TE KORI SCOTT POINT

Sustainability Annual Report

October 2022 – November 2023

Version 1.0

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Contents

Executive Summary

Construction of Te Kori Scott Point commenced in October 2021. The park is being developed with a focus on sustainability and is registered with the Infrastructure Sustainability Council (ISC) sustainability rating scheme.

This annual report provides an overview of the sustainability aspects of the project through the second year of construction November 2022 – October 2023.

The park is being developed in stages to align with the allocation of funding. Stage 1a commenced in October 2021, and has largely been completed within the past year. The scope for the Stage 1b Contract Works is currently being confirmed, and until this Contract comes into effect, the earthworks from Stage 1b have been brought forward to utilise the favourable weather conditions during the November 2023 – April 2024 summer season. Currently the earthworks under Stage 1b are due for completion in April 2024.

Over the past year the key sustainability targets have been met including -

- Formal adoption of the park name 'Te Kori Scott Point' for the project
- Enhancing the ecological value of the site through transplanting initiatives, rehoming of wildlife and the introduction of bees
- On-site water capture and reuse, and a reduction in the overall operational water requirements using an onsite bore
- Reducing the whole-of-life carbon footprint through efficiencies with machinery use and tracking of fuel consumption
- Engaging local businesses for the supply of materials and construction
- Educating suppliers and subcontractors engaged in the project on sustainability through onsite workshops

The diversion of construction and demolition waste from the site has been marginally less than the targeted 90%, with 88% diversion for the project to date.

Introduction

Auckland Council requires all projects seeking a rating with the Infrastructure Sustainability Council (ISC) sustainability rating scheme to submit an annual report for public release.

Te Kori Scott Point is targeting an ISC rating of 75 or higher, classed as “Leading” sustainable infrastructure realised through the As-built rating phase.

This report outlines the progress against key project sustainability goals, summarises significant opportunities and risks and describes lessons learnt associated with sustainability over the last year (November 2022 - October 2023).

PROJECT INFORMATION	
PROJECT NAME:	Te Kori Scott Point
REPORTING YEAR:	November 2022 – October 2023
REPORT PREPARED BY:	Dr Christopher Wilcox
COMPANY:	HEB Construction
PROJECT ROLE:	Senior Environmental Advisor
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REVIEWED BY:	Kate Chivers – Sustainability Manager
APPROVED BY:	Angela Levet

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SUMMARY OF WORKS FOR THE YEAR:

First Quarter November 2022 – January 2023

- All stormwater drainage completed.
- Slot drains and irrigation commenced for fields 2 and 3.
- Screened 16,900 m^3 of topsoil.
- Kerbing and rain gardens completed for the carpark.
- Piling for light poles completed.
- Service reticulation completed.

Second Quarter February 2023 – April 2023

- Installation of drainage and irrigation for fields 2 and 3.
- Placement of 4,500 m^3 of topsoil on fields 2 and 3.
- Concrete pouring for the east/west footpaths and cycleway.
- Installation of pumps and pump shed for irrigation.
- Installation of service ducting for park lighting and general power.
- Installation of tree pits and garden beds throughout site including boulevard between cycleway and footpath.
- Completion and shaping of informal batter area.
- Excavation and trimming of new aquifer.
- Site preparation for winter shutdown.

Third Quarter May 2023 – July 2023

- Community planting day kicks off planting on the project. Planting was undertaken around the aquifer and informal recreation area (2,000 plants).
- Planting of 7,860 trees and plants site wide.
- Installation of concrete footpaths, cycleways and decorative "nodes" throughout the park.
- Completion of carpark pavement and surfacing.
- Carpark lighting installation.
- Toilet block installation.
- Completion of wetland area.
- Preparation of baseball diamond surface.
- Installation of power and irrigation controls.

