



Fisher & Paykel Healthcare Karaka Campus

Masterplan Report

Prepared for:
Fisher & Paykel Healthcare

Document Revision Status:
Plan Change Supporting Information

March 2025

Contents

Prepared For:
Fisher & Paykel Healthcare

Document Revision Status:
Plan Change Supporting
Information

Date:
March 2025

Contact:
Warren and Mahoney
Architects New Zealand Ltd
139 Pakenham St West
Auckland 1010
New Zealand
+64 9 309 4894

Disclaimer:
This document is intended as a tool
to facilitate discussion. While Warren
and Mahoney has endeavoured to
summarise the issues raised by this
investigation, it has been done within
the constraints of this commission.

Introduction01

1.1 F&P Aspirations and requirements	7
1.2 The Masterplan Process	8
1.3 Stakeholder Inputs	9
1.4 Cultural Context	10
1.5 Site Context	11
1.6 Planning Context Summary	13

Guiding Principles02

Components of the Masterplan03

3.1 Parameter Definition	20
3.2 Optimal Pilot Buildings	21

The Masterplan04

4.1 Introduction	23
4.2 Key moves	24
4.3-4.6 Frameworks	27 - 32

Landscape and Open Space05

5.0 Landscape Masterplan	34
5.1 - 5.3 Circulation	35 - 38



Executive Summary

With the East Tāmaki campus reaching capacity as a manufacturing, research and development centre in the near future, the Karaka Campus Masterplan will support Fisher & Paykel Healthcare's (F&P) long-term sustainable and profitable growth.

This Karaka Campus Masterplan Report is the blueprint document which will inform the infrastructure development to meet F&P's short, medium and long-term infrastructure requirements for their Karaka Campus.

Building on the DNA of the East Tāmaki Campus, the Karaka Campus will be a place which puts people and community at its heart. The Campus will be a talent magnet attracting the best and brightest, while being finely engineered for success and optimised to maximise the return on investment. The Masterplan will build in resilience, and be environmentally positive.

The Guiding Principles Framework

The guiding principles framework is intended to support the Masterplan as the strategic document guiding the development of the Karaka Campus. This framework seeks to shape the Karaka Campus for business growth through pilot manufacturing, research and development, while providing a high value experience for employees and visitors and positive environmental outcomes.

The nine guiding principles inform a design response which supports the development of campus wide spatial strategies which, in turn, inform precinct specific intentions of the Masterplan.

The resulting projects encompass buildings, roads, services, paths, open spaces, and blue and green infrastructure that have been thoughtfully considered together to arrive at this vision document.

The Masterplan

The following report describes the constraints and opportunities of the site, F&P's requirements for this campus, and the buildings, infrastructure and landscape elements. This will come together to create an environment that inspires good people to develop innovative solutions that improves patient care and outcomes and delivers sustainable and profitable growth.

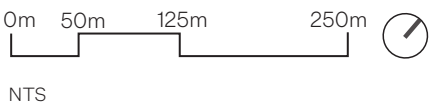
It is intended this Karaka Campus Masterplan will be a living document which can be updated and expanded upon as F&P's business infrastructure requirements evolve over time.



Fig 1. The Guiding Principles



Executive Summary
Masterplan



Building	Count	GFA
R&D + Pilot manufacturing	13	15000 - 34000 m ²
Total GFA:		319 000 m ²
R+D Employees:		10650
Manufacturing Employees:		4720
Total Employees:		15370





Introduction



1.1 Introduction

The Masterplan for the Karaka Campus will establish a blueprint for F&P's next 30 years of innovation and business growth.

F&P aspirations and requirements

Supporting a long-term vision for F&P

The Masterplan has been developed with the consideration of preserving the opportunity for the long-term growth of F&P's research and development and pilot manufacturing in New Zealand. Along with this, the Masterplan has sought to capture what has been heard from mana whenua and provides a framework for an ongoing, positive and mutually beneficial relationship.

Considering the evolution from the East Tāmaki Campus

The component parts of the Masterplan, and their inter-relation, build on the values and behaviours unique to F&P and reflected in their existing infrastructure. Importantly, the Masterplan reflects F&P's aspiration to put their people at the heart of the experience and evolve the concept of this environment to encompass wider ecosystem thinking.

A holistic approach to sustainable development of the site

The Masterplan is inherently future-focussed and captures a long-term view of F&P's needs. In this there has been a strong and consistent focus on the social, cultural, environmental and economic sustainability of the Karaka Campus through careful consideration of built infrastructure and staged development.

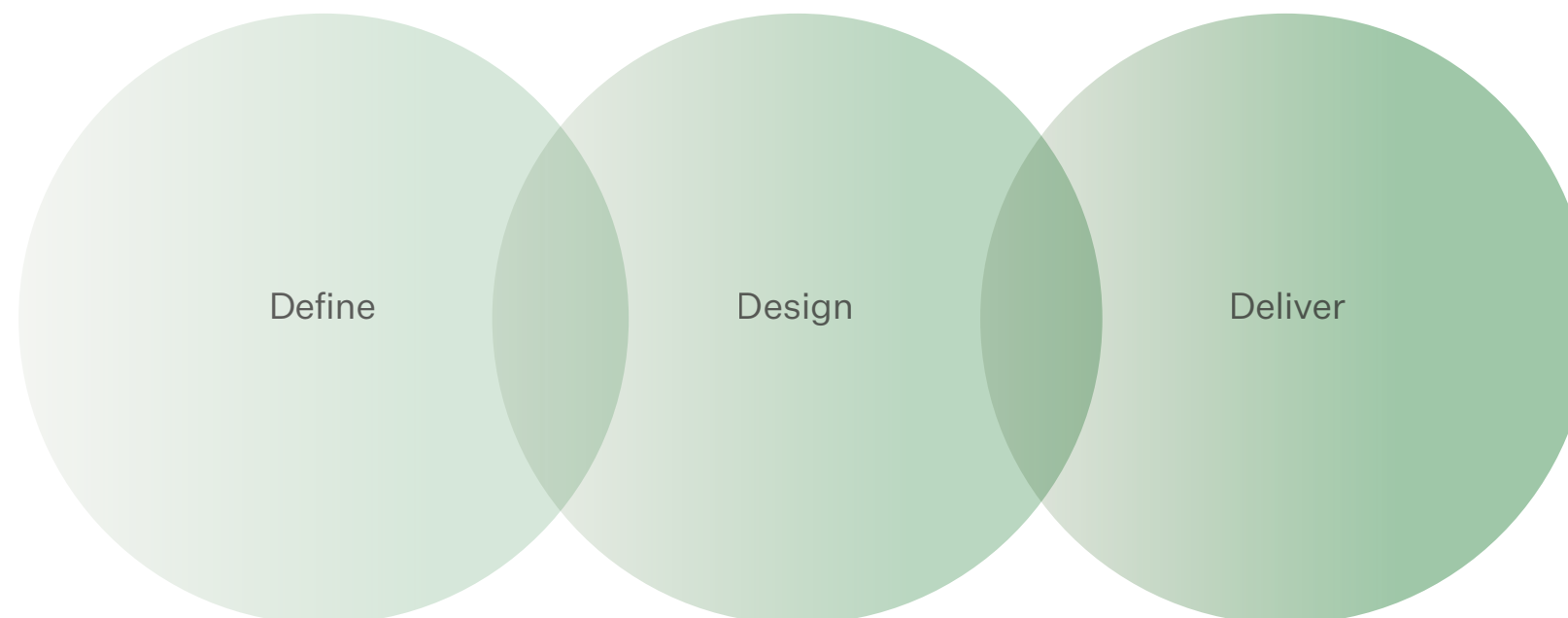
Supporting a plan change process

This Masterplan identifies a long-term future vision and will also be used to support F&P's private plan change process to enable the development of the Karaka Campus.



1.2 The Masterplan process

Through 'Define', 'Design' and 'Deliver' phases, specialist consultants have worked in partnership with F&P, mana whenua and key stakeholders to develop a blueprint for F&P's future development at Karaka.



