Auckland Council

# Ngā Wairau – Stage 1 A F Thomas Park Works

## Indicative Construction Methodology

10 November 2025
3-AWWAI.02

Ngā Wairau – Stage 1 A F Thomas Park works

Indicative Construction Methodology

Auckland Council

WSP
Auckland
Lvl 3, The Westhaven
100 Beaumont St
Auckland 1010, New Zealand
+64 9 355 9500
wsp.com/nz

| REV | DATE | DETAILS |
|---|---|---|
| 0 | 22-09-2025 | Draft for review by Auckland Council and Jacobs |
| 1 | 2-10-2025 | Updated with latest programme and technical briefing note |
| 2 | 7-10-2025 | Final following client review |
| 3 | 10-11-2025 | Final following Brookfield review and updated project description |
| 3.1 | 27-11-2025 | Updated equipment list |

| | NAME | DATE | SIGNATURE |
|---|---|---|---|
| Prepared by: | Josh Irvine | 22-09-2025<br>27/11/2025 | *Rebecca Francis signed in Josh's absence* |
| Reviewed by: | Mathew Chandran | 27/11/2025 | |
| Approved by: | James Reddish | 13/11/2025 | |

# TABLE OF CONTENTS



**Figures**

# 1 PROJECT BACKGROUND

## 1.1 PURPOSE

The purpose of this document is to outline an indicative construction methodology for the Wairau Stage 1 – AF Thomas Park Storage Scheme to inform the Fast Track Consenting referral process.

## 1.2 INTRODUCTION

Auckland Council's Healthy Waters and Flood Resilience Department (Healthy Waters) is lodging a referral application to increase flood storage at A F Thomas Park, Wairau Valley under the Fast-track Approvals Act 2024.

The project broadly involves:

a) Flood resilience infrastructure works; and

b) Reserve reinstatement, including site stabilisation, landscaping, new footpaths/boardwalks, and formal and informal recreation.

This memorandum provides an indicative construction methodology for the proposal.

## 1.3 SCOPE OF WORKS

The Ngā Wairau project is part of Auckland Council's Making Space for Water – Blue-green Network programme and is focused on the key areas within the Wairau catchment that were impacted by the 2023 storm events. Given the large scale of the Wairau catchment, the Ngā Wairau project is being delivered in three stages. This proposal covers Stage 1, which involves increasing the existing flood storage at A F Thomas Park, together with reserve reinstatement. The stormwater detention capacity created through Stage 1 works is critical to enabling future Stages 2 and 3. Further design development and funding confirmation is required for Stages 2 and 3, and they therefore do not form part of this proposal.

The works proposed under Stage 1 enable the delivery of flood resilience in the catchment by increasing flood storage within A F Thomas Park, initially for the downstream residential area, and undertaking additional stormwater improvement works.

The proposed works to increase flood storage at A F Thomas Park include the following:

- Excavate the park to increase the existing flood storage to reduce flood flows and flood levels. Formalisation of a wetland on the northern end of the park where water naturally ponds as a result of the works and dry detention in other areas of the park. At this stage the earthworks on the site are indicatively estimated to be in the order of 700,000 $m^3$ – 800,000 $m^3$ (cut and fill) to achieve a flood storage volume of approximately 550,000 $m^3$. All excavated material is to remain onsite unless unsuitable.
- The proposed flood storage changes will amend the consented dam. At this stage, the proposed changes may include reducing the dam height, increasing the flood storage capacity and providing an additional spillway.
- Construct a new spillway channel linking the existing channel north of A F Thomas Park that flows east under State Highway 1 to A F Thomas Park to optimise storage and release of flood flows in the park to maximise benefits.
- Reshaping ground using cut material to convey flood flows between proposed raise areas.

— Vegetation removal is required to facilitate the works.

— A temporary construction laydown area will be established on-site (location TBC).

— Reinstatement of A F Thomas Park and constructing new multi-use maintenance accessways.

The technical parameters provided above are indicative, as design is ongoing. The referral is sought on the basis of the broader project description provided above (i.e. (a) flood resilience infrastructure works and (b) reserve reinstatement, including site stabilisation, landscaping, new footpaths/boardwalks, and formal and informal recreation), with final design specifications and precise quantities to follow in the substantive application.

## 1.4 PROJECT AREA

The project boundary is outlined in the figure below; the red line is the project boundary and the parcels that make up the project area are shown with yellow lines and associated numbering.