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Fourth Quarter August 2023 – October 2023

- Construction of Stage 1a works in preparation for the opening of the footpaths to the general public on the 1 November 2023.
- Key focus for the quarter was landscaping, including the planting of native tree and shrubs, and placing rocks and park furniture (bench seats and rubbish bins).
- The carpark was asphalted with line marking completed in August.
- Works began on decommissioning the sediment retention pond near Joshua Carder Drive.
- Joshua Carder Drive roundabout construction started, with drainage, subbase layers and kerbing being installed.

Key Sustainability Targets & Initiatives

Sustainability Target	Project Initiative	Summary of Progress
29% Enhancement in Ecological Value (Eco-1, Level 3)	• Re-vegetate the existing contaminated / hard infrastructure nursery area • Replace 18,9123 m2 of exotic planting with 22,134 m2 native vegetation • Reduce the area of grassland / non-improved pastures by 7% a total of 4,830 m2	• The transplanted Epilobium has flourished over the season, showing a successful translocation. • 11,600 native plants have been planted within the park area. • A total of 20,700 native plants have been planted within the projects ecological area.
100% Onsite water capture and reuse (Wat-2, Level 3)	• Construction: Utilisation of the onsite bore and collected rainwater • Operations: The specified Blue2Green water storage system provides storage of 1080m3 and will capture rainwater and reuse 100% of its water onsite • Operations: Utilisation of the onsite bore for all other water requirements	• 100% of the water consumed onsite during construction has been from the onsite bore.
36% Reduction in overall operational water footprint (Wat-1, Level 3)	• Construction: Adjusted earthworks methodology reducing dust suppression requirements by 134.2ML • Operations: Utilising Blue2Green system for Field 1, requiring 80% of conventional demand, and using valve-under-head system for Fields 2 and 3 reducing irrigation requirements for the 50year design life by 55.6ML	• Dust suppression has been meticulously managed to result in very low levels of water usage. • Water consumed onsite for construction activities remains under the reduced levels, seeing further reductions from the base case water levels.
13% reduction in whole of life carbon footprint. (Ene-1, Level 2)	• Operations: 17,240m2 less turf area and field area to mow and maintenance removing 24 $tCo2^e$ of greenhouse gas emission from the 50-year design life • Operations: Lighting controls - External lighting for detailed design includes time clock and motion detection, and removes 161 $tCo2^e$ of greenhouse gas emission from the 50-year design life	• Onsite teams record the quantity of fuel being consumed onsite against the activity being undertaken, enabling tracking of efficiencies of fuel consumption during construction.
90% diversion rate for construction and demolition waste. (Was-3, Level 3)	• Design: Re-use of onsite materials included within design • Design: Cellular structure of Blue2Green minimised to avoid waste creation • Construction: Onsite storage for waste segregation through clearance and demolition • Construction: Excavated soils stored onsite in segregated piles for re-use onsite • Operations: Three-stream Big Belly bins located onsite for park users to divert waste	• Construction and demolition waste diversion is at 88% currently, increasing 1% from last year, remaining below the targeted 90%.
75% of subcontracts with local suppliers	• Procurement process set up to include weighted considerations of local suppliers and sub-contractors	• 99% of spend this annum has been with a total of 98 Auckland businesses attributing to $8.6M spent locally.
Continue incorporating iwi values during the construction phase through a collaborative approach with the community	• Hosting educational workshops • Project newsletter every 3 months	• Project name officially changed to Te Kori Scott Point.

Sustainability Impact

• Ecological Restoration

- ❖ Replanted saved Pohutukawa trees to their permanent location, creating an avenue through the park.
- ❖ Site beehive has been ongoing for the last year with two years of honey production (Figure 1).
- ❖ Majority of the informal recreation area has been planted with 11,600 native tree and plant species resulting in an increase in the ecological values of the project (Figure 1).
- ❖ Increase in overall ecological footprint due to change in planting for the new aquifer/wetland area.