1. Establishment of principles

The Masterplan process began with a focus on understanding F&P values and their vision for the Karaka Campus. A 'project intent' workshop was held with key internal stakeholders at F&P to capture ideas and establish general themes around key focus areas.

During the process three prompt questions were asked about functional possibilities, contextual presence, and aspirations. Participants from F&P and the Consultant Team shared their individual responses facilitating discussion. Subsequently, a series of further workshops, a site visit and external consultations with mana whenua were conducted allowing the team to identify opportunities across disciplines and understand the site context.

The Project Guiding Principles were the key outcome of this phase.

2A. Parameter Development

Building on the strategic moves from Phase 1, the second phase of the Masterplan sought to determine the parameters and constraints of the Masterplan components. This workstream sought to build on F&P's brief for buildings, logistics, environmental sustainability, infrastructure and open space and bring a greater level of specificity to the project requirements. As part of this process, development constraints from the plan change process around site access, and waterway protections were captured.

The brief for the component parts of the Masterplan was the key outcome of this phase.

2B. Initial Concept option development

Following the refinement of a spatial and component brief for the site, phase 2B sought to bring these elements together and test alternative spatial arrangements. Through this process, Masterplan options were tested and further refinements were made to component parts through the evaluation of options against the Masterplan guiding principles.

The outcome of this phase was an agreed preferred Masterplan direction.

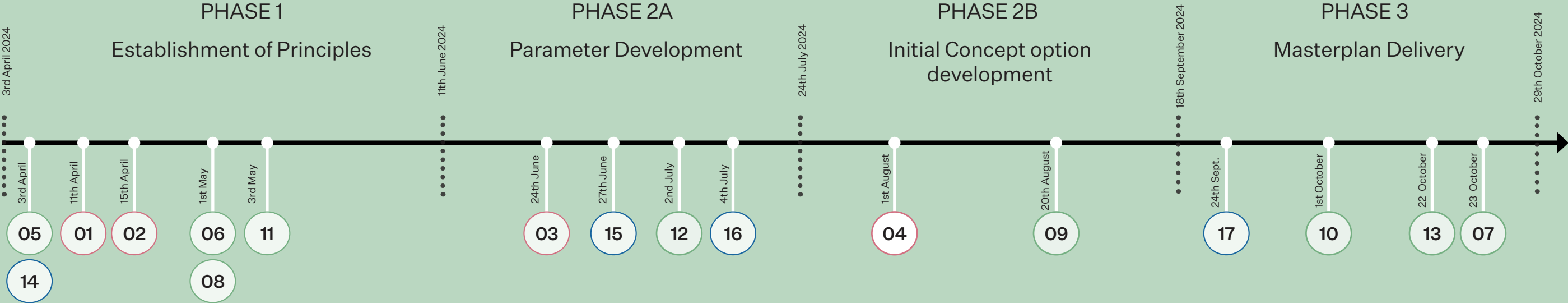
3. Masterplan Delivery

The final phase of the Masterplan process involved the delivery of this comprehensive Masterplan document. The refinement of the preferred direction has involved close coordination between disciplines to finalise the Masterplan layers including urban design, buildings and building platforms, landscape and open space, site services and infrastructure, three waters, environmental targets, and transport.

The final Masterplan was the key outcome of this phase.

Consultant Team	
Pragmatix	Project Manager
Warren and Mahoney	Masterplanning, Urban Design, Landscape, Cultural Design
eCubed, Warren and Mahoney	Sustainability
Barker & Associates	Urban Design & Planning
GHD	Civil and Stormwater
Mesh	Centralised Services
WSP	HV Engineer
Stantec	Transport Engineer
Bioresearches	Ecologist
WT	Quantity Surveyor

1.3 Mana whenua and Stakeholders Inputs



F&P and other Stakeholders meetings

- 11th April 2024
Sustainability Briefing with F&P team
- 15th April 2024
Vision / intent workshop with F&P management
- 24th June 2024
Briefing with FM Global
- 1st August 2024
Briefing with Counties Energy

Mana whenua

- 3rd April and 1st May and 23rd October 2024
Hui with Ngāti Tamaoho
- 1st May , 20th August and 1st October 2024
Hui with Ngāti Te Ata Waiohua
- 3rd May and 2nd July and 22nd October 2024
Hui with Te Ākitai Waiohua

Workshops

- 3rd April 2024
Site visit
- 27th June 2024
Sustainability Workshop
- 4th July 2024
Resilience, Transport and Renewable Energy Workshop
- 24th September 2024
Climate Adaptation Workshop

1.4 Cultural Context

This diagram reflects the relationship with the land, sea and sky, and the many sites of significance and species which reside within their respective domains. The footprints of ancestors that walked over these lands and travelled its waterways.

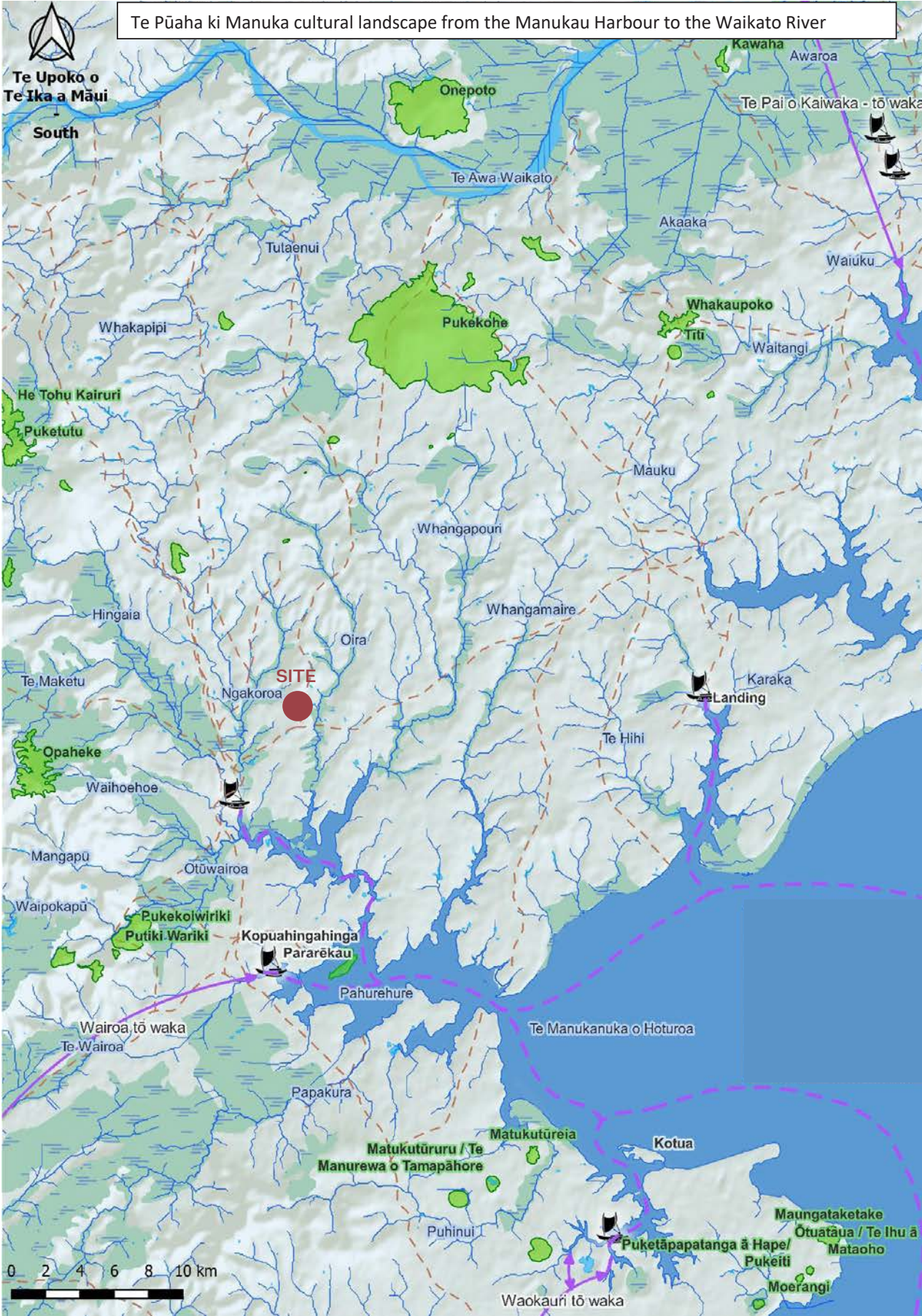
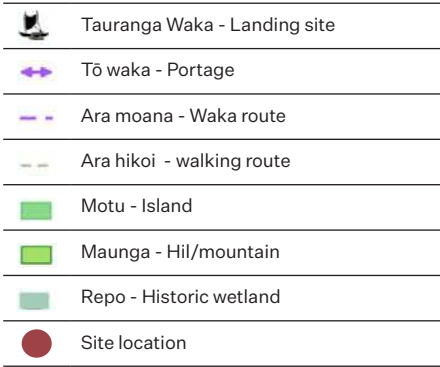