## 1.5 SITE ADDRESS

The site addresses and the legal descriptions for the project area are as follows:

| Property address | Legal description |
|---|---|
| **R 21 and 21 Northcote Road** | Lot 1 DP 150598, Lot 3 DP 150598, Lot 4 DP 150598, Lot 8 DP 150598 and Lot 8 DP 101760 |
| **17 Silverfield Lane** | Lot 2 DP 150598 |
| **17A Silverfield Lane** | Lot 5 DP 150598 |
| **17B Silverfield Lane** | Lot 6 DP 150598 |
| **17C Silverfield Lane** | Lot 7 DP 150598 |
| **Nill** | Part Allot 103 PSH OF Takapuna |

## 1.6 USE AND RELIANCE

1. This report ('Report') has been prepared by WSP New Zealand Limited ('WSP') for Auckland Council ('Client') in relation to the Fast-track Referral Application Ngaa Wairau - Stage 1 A F Thomas Park Works and in accordance with the terms of the agreement between WSP and Client. The Report relates to the project and scope set out in the Report and the stated purpose for which it was prepared. Subject to clause 2 below, the Report is not to be used or relied on for any other project or purpose, or by any person other than our client, without WSP's prior written agreement. WSP does not accept liability for any unauthorised use or reliance.
2. WSP acknowledge and agree that this Report may be used and relied on by the Minister deciding on the Fast-track Referral Application under section 21 of the Fast-track Approvals Act 2024, and by any expert consenting panel appointed under that Act to determine a subsequent substantive application.
3. In preparing this 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 this 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 rec1ommendations 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 for any 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.

# 2 INDICATIVE CONSTRUCTION METHODOLOGY

## 2.1 EARTHWORKS

The project is primarily focussed on flood mitigation, involving extensive bulk earthworks along with supporting works such as wetland construction, stormwater outfalls and extensions, underground services and maintenance paths. It also allows for reserve reinstatement, the specifics of which are yet to be determined by the Local Board.

Figure 1 outlines the Cut and Fill Plan based on the 3D earthworks modelling completed to date. Final earthwork quantities and locations may differ from those shown in the current plan and will be confirmed during the developed design phase. Cut and fill volumes are anticipated to be in the order of 700,000-800,000 $m^3$.

All spoil generated from the earthworks will be retained onsite, i.e. a neutral cut and fill balance, unless deemed unsuitable.