Figure 1: Site Engineer getting involved in the community planting day, and the beehive

• Energy and Carbon Reporting (including Materials)

Over the last year, construction activities produced 81t$Co2^e$ greenhouse gas emissions from 29,955 L of diesel largely due to: earthmoving activities; installation of services and stormwater; and additional variation works (Figure 2). To date the construction works have resulted in 283t$Co2^e$ greenhouse gas emissions from 105,063 L of

diesel (Figure 3); largely from earthmoving, environmental installation, site clearing, stormwater and a range of variations form the initial base case (Figure 4).

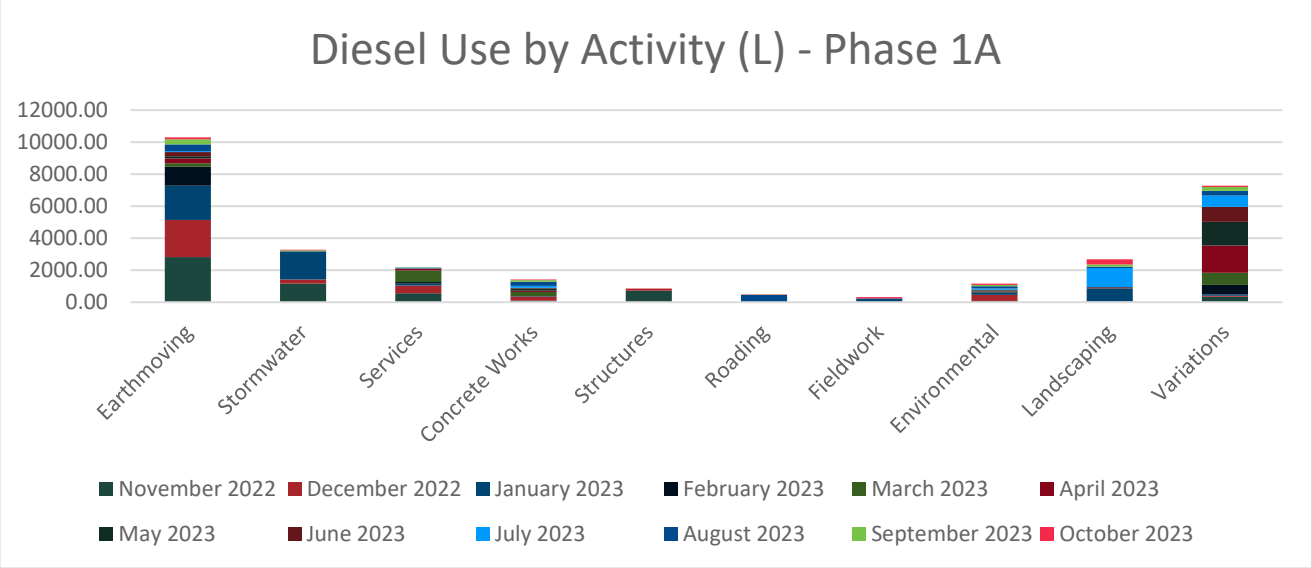


Figure 2: Energy Use (L) within Construction Phase 1A by category for the annum

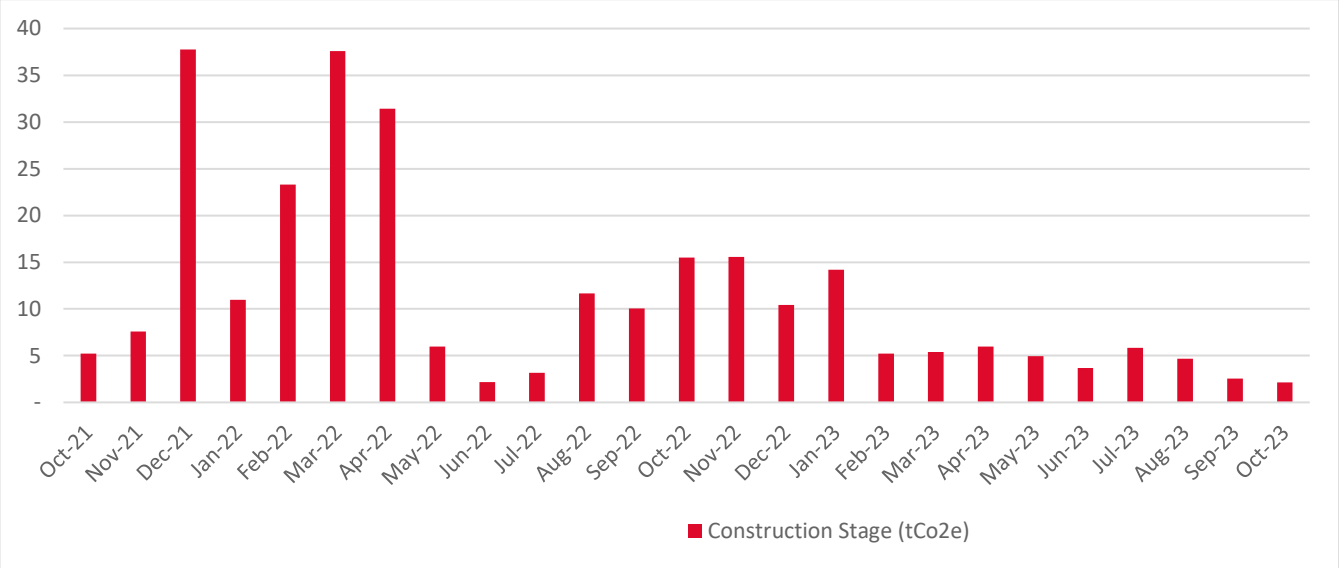


Figure 3: Construction Use Greenhouse Gas Emissions (tCo2e).