Figure 3. Maunga, awa, repo, and land and water connections within Te Pūaha ki Manuka - the ancestral landscape from Te Manukanuka o Hoturoa (the Manukau Harbour) to the mouth of Te Awa Waikato (the Waikato River)

Source: Ngāti Tamaoho O10J, Maori Cultural Heritage, Kaitiaki, Evidence



1.5 Site Context

Wider context and Amenities

The 105Ha site sits within the wider Drury - Opāheke area, a predominantly rural area that has been signalled as an area for urban expansion through both the Auckland Plan and Auckland Unitary Plan. There are a number of emerging neighbourhoods in this area including the residential communities of Auranga, Paerātā Rise and Drury. In time, it is anticipated that the Karaka Campus will sit at the centre of a much larger mixed-use area featuring residential, industrial and commercial activities.

Site

- Boundaries are defined by Karaka Road from the north and the railway track from the south. The western boundary runs along the Oiroa Creek. The eastern boundary adjoins existing rural land which currently falls in the Future Urban Zone.
- The Rural Urban Boundary currently passes through the site. This denotes the current planned urban extent of Auckland.
- East Tāmaki Campus is located 25km north from the Karaka site. It takes approx. 20min drive via the Southern Motorway (SH1).

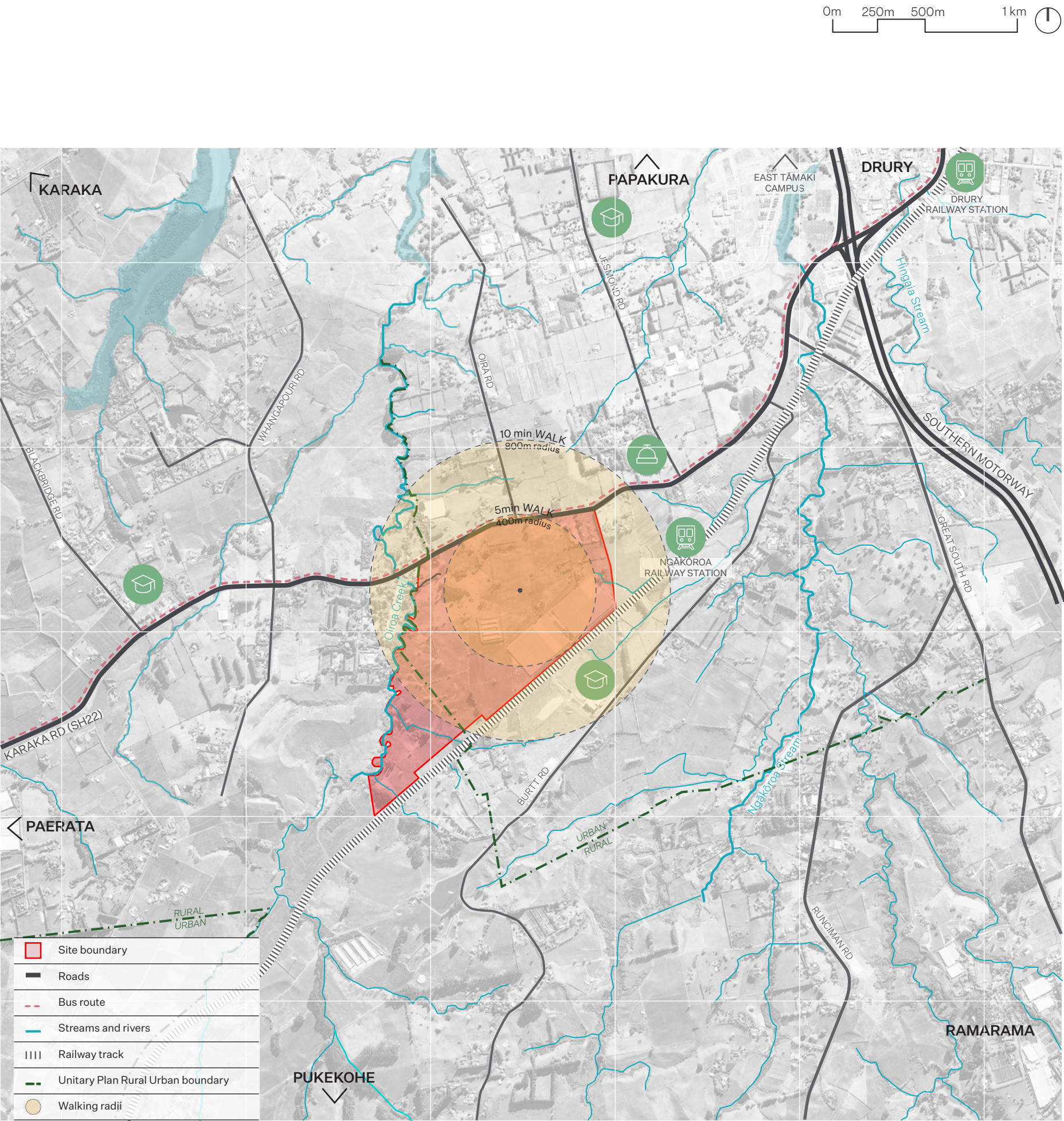
Amenities

There are a few amenities located in the surrounding area:

- Daycare, preschool and school are on Blackridge Road and newly built St Ignatius of Loyola Catholic College is south of the railway tracks.
- The Ministry of Education is also planning to construct a new secondary school north of the site along Jesmond Road.
- Land approximately 0.8km east of the site is zoned for a new Town Centre to serve the emerging residential neighbourhood of Auranga.
- Wider range of amenities are in Drury, approx. 4km distance. Drury Metro Centre currently under development (mixed-use development including residential, commercial, large format retail, food & beverage etc).

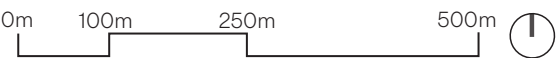
Transport

- The site has good access to the strategic road network with direct connections onto SH22 / Karaka Road. This provides connections to Pukekohe and Waiuku to the south and west, and the interchange with the Southern Motorway to the east.
- The site will be in walking distance to the future Ngākōroa railway station. Direct access to this station will be dependent on neighbouring land to the east being developed.
- There is an existing bus route via Karaka Road with bus stops currently in Drury and Paerātā. As neighbouring land continues to be urbanised, new or enhanced bus routes with increased frequency and destinations will likely be delivered by Auckland Transport.



1.5 Site Context

Existing site features and opportunities



Existing site features include:

- Several existing dwellings across the site.
- Structures consistent with the site's rural production uses including large greenhouses and chicken coups.
- Distribution centre with surrounding infrastructure, directly accessible from the Karaka Road.
- Formed road off the Karaka Road to greenhouses.
- Several farm races providing access across the site.
- Three vehicle access points onto SH22 / Karaka Road.

Existing natural features include:

- Oiroa Creek with tributary streams and surrounding vegetation which includes a mix of exotic and native species.
- Trees and small stream by the eastern boundary.

