

# HENDERSON - MASSEY Connections Plan

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August 2019



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Sandringham Local Street Auckland Council Stock Photo, 2012.

# Executive Summary

## Overview of the Connections Plan

The Henderson-Massey Connections Plan is a response to aspirations set by the Henderson-Massey Local Board Plan and the more detailed objective from within the Henderson-Massey Local Board Open Space Network Plan 2015 - 2025 to 'create a well connected trails and Greenways Plan'.

The Connections Plan presents a vision of a complete network of shared paths connecting town centres, schools, public facilities, recreation areas and public transport hubs. It is a long-term plan with the aim of significantly improving walking, cycling and ecological connections within the urban environment in the Henderson-Massey Local Board area. It is envisaged that this will be implemented over time to achieve the vision, key objectives and outcomes prescribed by the Local Board.

The Connections Plan developed out of discussions surrounding what kind of path network would deliver effectual alternative transport/travel options for the Henderson-Massey area. For many years 'Greenways' has been the term used to describe the walking and cycling network planned for the Auckland region. Henderson-Massey is fortunate to have a considerable number of greenways already in existence, which have successfully provided great recreational connections throughout the local board area. However, it was recognised that the kind of cycle/pedestrian path network needed to create a connected Auckland, would require more variety than what the definition of greenways prescribed.

The Connections Plan is based on the Local Paths Design Guide developed for Auckland Transport and Auckland Council. It describes a set of local path types which use a combination of design treatments to 'provide priority to people riding bikes and improve the conditions for walking'. The Connections Plan is designed to provide active transport options, appealing especially to those in the community that may not be comfortable cycling or walking on streets where cars are prioritised.

The four path types serve different functions and different user experiences in combination with varying landscape characters. From fast paced express paths for direct commuter cycling, to local paths -on streets for quiet neighbourhood connections, to local paths -open spaces for recreation and links through the parks network, and finally, to the more informal nature trails used purely for recreation which can sometimes include bridle paths.

## The Process for developing the Henderson-Massey Connections Plan

The process of creating the Connections Plan involved internal and external research, consultation and engagement with Mana Whenua, key stakeholders and the wider public. This was done through a variety of workshops, hui, public open days and correspondence. Analysis of the feedback received through this process laid the foundations of the connections plan. Existing, proposed and aspirational paths were identified from engagement feedback as well as from other relevant documents, such as The Open Space Network Plan, were applied to a map of the local board area.

Once the path network was applied to the map patterns of connections and links could be identified and decisions surrounding the type of path appropriate to the setting could be made. In some cases, paths that already exist are identified as proposed or aspirational. This occurs in locations where the existing path is not deemed to be fit for purpose/not providing an adequate level of service envisaged for the Connections Plan. For example Te Wai-o-Pareira / Henderson Creek Path does not currently meet the key attributes of a shared path, and also requires improvements to meet the local path principles of safety, connection, accessibility, comfort - therefore is identified on the Connections Plan map as proposed/aspirational.

In order to help, enable and facilitate the next stages of the path network the Henderson-Massey Local Board has been organised into seven focus areas to clearly identify, evaluate and prioritise 'key routes' and 'key connections' for each area. Constraints and opportunities have been outlined at a high level to help frame the key phases necessary to take next steps.

## The seven focus areas are:

- 1\_ Massey and Westgate
- 2\_ West Harbour and Royal Heights
- 3\_ Te Atatū Peninsula
- 4\_ Birdwood, Rānui, Sturges, Western Heights and Sunnyvale (west)
- 5\_ Lincoln
- 6\_ Te Atatū South, Glendene and Sunnyvale (east)
- 7\_ Henderson

Key routes are identified as primary routes supplying express connections in and between the focus area. Key connections provide the finer grain links between local destinations.