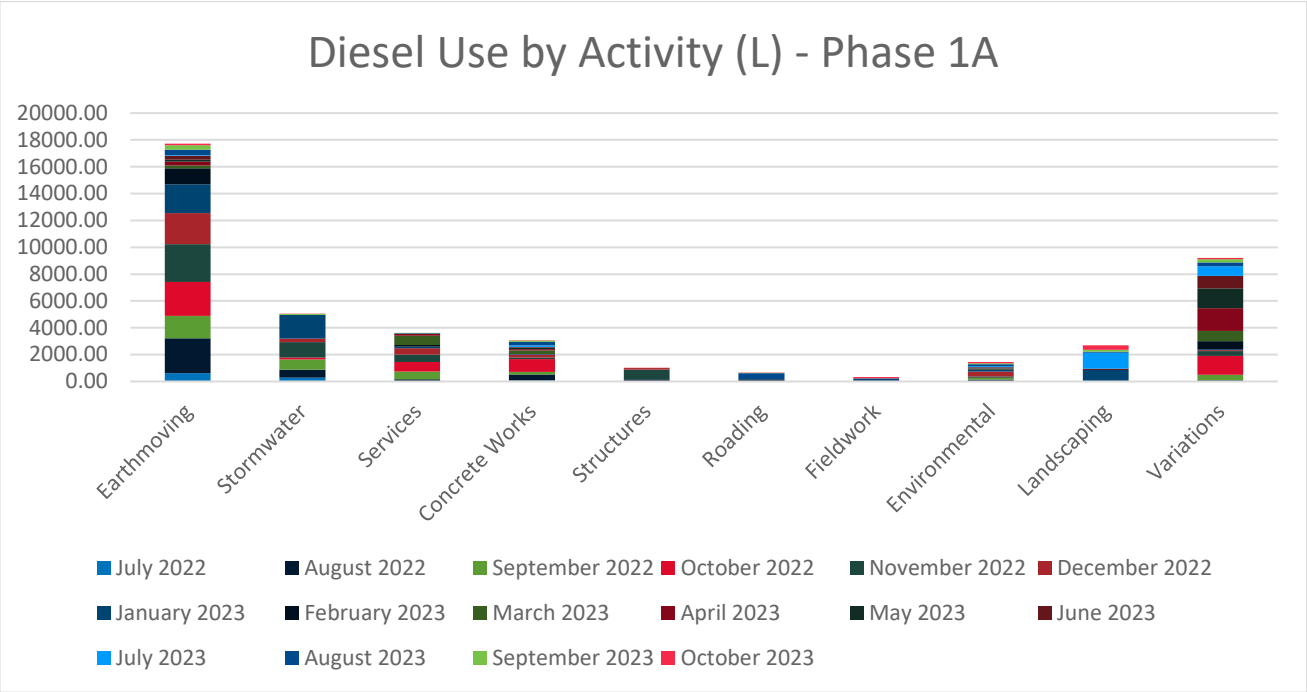


Figure 4: Energy Use (L) within the entire Construction Phase 1A by category to date

As the majority of Stage 1a has been completed on site, the largest Scope 3 greenhouse gas emissions from purchased materials on site was due to the consumption of ready-mix concrete for all the pathways and kerbing etc, and the importing of aggregates (Figure 5 & Figure 6).

The use of 2,706m3 of crushed concrete rather than importing virgin Gap 40 from the quarry has resulted in a saving of 51.3 tCo2e, equivalent to a 13% reduction of carbon embodied materials consumed on the project to date.

Materials Categories	Quantity (m3/t)	Sum of Tco2e (incl. tran)
Aggregate (m3/t)	4,350.5(m3) + 6,207.6 (t)	93.88
Cement (t)	30.34	4.38
Piping (t)	11.62	18.80
Plastics (t)	2.27	8.75
Pre-Cast (t)	257.42	19.90
Ready Mix Concrete (m3)	585.72	186.62
Metal (t)	20.13	60.34
Timber (t)	8.13	4.59
Grand Total		**398.73**

Figure 5: Materials used on site to date by category, relevant quantum and overall, Greenhouse Gas Emissions (tCo2e).

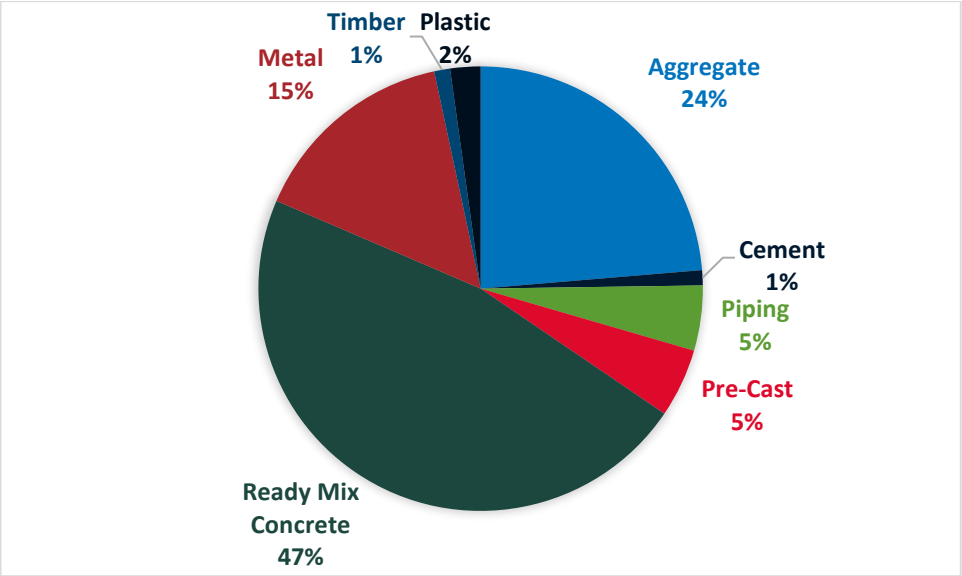


Figure 6: Percentage breakdown of material types by to date Greenhouse Gas Emissions (tCo2e).