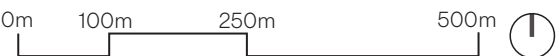
Opportunities:

- Enhancement of existing natural features.
- Creating an entry point in the eastern part of the site in convenient proximity to the railway station, with route running along the stream and through the vegetated area.
- Allowing existing distribution centre and potentially existing glasshouses to operate on the site under a land lease condition providing revenue for F&P, until further Masterplan phasing.
- Utilising existing formed road as a circulation route in the first years.
- Preserving an existing dwelling building to repurpose it as a non-core business space eg. wellness, educational space, prayer room.

	Site
	Existing Vegetation / Streams / Ponds / Wetlands - indicative area
	Existing Industrial Structures
	Existing Distribution Centre
	Existing Dwellings
	Formed roading



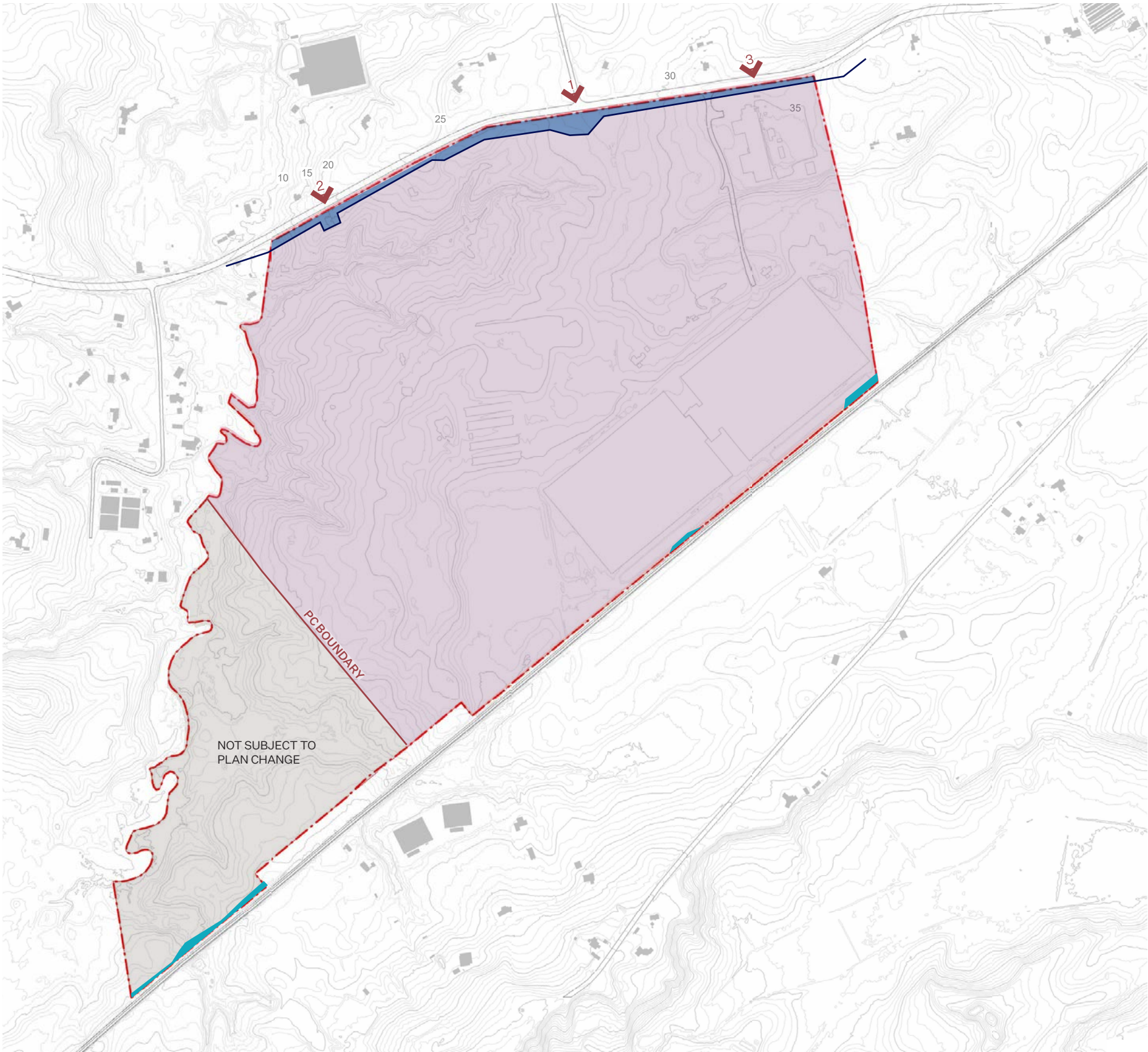
1.6 Planning Context Summary



This diagram represents planning changes and constraints proposed on site as a part of the Plan Change application.

- Zone change in Unitary Plan to Business-Light Industry
- Three access points to the site off the Karaka Road
- Designation 6707 - SH22 road widening that extends into the side along the northern boundary
- Draft Designation - potential widening of the rail corridor

Note: Refer to the Appendix B. for more detailed analysis on planning context.



	Site
	Business-Light Industry Zone
	Designation - SH22 road widening
	Designation - Rail corridor widening
	Access Network



Guiding Principles

Karaka Campus Vision

Continuous Improvement (evolution not revolution) | Te Hononga

The Karaka ‘Ecosystem’ will enable the beneficial interaction of the site, buildings, infrastructure and people to facilitate knowledge sharing, collaboration, delivery, business sustainability and connection.



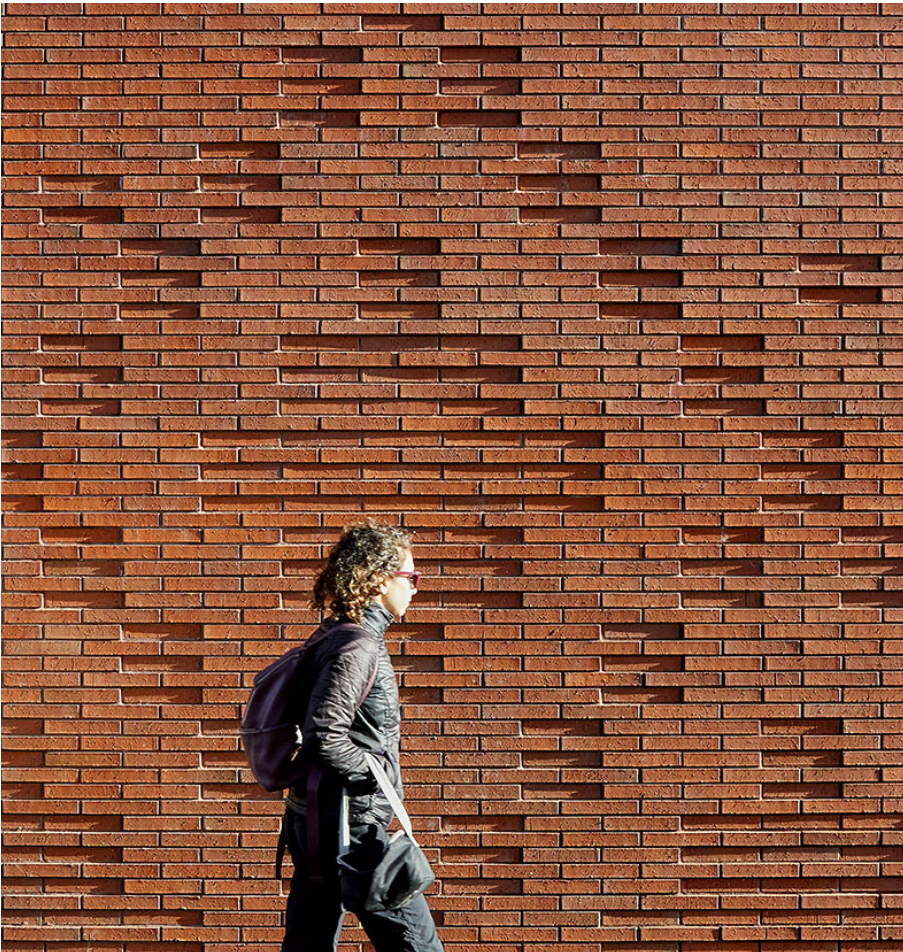
Guiding Principles | Ngā Mātāpono

The guiding principles framework is intended to support the Masterplan as the strategic document guiding the development of the Karaka Campus.