## Next steps

Next steps outlines the core phases necessary to implement the Connections Plan. The next steps involves:

- Consideration of best practice guidelines including consideration of the design principles of the Local Path Design Guide which sets a framework for paths to be safe, connected, accessible, comfortable and enabling. These principles are intended to work with the key objectives and values of the Te Aranga Design Principles to develop a more fine grained means of expressing cultural landscapes and enhance our collective appreciation of 'sense of place'.
- Ongoing community engagement, stakeholder collaboration and partnerships with key council departments and community organisations. Sourcing and allocation of funding. Funding has been allocated for road improvements in the Local Board areas in Auckland Council's Long Term Plan (LTP) for the next 10 years, and some of this funding could be used to implement the Connections Plan. Other funding avenues include Auckland Transport and the NZTA's regional cycleways fund.
- An investigation phase to test the feasibility and viability of a key route and/or key connection. The investigation phase will identify and confirm neighbourhood destinations, key routes and connections; collect and analyse base data; identify and prioritise paths; identify key design requirements and outline a rough order of costs.
- A design phase to develop, refine and confirm the alignment and design requirements developed through the investigation phase.
- The delivery phase including the procurement of a contractor to build the proposed project and resolve any issues that may have emerged through construction before practical completion.
- The ongoing management and maintenance of the path, needs to be established during the design phase and confirmed by the time the construction of the project is complete. Responsibility for ongoing maintenance and costs need to be agreed with the part of Auckland Council or Auckland Transport responsible for the path type. The choices surrounding durability of surfaces, furnishings and landscape features, maintenance requirements of plants and the provision of emergency vehicle access into path design are detail elements that require foresight and attention in order to successfully deliver each local path project and future proof the effective continuation of the Connections Plan.

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# Part One

## Overview

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## 1.1 Purpose of the document

The purpose of this document is to provide a comprehensive framework of prospective walking and cycling networks within the Henderson-Massey Local Board area. The key to delivering an effective network is to provide walking and cycling paths that create connectivity in a safe and serviceable way.

Identifying potential links between local centres, open spaces, public transport hubs, educational facilities, libraries and local neighbourhoods that can be practically accessed by pedestrians and cyclists provides opportunities for people to re-evaluate transport choices and reduce private vehicle use for local trips. Equally important to reducing stress on the transport system is that increased physical movement promotes wider health benefits for the community and additional scope to strengthen the surrounding ecological environments.

The Connections Plan investigates opportunities and constraints surrounding the serviceability of the existing shared path network and redresses gaps in the network which have constricted interconnected safe movement between neighbourhoods.

This document addresses many of the aspirational outcomes outlined in the Henderson-Massey Local Board Open Space Network Plan 2015 - 2025, in particular "Creating a connected trail and Greenways Plan".

This is a visionary document intended to guide elected members, council officers, community groups, private developers and other interested parties. The Henderson-Massey Connections Plan outlines long-term opportunities for the local board area, with a set of focus areas that identify key route and path connections, and a next steps strategy to help guide implementation over the coming years.

## 1.2 Strategic fit

### Links to the Auckland Plan 2050

The Auckland Plan 2050 was adopted in June 2018, replacing the Auckland Plan 2012.

The Auckland Plan 2050 is a streamlined spatial plan presenting a simple structure with clear links between outcomes, directions and measures. It shows how Auckland is expected to grow and change during the next 30 years.

Six visionary outcomes set Auckland's strategy to 2050. Each outcome is accompanied with directions and areas of focus. Four outcomes have a direct relationship to the development of this Connection Plans.

#### Outcome: Belonging and Participation

*All Aucklanders will be part of and contribute to society, access opportunities, and have the chance to develop to their full potential.*

#### Outcome: Homes and Places

*Aucklanders live in secure, healthy, and affordable homes, and have access to a range of inclusive public places. Connecting areas and residents to each other and to the public amenities they value.*

#### Outcome: Transport and Access

*For Auckland to be a truly accessible city there is a need to make sure that people of all ages and abilities, including people with reduced mobility levels, can go about their daily lives and get from one place to another easily, affordably and safely. A well-connected society enables access to community resources, and provides for positive experiences and better life outcomes.*

*Direction 1: Better connect people, places, goods and services.*

*Direction 2: Increase genuine travel choices for a healthy, vibrant and equitable Auckland.*

*Direction 3: Maximise safety and environmental protection  
A key focus area is to make walking, cycling and public transport preferred choices for many more Aucklanders*

#### Outcome: Environment and Cultural Heritage

Aucklanders preserve, protect and care for the natural environment as our shared cultural heritage, for its intrinsic value and for the benefit of present and future generations.