- **Water Reporting**

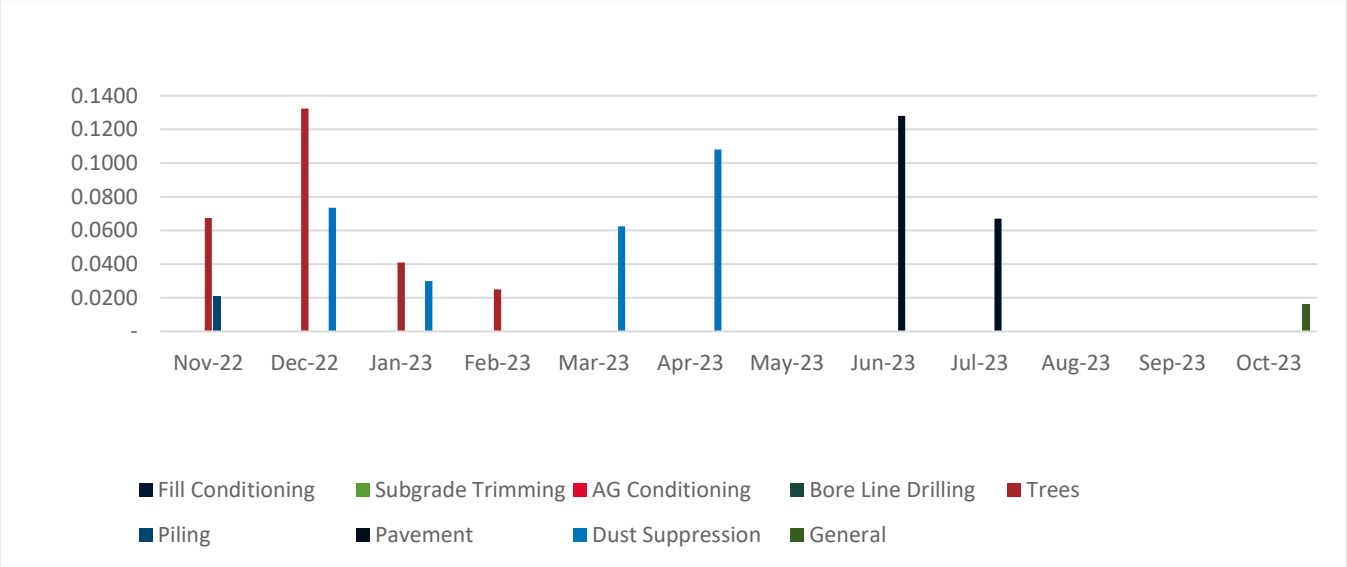


Figure 7: Water Use - Construction Stage for the annum (ML)