Partnership and exchange

The campus will bring people together and strengthen connections internally and externally. The experience for campus users and visitors will be frictionless and support face-to-face interaction. The environment will support tikanga Māori practices of welcoming and exchange.



Celebrating identity

The Masterplan will seek to acknowledge and integrate Māori design values and principles. The Masterplan will be developed in partnership with mana whenua to ensure the land is developed in a way that aligns with mātauranga Māori values while retaining the DNA of the East Tāmaki campus.



Economically sustainable

The campus environment will allow Fisher & Paykel Healthcare to get closer to patients and their needs. The investment in infrastructure will be linked to return on investment and the target to double revenue every 6-7 years. The site will be optimised for strong business operational sustainability and incorporate careful consideration of the movement of people and goods.





Connection and collaboration

The campus will be designed for the people who use it. The environment will build on the principles established at the East Tāmaki site of workplace environment which is non-hierarchical, collaborative and connected to nature. The landscape environment and connectivity between buildings will function therapeutically and support the reduction in cognitive fatigue.



Inspiring people

The Karaka campus will be seen as a highly desirable place to work for talented people who want to realise their full potential. The Masterplan will integrate consideration for campus identity and employee wellbeing and represent an evolution of the employee experience present at the East Tāmaki campus. It will seek to remove barriers to interaction, support equity and diversity and support all F&P employees build a sense of social connection while reducing life admin.



Environmentally positive

The Masterplan will create a lasting positive impact on society and the environment. The campus environment will be developed in harmony with the natural features and constraints of the site to deliver regenerative and nature positive outcomes. The project will prioritise the use of low carbon technologies to deliver a carbon positive net impact. The campus will support a ‘multispecies’ approach which recognises the health and wellbeing of all living things.





Resilient futures

Karaka will be a campus which supports resilience in energy, water and access and adaptability to climate change. We are blessed with many things in New Zealand however there will continue to remain a fragility in our infrastructure due to our vulnerability to seismic events and the impacts of climate change. The Karaka campus will reduce its dependence on supplied utilities to both control costs and manage risks. Additionally, the campus will promote resilience in transport and access through supporting and encouraging mode shift in campus users.



Flexible and adaptable

The Masterplan will support flexibility and adaptability over the long-term. The Karaka campus will allow evolving business needs and future technologies to be integrated with minimal business disruption. The building, services and roading will be adaptable to expansion and change without the need for demolition before end of life.



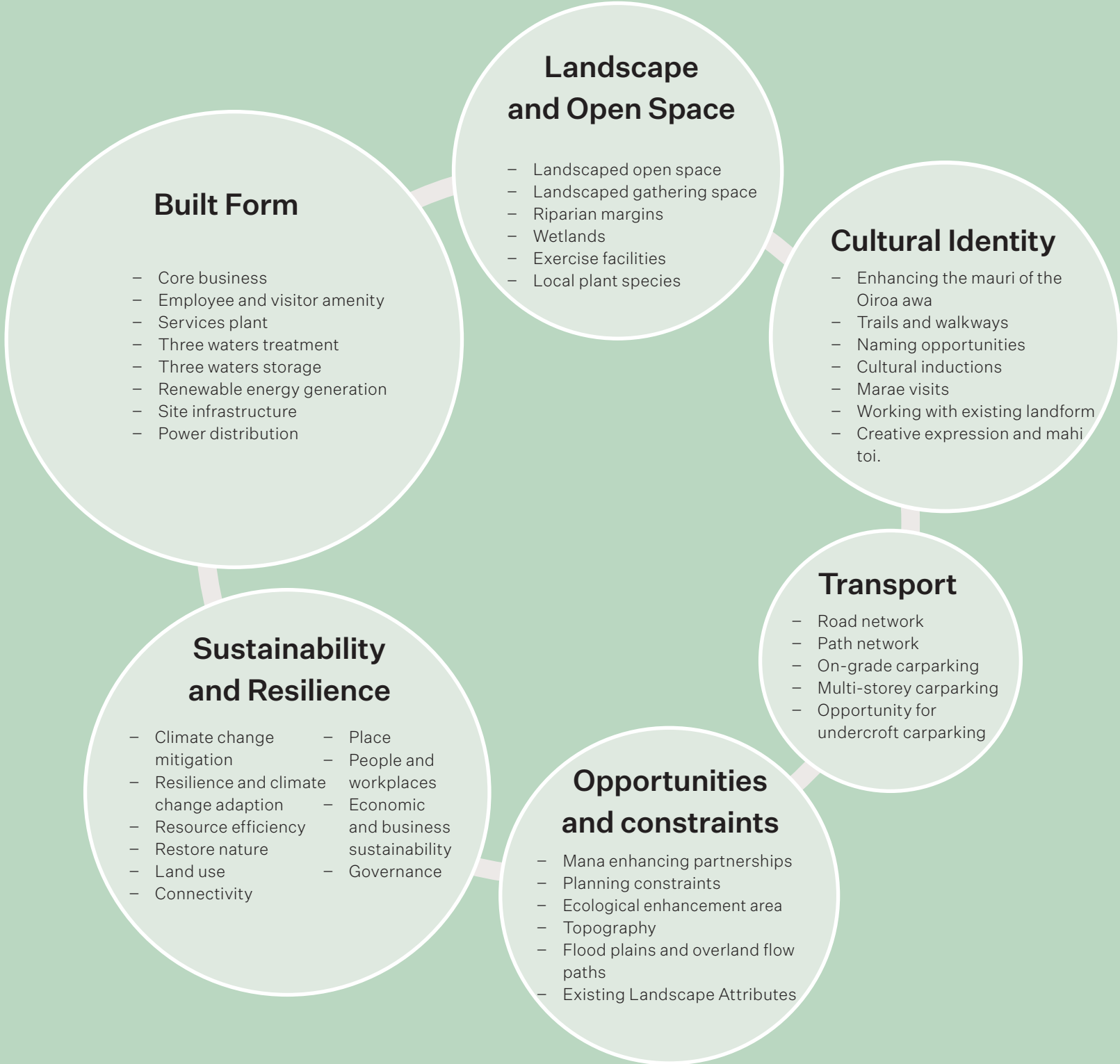
Staging logic

The Masterplan for the Karaka campus will set up a logical sequence for the development of infrastructure and buildings so that funding requirements are staged and invested in an optimal way that minimises the lag between investment and return. Urban Design, Sustainability and Civil engineering will integrate to ensure that underground service and roading are closely coordinated with the development of buildings to enhance the user experience of the campus.