### Links to other initiatives

In developing this Connections plan, a number of related Council and non-Council initiatives have been investigated and - where possible - included in the network:

- Auckland Unitary Plan
- The Henderson - Massey Local Board Plan 2017
- Henderson - Massey Open Space Network Plan 2015-2025
- The Auckland Plan 2050
- Local Path Design Guide
- Te Aranga Design Principles
- Unlock Henderson - Panuku Development
- Te Atatū South Town Centre Plan
- Parks Sports and Recreation Action Plans
- The Auckland Cycleway Network (ACN), prepared by Auckland Transport
- Auckland Transport projects
- Initiatives currently underway or proposed by community and ecological restoration groups i.e Project Twin Streams
- Te Whau Pathway project
- NZTA Projects

# 1.3 Henderson-Massey Local Board Area

## Auckland Context

This map below shows Henderson-Massey Local Board area in its wider context within the Auckland Isthmus. Located between the foothills of the Waitākere Ranges to the west and the Waitematā Harbour to the east. The area has two metropolitan centres located at Henderson and Westgate and includes the suburbs of West Harbour, Royal Heights, Massey, Rānui, Glendene, Lincoln, Henderson Heights, Sunnyvale, Te Atatū Peninsula and Te Atatū South. The Henderson-Massey covers an area of 53km<sup>2</sup>.

## Site Location



## Henderson-Massey

The adjacent aerial photograph shows the broad landscape patterns of the Henderson-Massey Local Board area within its surrounding context.

The Oratia and Opanuku streams and their tributaries wind their way from the ranges to the sea through this area. The Motu Manawa Marine Reserve to the east of Te Atatū is home to ecologically important saltmarshes and the endangered railbird. State Highway 16 (SH16) traverses the north eastern section of the area, dividing Te Atatū South from Te Atatū Peninsula and Massey. From Royal Heights the Western Rail line traverses the south western section of the area through the main transport hubs of New Lynn and Henderson.

The area is bounded:

- To the north-east, by predominantly residential land sloping down towards the east coast of the Waitematā Harbour;
- To the south-east, by the Whau River estuary;
- To the south-west, by pastoral foothills of the Waitākere Ranges;
- To the north-west, by pastoral land, currently experiencing recent residential subdivision and future urban zoned areas (Redhills).

The mixed land use types of Henderson-Massey Local Board area can be clearly seen in this aerial photograph - featuring swathes of residential land, vegetated areas, countryside living, and pockets of industrial land.

**Residential land**\_ Large areas of residential land exist throughout Henderson-Massey. These areas are predominantly situated between SH16 and the Western Rail Line.

**Vegetation**\_ Significant areas of vegetation exist within Henderson-Massey Local Board area, many border the streams within the area and the coastal edge of the Whau River and the Waitematā Harbour. Streams can act as barriers to movement between communities however the esplanade and riparian reserves are also able to provide green linkage corridors.

**Countryside living**\_ Countryside living largely exists in the north-western portion of local board area, to the north west of Massey West.

**Industrial land**\_ Industrial land is generally located adjacent to SH16 and the Western Rail Line, including a large area extending through Te Atatū South. The motorway and rail corridor creates a physical barrier to pedestrian movement. However, recent and planned developments along the motorway corridor have created greater connectivity along the corridor.

## Henderson-Massey Local Board Aspirations

The 2017 Henderson-Massey Local Board Plan outlines the priorities of focus over the next three years. Developed with the community the plan seeks to help create a more equitable and thriving Henderson-Massey area.