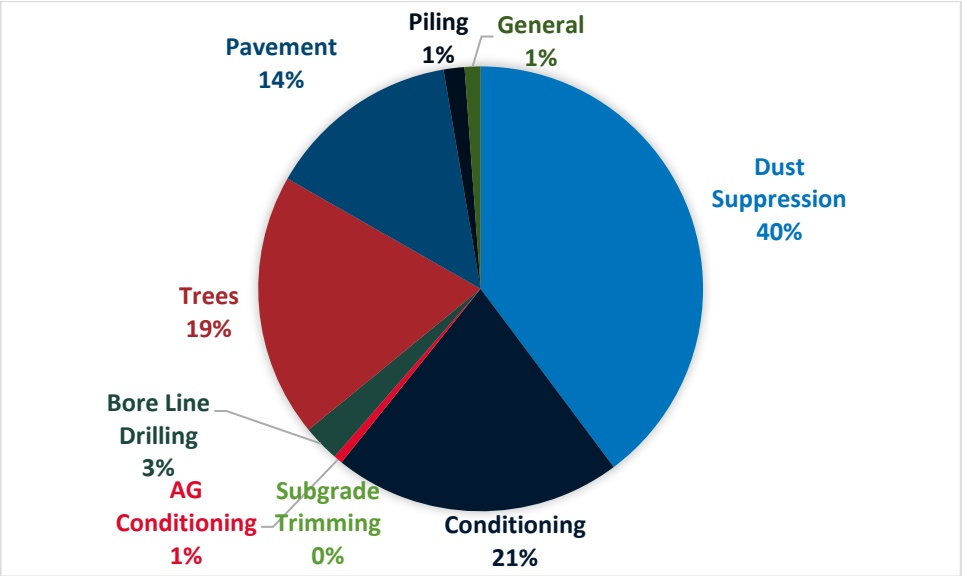


Figure 8: Water Use - Construction to date percentage of water uses (ML)

To date 0.77ML of water has been used onsite for dust suppression, trees and pavement for the annum (Figure 77). Overall the project has utilised 1.37ML of water to date, with the largest uses being dust suppression