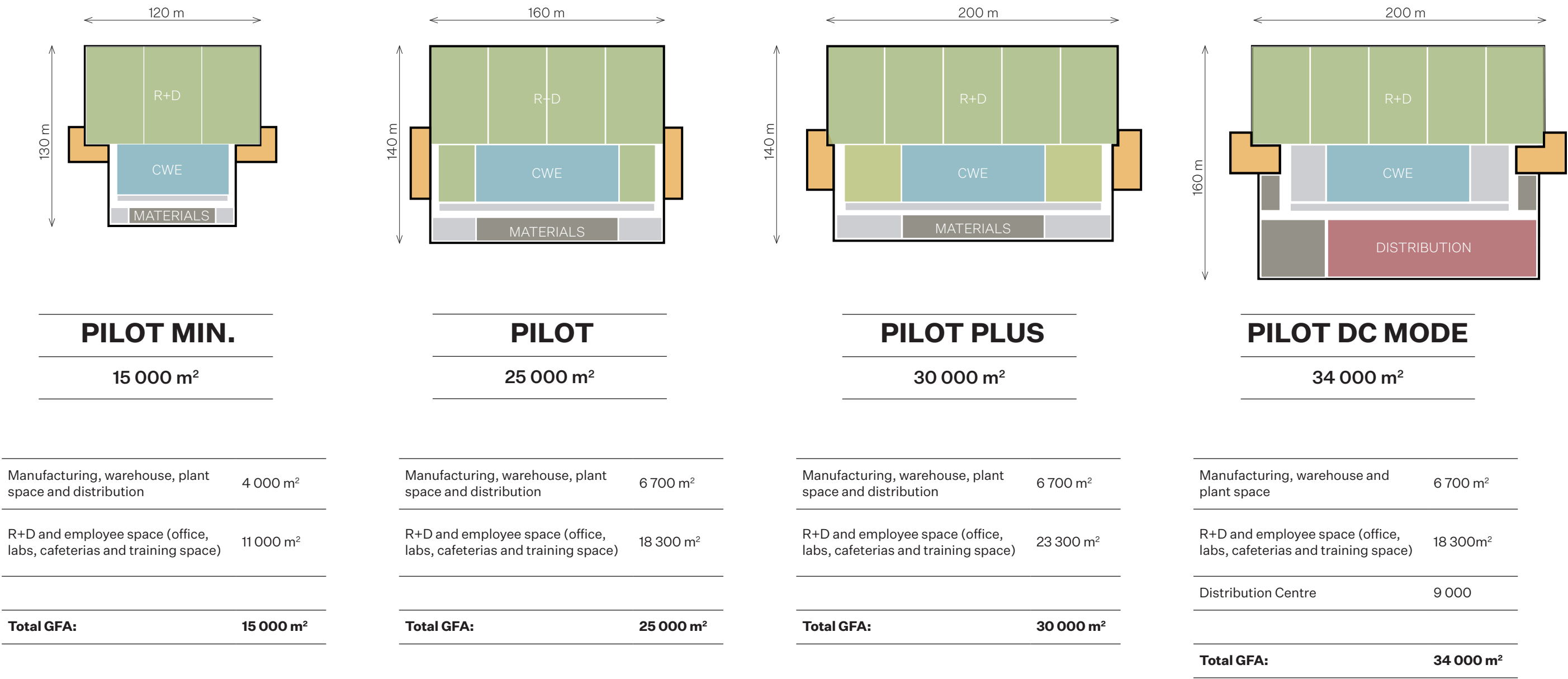
Components of the Masterplan

3.1 Parameter Definition



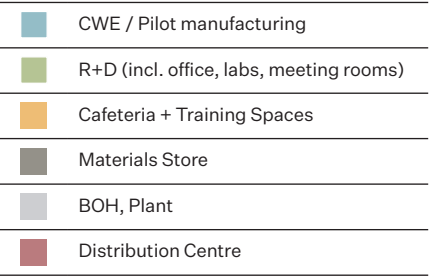
3.2 Optimal Pilot Buildings

The proposed plans for pilot buildings are derived from the typology of pilot manufacturing buildings at the East Tāmaki Campus. They maintain the optimal arrangement and proportions of controlled working environment and R&D spaces to ensure efficient performance, while also providing flexibility in building size to meet the objectives of this Masterplan.



Building types, layouts and sizes are indicative only and likely to change depending on business requirements at time of design. These models build in the following assumptions about massing:

- There is opportunity for undercroft carparking located below R+D space dependent on site layout and topography.
- Cafeteria and training spaces are able to be split over two levels. These building components act as links between buildings, and can address level changes.



The Masterplan

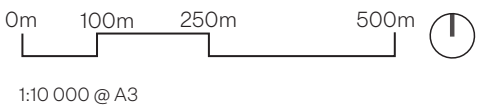
4.1 Introduction

The Karaka Campus Masterplan identifies buildings, core utilities, roading and transport infrastructure, three waters and landscape elements. All of these come together to create an environment that will inspire good people to develop innovative solutions that improve patient care and outcomes and delivers sustainable and profitable growth.

The core function of this Masterplan is two fold:

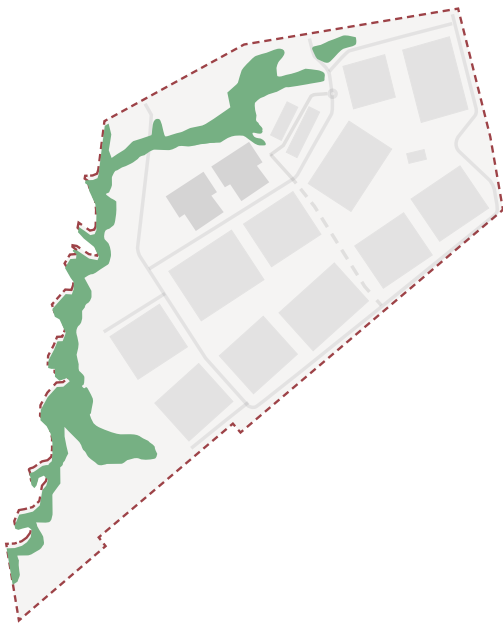
- 1. Providing a blueprint to inform infrastructure development to meet F&P’s short, medium and long-term infrastructure requirements
- 2.Supporting F&P’s private plan change process

The guiding principles developed for the Masterplan helped inform some key moves in the development of a spatial strategy to support this core function which are explained in the following pages.



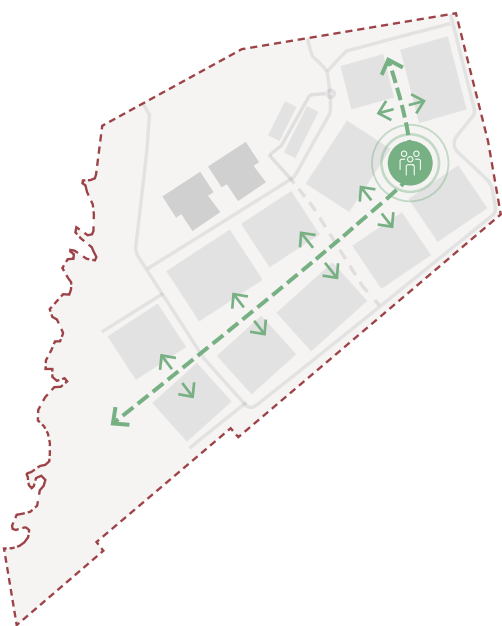
4.2 Key Moves | Whakamahere Matua

Below are the site spatial organising ideas which have informed the layout of buildings, roads, services, paths, open spaces, and blue and green infrastructure which form the components of the Masterplan.



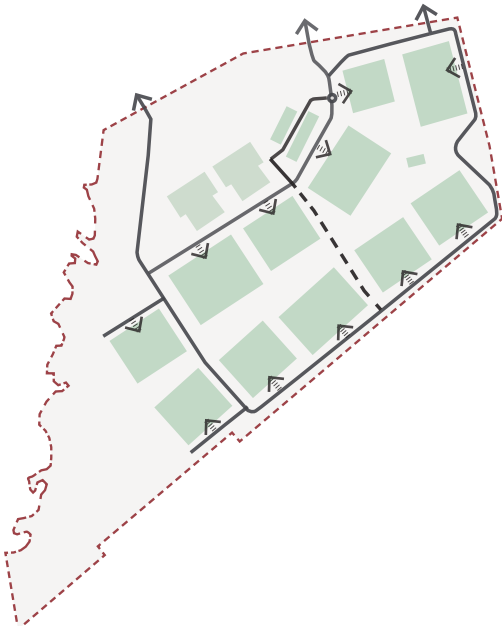
A Landscape edge

Planting, landscaping and ecological restoration within the site along Oiroa creek to provide passive recreational opportunities, ecological benefits, and a natural buffer between urban and rural zones.



