to design for emergency exit and show in plan.
10. **Great South Road Speed Limit** – There are speed limit signs of 100 kph to the north of the site and 60 kph to the south. It is not clear what is the speed limit immediate in front of CVSC. Prasad mentioned that AT is working on some speed zones improvement project in Bombay.	Prasad to give Anna (WSP) the AT's contact to have clarity on the speed limit.
11. **Cyclist Safety**– One cyclist was spotted using GSR during the site visit. SII has concern with cyclist safety on GSR if CVSC was in use.	WSP will assess the impact to cyclist safety from the proposed CVSC.
12. **Property owner access re-alignment** – further information required on the impacts of the alignment on the awa, its banks, ecological and filtration values.	WSP to provide associated reporting.
13. Specialist Lists	SII to provide the list of specialists to WSP
14. Draft Specialist reports	WSP to send the draft specialist reports for SII review
15. Next SIIG hui	CVSC project to be included in the agenda. Site visit, memos and design progress to be presented. SIIG to decide if a CIA is an appropriate way to respond.