and conditioning (Figure 8); with 2.1ML provided for every month of earthworks within the Actual Case for a 12-month earthworks season. All water used onsite to date has been from a non-potable source - 100% from the onsite bore.

• Waste Reporting

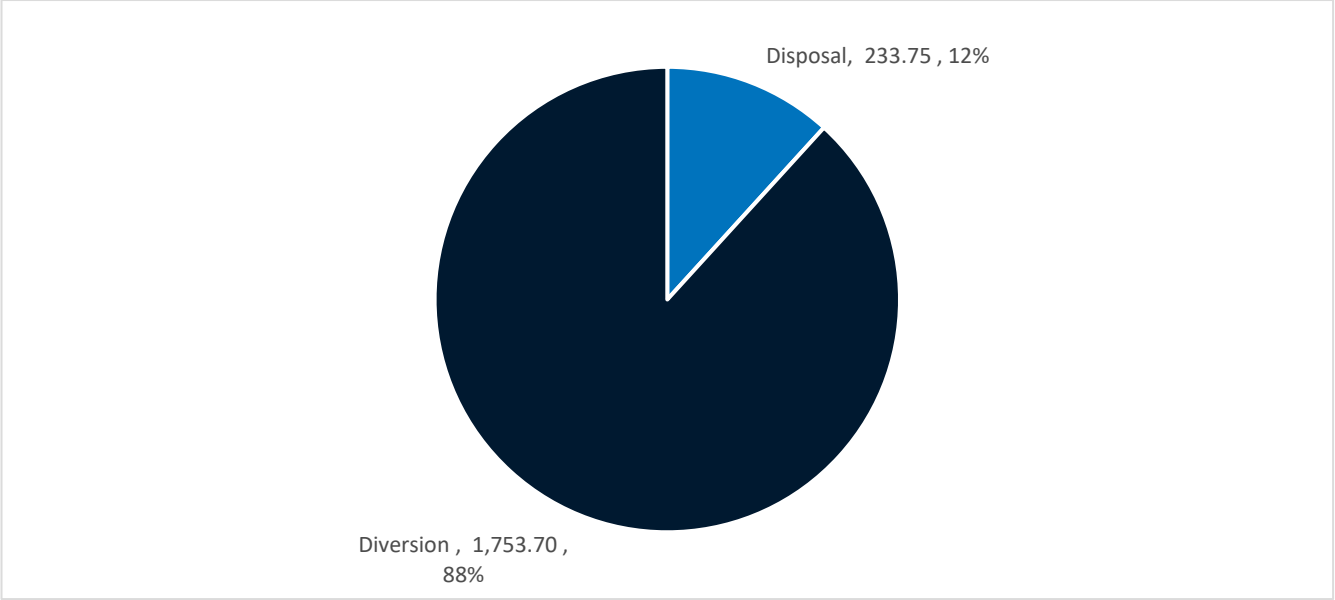
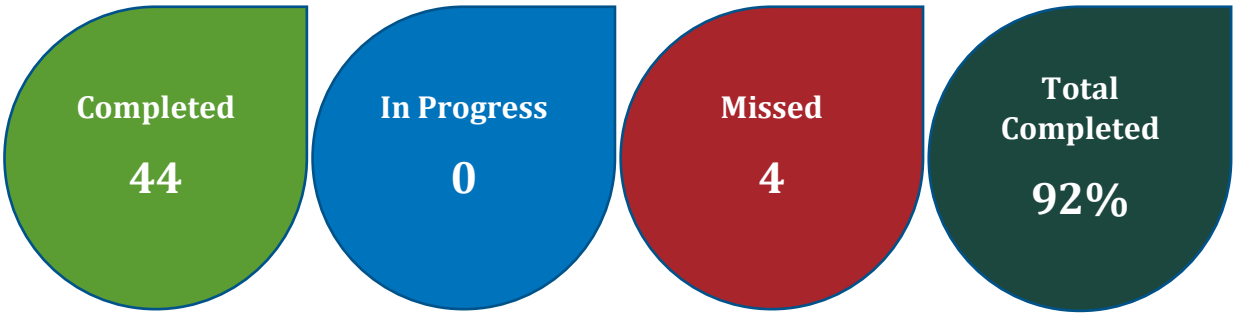