Directly relevant to this connections plan, the Local Board Chair outlines the boards commitment to make it easier to get around without a car.

*“Our residents demand access to proper transport options, and we are committed to prioritising walking, cycling and public transport. Our future must be one where our children can cycle to school safely. We will work to close the gaps in our cycle and public transport network, particularly in Te Atatū, Massey and the northwest”*

The Henderson Massey Local Board Plan comprises aspirational outcomes and objectives to achieve a better community for all.

The following outcomes and objectives are supported by this Connections Plan:

**Outcome 1: A network of vibrant and loved urban neighbourhoods**  
*“Our town and neighbourhood centres are the thriving hearts of our community”.*

**Outcome 2: A thriving local economy that supports quality of life**  
*“We want to bring vitality and economic opportunity back to our town centres”*

**Outcome 3: Communities know each other and work together on common interests**  
*“We have thriving communities that are connected, healthy, resilient and inclusive”.*

**Outcome 4: Community facilities are vibrant and welcoming places at the heart of our communities**  
*“These facilities provide spaces where people can connect, socialise, learn and participate in social, cultural, art and recreational activities”*

**Outcome 5: It is easy to get around without a car**  
*“People have smart, active public transport options across west Auckland and beyond”.*

**Outcome 6: Natural spaces are valued and restored**  
*“Our waterways, biodiversity and indigenous flora and fauna are protected, and we work to reduce waste”.*

Henderson-Massey is fortunate to have existing shared path network alongside streams, through parks and some outstanding nature trails.



State Highway 16  
Towards Kaipara Coast Highway

State Highway 18  
Towards Auckland North Shore



Scale: 1:40,000 @ A3

WHENUAPAI

WESTGATE

WEST HARBOUR

Te Wai o Pareira / Henderson Creek

Waitematā Harbour

ROYAL HEIGHTS

MASSEY

TE ATATŪ PENINSULA

BIRDWOOD

LINCOLN

Towards Waitakere Ranges  
Regional Park

SWANSON

RĀNUI

TE ATATŪ SOUTH

State Highway 16  
Towards Auckland CBD

STURGES

HENDERSON

Whau River

WESTERN HEIGHTS

GLENDENE

SUNNYVALE

KELSTON

NEW LYNN

**KEY**

- Local Board Boundary
- State Highway
- Urban Route
- Train Line

## 1.4 What is a 'Connections Plan'

A connections plan is a blueprint document to guide the creation of a network of walking and shared cycling paths that safely connect people to key destinations such as public transport, schools, local shops, libraries, parks and reserves. Walking or cycling for short local trips instead of driving can reduce stress on the transportation network, support local businesses, provide wider health benefits, for people and the environment, and help create more connected communities.

The Henderson-Massey Connections Plan will connect Henderson-Massey to wider Auckland, by linking into regional transport networks, and neighbouring local board greenways/local path networks. Conveying the path network beyond the boundaries of Henderson-Massey is an essential part of building a connected Auckland.

The Connections Plan outlines key design principles, shows an overview of key design principles, engagement and consultation along with environmental benefits that will define the outcome. Additionally it identifies focus areas with potential connection path opportunities and associated strategic questions and further investigations that would be required to establish a next steps programme.

### Opportunities and Benefits of a Connections Plan

Connections plans provide opportunities for the local board and the community to engage with the social, cultural and environmental context of their local and wider neighbourhoods.

There are many benefits from developing a network of neighbourhood local paths, including:

#### Transport

Connections paths can be used to link schools, workplaces and communities with parks, shops, and public transport routes, reducing private vehicle congestion.

#### Recreation

Improving people's access to outdoor recreation and enjoyment close to their home.

#### Environmental

Creating cycle and walking networks within natural landscapes present opportunities to enhance and maintain the health of local waterways and bush environments, in addition to sharing Māori cultural and spiritual significance of these places. Sensitive and inclusive design principles applied to natural landscape corridors and open spaces enhance ecosystems, habitat sources and ecological niches and provide opportunities for communities to interact with their natural environments and understand kaitiakitanga.