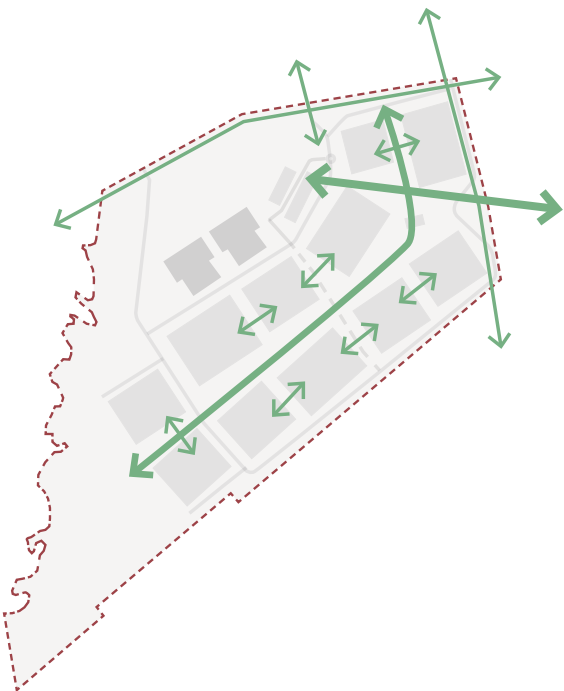
People at the heart

The creation of a sense of arrival for employees and visitors through a welcoming landscaped open space, and the separation of people movements from vehicle movements supporting a safer, easier non-vehicular connections between buildings.



A sitewide campus infrastructure

An infrastructure network which is planned at the outset to be flexible, adaptable and support a long-term site wide development. Shuttle service around the campus and connecting to Ngākōroa railway station could be considered.

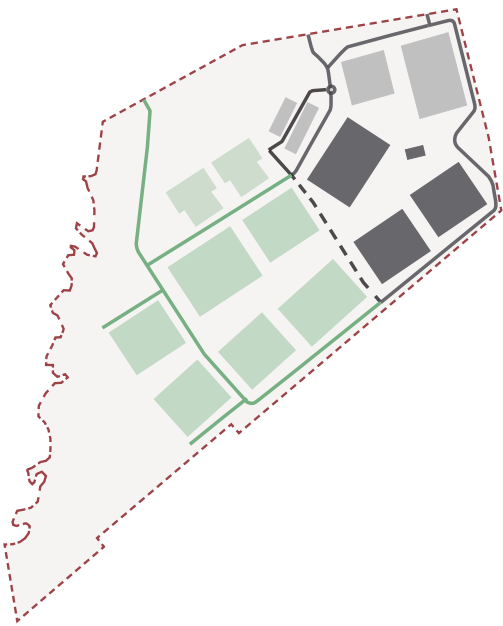


Active mode connections

Connect the campus with public transport and local amenities. Support north/ south activity linking neighbouring residential areas with surrounding amenities on either side of the rail corridor.



4.2 Key Moves



Adaptive

Future flexibility allowed for in the Masterplan. Space to support staging and adaption of the built infrastructure to manage future uncertainty (demand/usage/climate etc).



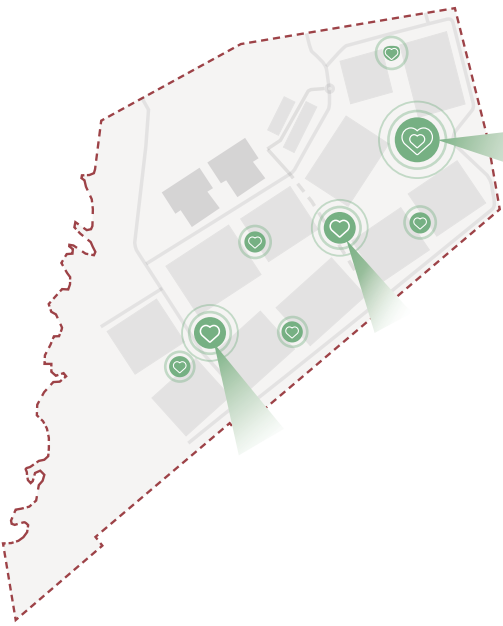
Environmental care

Measurable campus sustainability standard/targets. A ‘care for water’ approach which supports both resiliency and environmental health. An approach to support improved biodiversity on the campus.



Partnership approach

Space for opportunities to enhance research outcomes through partnerships with healthcare providers, research institutions, the local community and mana whenua. Deliver greater amenity for employees through partnership with other businesses (eg: childcare, fitness, short and long-term accommodation options).



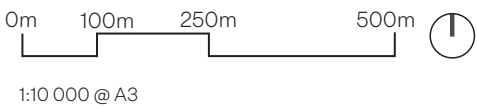
Campus heart

Not a singular building but rather a concentration of spaces that can serve as a focal point of connection and exchange. The campus heart will include a diversity of spaces that can support the needs of employees and visitors and evolve over time. The campus heart will consider sightlines and views to landscape features beyond the site boundary.





4.3 Landscape + Open Space Framework



Landscape

Landscape strategies for the Masterplan seek to establish a framework of regenerated vegetation that supports habitat connectivity and establishes a secure environment around the core of the campus. The landscape will provide shelter and amenity for employees and visitors to the site, and support wellbeing through establishing strong connections with nature. Planting will support the resilience of the campus through native species with little to no low maintenance or additional irrigation requirements.

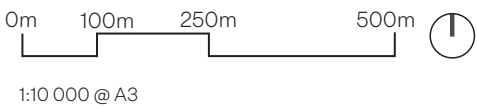
Open Space Amenities

A simple circulation network provides access within the site, connecting buildings and destinations with landscape. It will be anchored at key intersections or ‘meeting places’ by a range of local spaces that offer amenity and activity opportunities as part of the everyday site experience.

	Landscape Connections
	Active Modes Routes / Shared Paths
	Amenity Pathway + Primary Amenity Nodes
	Secondary Amenity Nodes
	Stream Trails
	Boardwalks/Stream Trail Amenity Node
	Pick Up / Drop Off Opportunity



4.4 Road Network Framework



Resilient Futures

The proposed internal private road network is planned as an outer loop, providing easy service access and separates high vehicle movements from a non-vehicular network. It supports resilience in transport and access through promoting mode shift in campus users.

Multi-storey carparking provides 0.4 ratio of carparks for campus users. Their central location in relation to the campus buildings and proximity to primary site access points allows for efficient traffic flow.

	Primary site access points
	Secondary site access points
	General traffic (car, HGV, walk, cycle)
	Heavy Goods Vehicle / Service Access
	Vehicle circulation / access
	Proposed multi-storey carparking



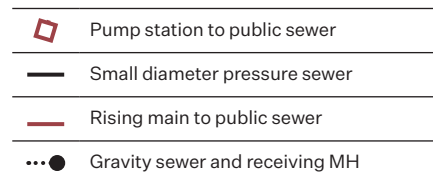
4.5.1 Wastewater

4.5.1 Wastewater

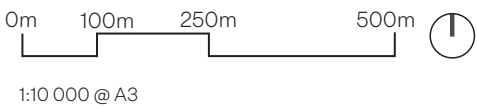
The indicative wastewater system includes:

- Small diameter low pressure sewer network running under the main loop road to the pump station located near the main entry to the site.
- Pump station and receiving man hole managed in conjunction with rain garden design in this area.
- Pump station located up gradient from rain garden to manage risk of overflows.

In the short-term, an alternative, self sufficient option can be considered, with on-site treatment and land disposal.



4.5 Three Waters Framework
4.5.2 Stormwater



The indicative stormwater system includes:

- Rain gardens located centrally to treat runoff from the core of the development.
- Wetland enhancement and wetlands for treatment near existing gully systems.
- Swales / Bioretention swales for treating road runoff.
- New culverts provided with new road development to cross over existing gullies.
- Roof runoff collected and reused on site (for potable and non-potable use)
- Overland flowpaths distributed across the site where possible to manage flow from large rainfall events.