Figure 9: Construction and Demolition Waste Diversion to date (tonnes & percentages)

Construction and demolition waste diversion is at 88% currently, dropping 2% off the targeted 90% (Figure 99). Investigation is underway into the upcoming waste creation streams anticipated for Stage 1b in order to ensure waste diversion options are investigated and implemented ahead of time.

• Social

All HEB and Auckland Council personnel directly involved in the project have completed the Supply Chain School E-modules. In addition, two internal subcontractor training sessions and catchup sessions have resulted in 92% of the 48 required staff and subcontractors completing their full sustainability training.



The project hosted the “sustainability warriors”, a lunchtime group from Scott Point School, who met with Jessie the beekeeper (who services the beehive at the project) for a training session on the environment and sustainability in construction. The entire school (roll of ~650 students and their teachers) completed a pre-opening tour in October 2023 of areas of the park that were opened to the public for access in November 2023. This includes shared paths that provide public access through the park to the school, providing a shorter and safer route for the community.

Figure 10: Onsite training and Scott Point School site tour.

- **Economic**

99% of spend this annum has been with a total of 98 Auckland businesses attributing to $8.9M spent locally.

Lessons Learnt

Topic	Lesson Learnt
Without access to the watermain onsite, the intended field grow in could not be completed as planned and therefore Fields 2 and 3 could not be opened for public use.	Positive: Temporary works would have been required to open the fields in time. Delaying the opening of these fields allowed for removal of temporary activities and therefore created a reduction in resource use and waste avoidance.
Topsoil screening onsite to ensure high productivity of the topsoil.	Positive: High yielding result in topsoil quantity and quality may enable the site to meet the Lan-2 Level 3 without any additional works. This is being investigated. A 65% yield has been achieved and utilised on site.
Topsoil biproduct successfully reused on site.	Positive: As a biproduct of the topsoil screening, a high quantity of tailings was produced. This included a mix of materials such as stones, sticks and general rubbish. The tailings were utilised rather than shipping off or burying the tailings as Business as Usual. This saved on additional costs and export from the site, and ensured the material was utilised to its full potential rather than shifting the problem. This annum the tailings were transformed and utilised as a viable product.
Relationship building with the community	Positive: Several community initiatives have taken place. The community planting day, site tour for the school and bee/sustainability training with the school "sustainability warriors" has resulted in relationship building with the community and a sense of community ownership with the park.

Approval Signatures

Jacqui Robson, Project Sponsor

Angela Levet, Project Manager