Reducing our reliance on fossil fuels by providing attractive and safe alternative transport choices, improving water quality and reducing flooding events through water sensitive design (WSD) measures are important steps to improve environmental safety and wellbeing for future generations.

#### Social

Providing improved opportunities for people to get out of their cars and engage with safe, accessible and connected networks provide opportunities for street based initiatives to happen. Community projects/initiatives such as berm gardening, street parties, play streets, bike trains and walking school buses empower citizens to re-imagine their streets and create occasions to reclaim them as valuable open spaces that accommodate people of all ages and abilities.

#### Health

Providing improved opportunities for activity and fitness which benefits both physical and mental health.

#### Education

Providing opportunities to learn about the vegetation, wildlife, ecology, history and people of the landscapes that they pass through.

#### Economic

High-performing connections paths can create improved local employment opportunities as areas become more desirable for businesses and shoppers. Can also provide tourist destination/interest areas for international and national visitors.

#### Placemaking

Incorporating artwork such as murals / sculpture and information boards can infuse a local flavour into the network and serve the purpose of wayfinding signage, education and provide opportunity to exhibit a celebration of place.

## 1.5 Different types of path networks

The Connections Plan walking and cycle path network is comprised of four distinct paths types, each having a design treatment based on their proposed use and environmental context.

### Express Path

Forming the base structure of the path network, express paths are cross city connections that provide walking and cycling separated from vehicles, creating links to regional and local centres.

### Local Path - Street

An on-street Local Path has pedestrians accommodated on footpaths with streets that are safe enough to cycle on without the need for separated cycle lanes traffic calming tools, pavement markings and signage are used to improve safety for all street users.

### Local Path - Open Space

These local paths are off road and run through parks and open spaces accommodating both cyclists and pedestrians. Together with on-street local paths they are designed to create links to local centres parks, schools and transport links including express paths.

### Trail

Distinct from a Local Path, a trail is found alongside streams, coasts or in rural or bush settings and are primarily for recreation. Trails may connect to local paths - open space and can also allow for horse-riding alongside walking and cycling. Trails are not generally intended to form a connection between destinations, and often run in loops through and around open spaces.

## Connections Network





# Express Path

Creating connections within and between local board areas

## Key attributes

### Vehicle volumes

- Average daily transport 1500+.

### Vehicle speed(Km/h)

- 40-50+ km.

### Arterial Road Crossing

- Include pedestrian or signalised crossings.
- 50 - 100 per hour.

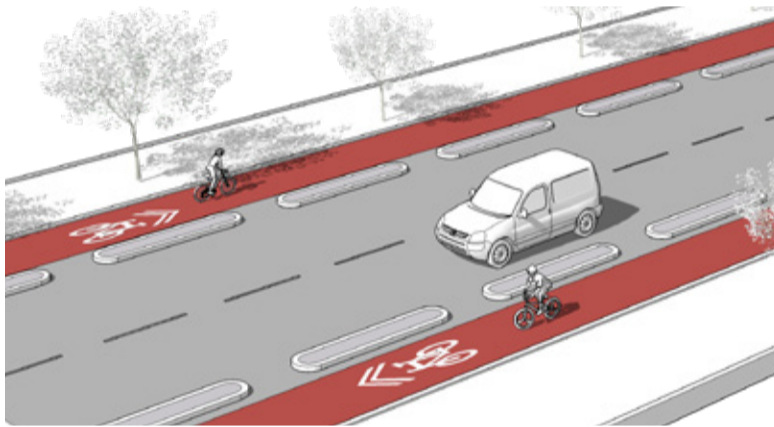
### Accessibility and Safety

- Ministry of justice 7 Qualities of Safe Spaces.
- 1m safety strip separating cyclists from vehicles and opening car doors.

### Off road paths

- Can be one-way or two way.
- Protected and separated from major road corridor by clear barriers, such as fencing, bollards or planting.