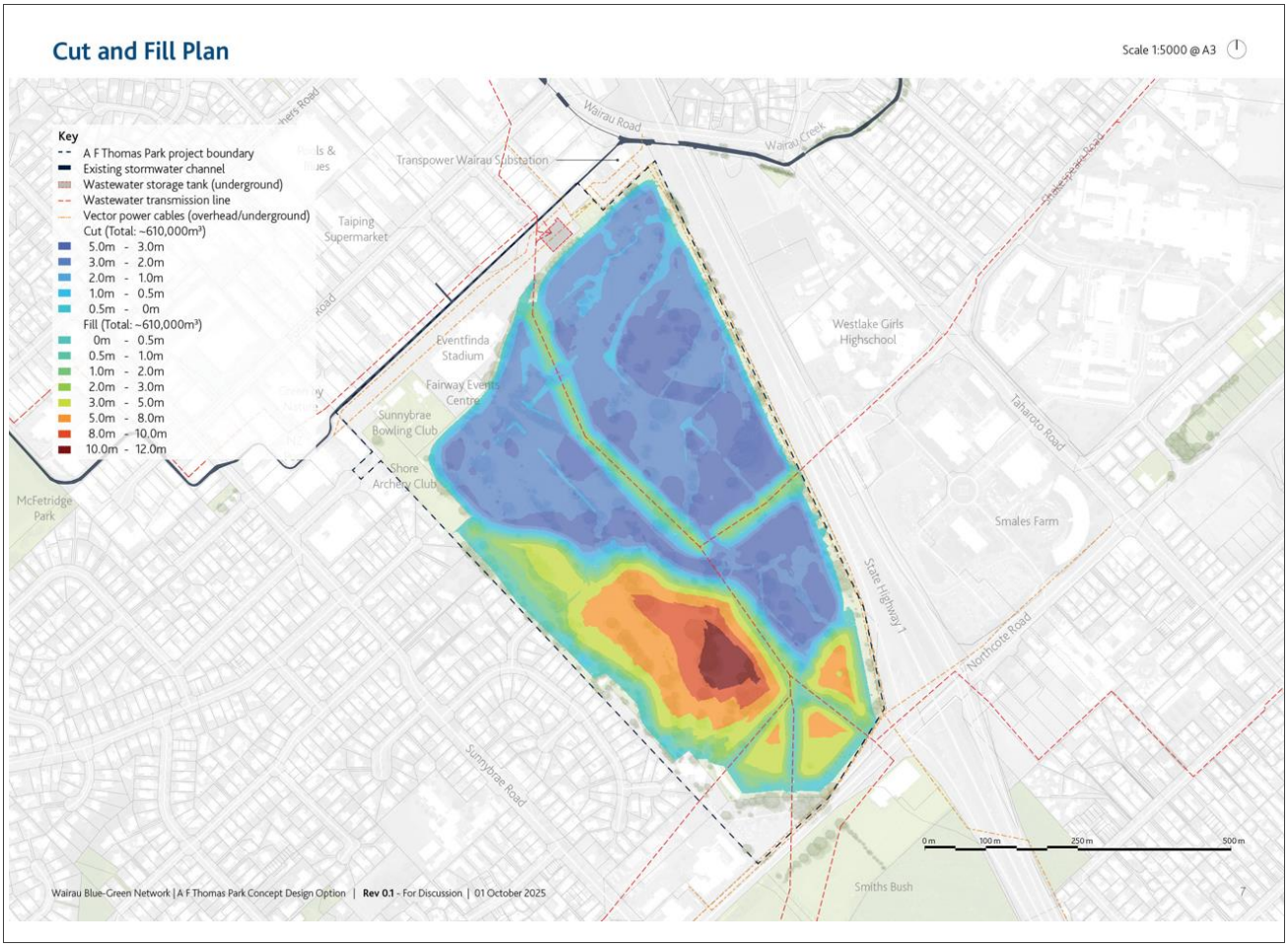

Figure 1: Cut and fill plan for AF Thomas Park (NB: Proposed cut and fill volumes to be confirmed during the developed design phase)

## 2.2 EQUIPMENT

The following equipment is anticipated to be utilised during construction.

- Excavators (5T-40T) – Digging, trenching, loading, shaping
- Bulldozers – Clearing, cutting, filling, grading
- Wheel loaders – Moving material, loading trucks
- Dump trucks – Hauling soil, rock, aggregate
- Scrapers – Cut, haul, and spread material over large areas
- Rock breakers – Localised rock breaking in cut areas (if required)
- Graders – Final surface shaping and levelling including haul road maintenance
- Compactors/rollers – Soil compaction and stabilisation
- Tractors and disks – Soil conditioning/drying
- Pile Driver – Drive piles into the ground (e.g. driving range)
- Chainsaws – Vegetation removal
- Water carts – Dust management
- Water pumps – Manage groundwater flows

## 2.3 SEQUENCE AND PHASING

The following steps outline the key anticipated stages of the construction process:

- Site establishment
- Vegetation clearance
- Site preparation including haul roads, site fencing, signage, environmental measures (erosion and sediment control)
- Establish compound and site office
- Relocation of native fauna species where required
- Location and protection of existing services (e.g. wastewater trunk main, Vector power cables)
- Stripping and stockpiling of topsoil
- Construction of wetland and bulk earthworks (including works on the stormwater outfalls within the park) – working from northern corner (lowest point) progressively compacting and stabilising areas
- Spread topsoil and grass where required to progressively stabilise areas
- The bulk earthworks will be substantially completed during the 2027/2028 and the 2028/2029 earthworks season, with final completion anticipated at the end of 2029. The material will likely be progressively dried in layers, spread over the large portion of the identified fill area.
- Construction of maintenance tracks that will double as shared paths and boardwalks

- Planting for wetland and any other elements will be constructed during winter months (e.g. spillway)
- Reinstatement works including final contouring (commencing October 2028)
- Additional planting and reinstatement

The total construction period is anticipated to be 24-27 months.

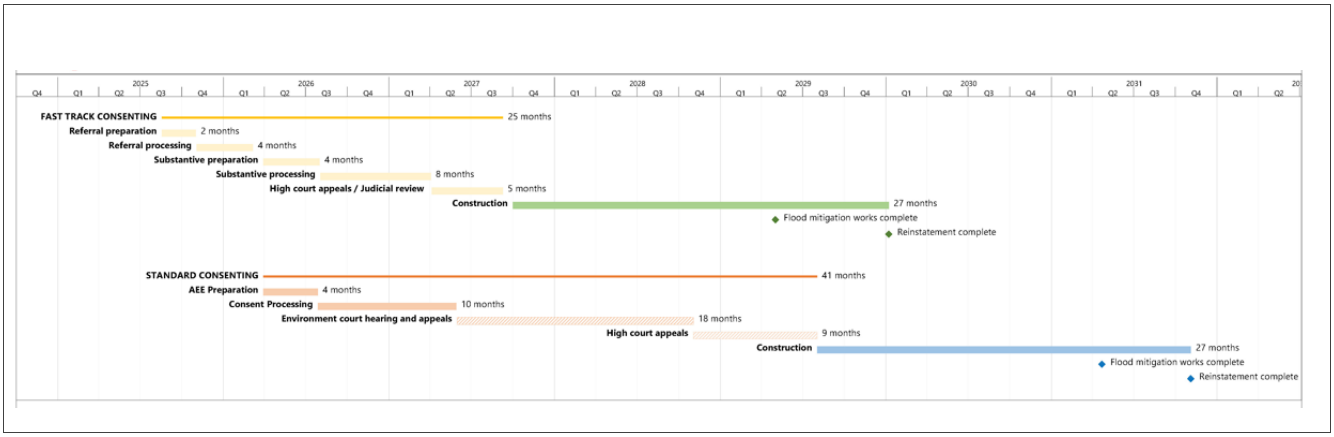


Figure 2:High-level construction programme

## 2.4 CONSTRUCTION ACCESS

Construction access will primarily be via the existing lane off Northcote Road, with potential additional entry points from Terrylyn Drive and through the Eventfinda carpark of 17 Silverfield. All three locations have established access points currently used for operations and maintenance activities within AF Thomas Park.