Wetland enhancement area

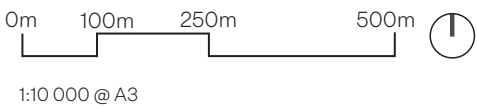
Rain gardens integrated with landscape design

	Rain garden
	Wetland
	Pond
	Overland flow path



4.5 Three Waters Framework

4.5.3 Potable water



The indicative potable water system includes:

- High quality raw water collection - To capture roof water and direct it to local storage and a centralised storage and treatment system for potable use. This could be augmented by bore water during dry periods.
- Low quality raw water collection - To capture roof water, store locally and treat for grey water reuse within each building.
- Potable water treatment system, treated water storage and distribution network - To treat and distribute water to buildings.
- Fire network, pumps and storage - A separate fire water network.

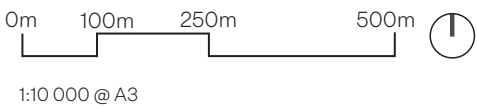
Long-term, a secondary source of water will be required to supplement the primary roof water source and water storages during extended dry periods.

High quality treated water distribution with centrally located raw water storage, potable water treatment and potable water storage

	Treated water distribution
	Treated water storage tank
	Untreated water distribution
	Untreated water storage
	Fire main network and storage tank



4.6 Mana whenua - cultural identity opportunities



Celebrating Identity

- Enhance the mauri (life force) of the Oiroa awa
- Preserve existing trees to provide shade for the streams
- Create trails and walkways throughout the development
- Support traditional naming opportunities (buildings, roads, internal spaces, natural features in the landscape)
- Provide cultural inductions and education initiatives for employees and management (including new employees)
- Cultural exchanges to develop and strengthen lasting relationships supporting ongoing mana whenua inputs into the continued evolution of the campus.
- Work with existing land form to support views to wider landscape features.

	Trails, walkways and cultural expression opportunities
	Views to surrounding landscape
	Preserving existing environments
	Enhancing the Oiroa awa



Landscape and Open Space



5.0 LANDSCAPE MASTERPLAN

(A)	Regenerated stream environment
(B)	Vegetation & habitat connections
(C)	Indicative stormwater attenuation
(D)	Rain gardens
(E)	Overland flow connections
(F)	Activity nodes
(G)	Amenity hub
(H)	Active modes connections
(I)	Stream trails
(J)	Stream trail amenity node
(K)	Ponds



5.1 INDICATIVE CIRCULATION STRATEGY

Circulation is organised to provide for a separation of vehicle and active modes circulation. Vehicle movement occurs via a simple perimeter loop of internal private roads with 3 points of connection to Karaka Road and providing direct access to the buildings across. Active mode access and circulation is provided via an internally located spine and cross routes that connect buildings with each other, the amenity offering of the stream and to key points of arrival to the site.



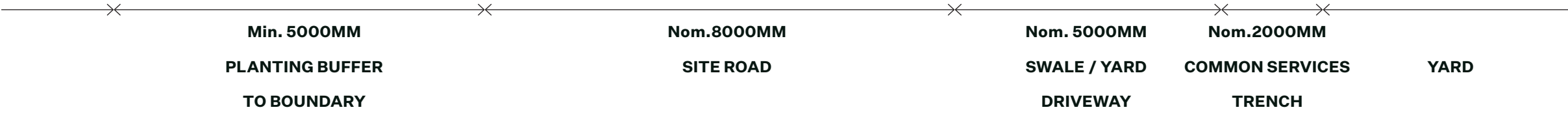
5.2 CIRCULATION

Indicative Cross-Section of Internal Private Road
Typical 01



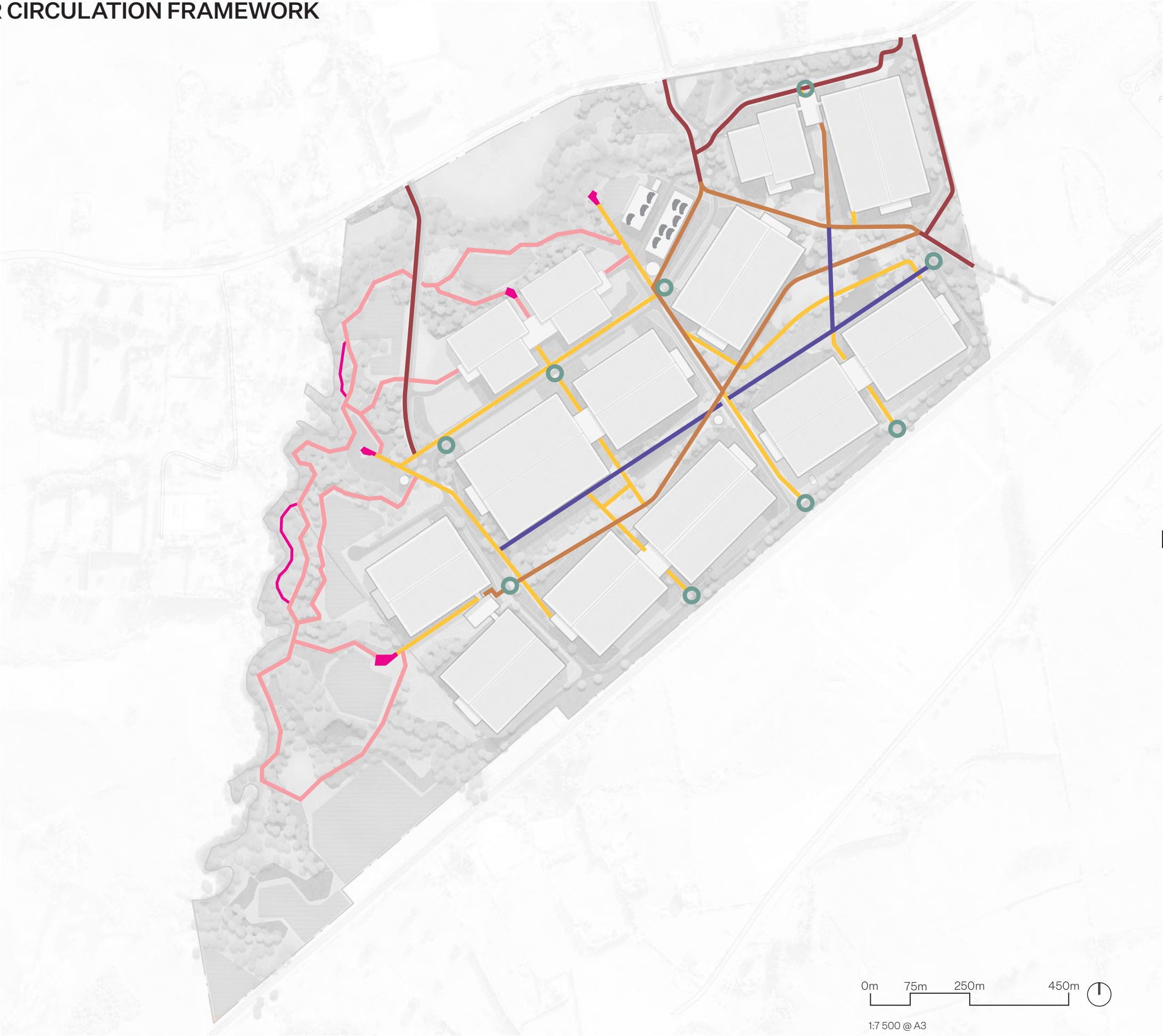
5.2 CIRCULATION

Indicative Cross-Section of Internal Private Road
Typical 02



5.3 INDICATIVE NON-VEHICULAR CIRCULATION FRAMEWORK

	Site access routes
	Primary active modes routes / shared paths
	Secondary active modes routes / shared paths
	Amenity pathway
	Stream trails
	Boardwalks/stream trail amenity node
	Pick-up / drop off opportunity





One studio
7 locations
350+ people
49 principals
65 years
1000+ awards

Auckland
Tauranga
Wellington
Christchurch
Queenstown
Sydney
Melbourne

Registered Architects and Designers
www.warrenandmahoney.com
Toitūcarbonzero CERT TM certified architects

 **WARREN AND MAHONEY®**