## Separated Cycleway with Road way (single direction)

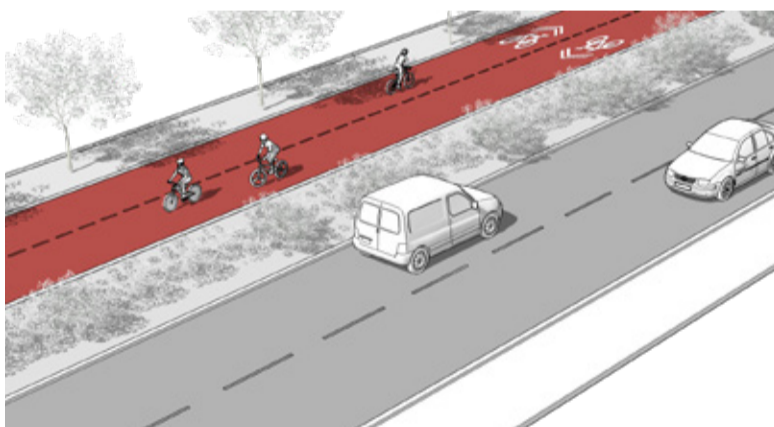


Illustrative example



Victoria St & Hardinge St, artist impression

## Separated Shared Path

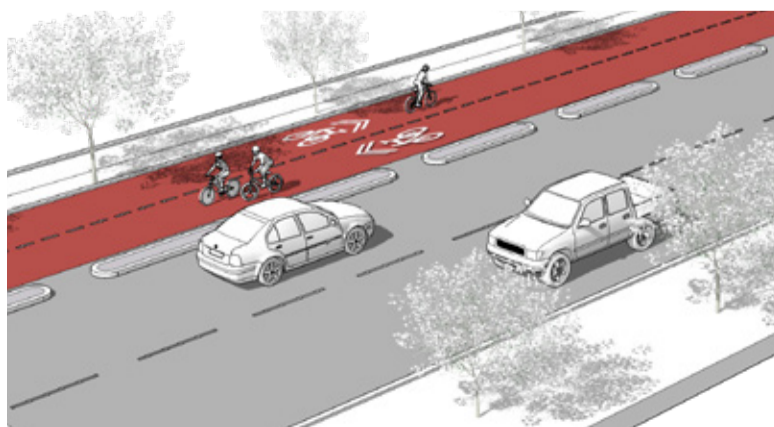


Illustrative example



Grafton Gully Cycleway

## Separated Cycleway with both directions



Illustrative example



Beach Road Cycleway



## Local Path- Street

Creating safe streets and shared pedestrian paths linking local destinations

### Key attributes

#### Vehicle Volumes

- Average daily transport 500 - 1500.

#### Vehicle speed(KM/h)

- 30-40 km/hour.

#### Arterial Road Crossing

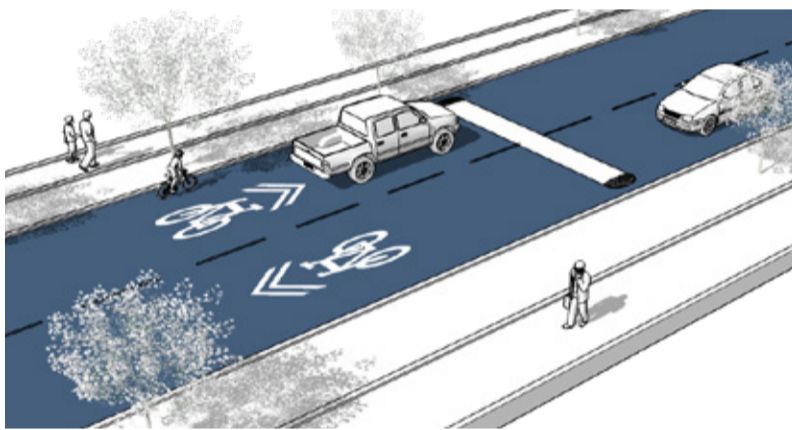
- Include pedestrian or signalised crossings.
- 50 - 100 per hour.

#### Accessibility and Safety

- Ministry of justice 7 Qualities of Safe Spaces.

#### Green Infrastructure

- Impervious surface 70 - 90%
- Tree canopy coverage greater than 30-40%.



Illustrative example



Sandringham, Auckland



## Local Path - Open Space

Creating shared paths through open spaces for local connections and recreation

### Key attributes

#### Vehicle Volumes

- N/A

#### Vehicle speed(Km/h)

- N/A

#### Arterial Road Crossing

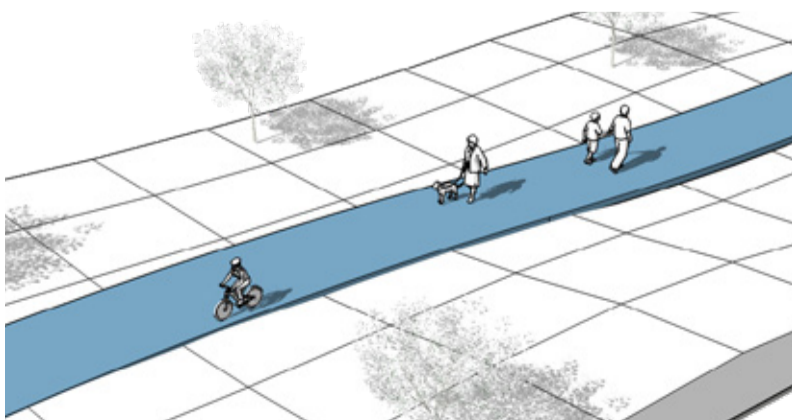
- N/A

#### Accessibility and Safety

- 20 km/h design speed/20 metre sight lines and stopping distance.

#### Green Infrastructure

Tree park: Continuous canopy with grass and assorted low level planting.



Illustrative example



Waterview Shared Local Path



# Trails

Creating shared paths along coastal edges and through rural or bush settings for recreation

## Key attributes

### Vehicle Volumes

- N/A

### Vehicle speed(Km/h)

- N/A

### Arterial Road Crossing

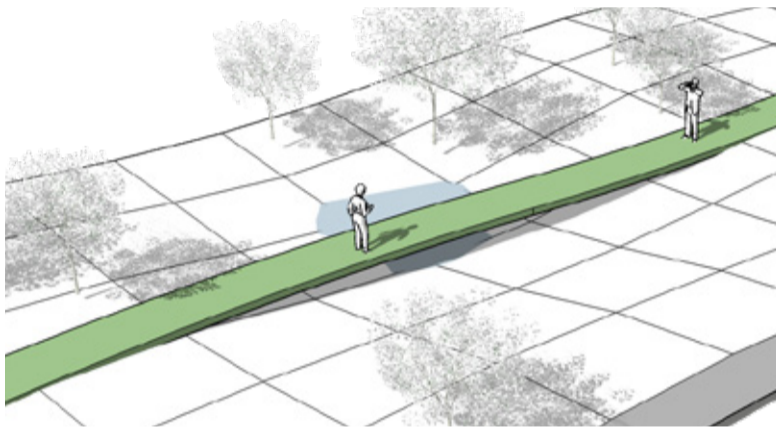
- N/A

### Accessibility and Safety

- 20 km/h design speed/20 metre sight lines and stopping distance.

### Green Infrastructure

- Park land/water systems/self regenerating forest.



*Illustrative example*



*Te Wai o Pareira / Henderson Creek and Opanuku Stream*

## 1.6 How connection paths may look

Connection paths can take many forms. The images below show a range of path types and features in different settings that demonstrate the possible look and feel of the Henderson-Massey Connections network.

### Express Path \_cross urban connections



### Local Path - Street \_safe streets and shared pedestrian paths linking local destinations



### Local Path - Open Space \_shared paths through open spaces for recreation and local connections



### Trails \_shared paths along coastal edges and through bush settings for recreation



### Social, ecological and creative connections



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# Part Two

## Methodology

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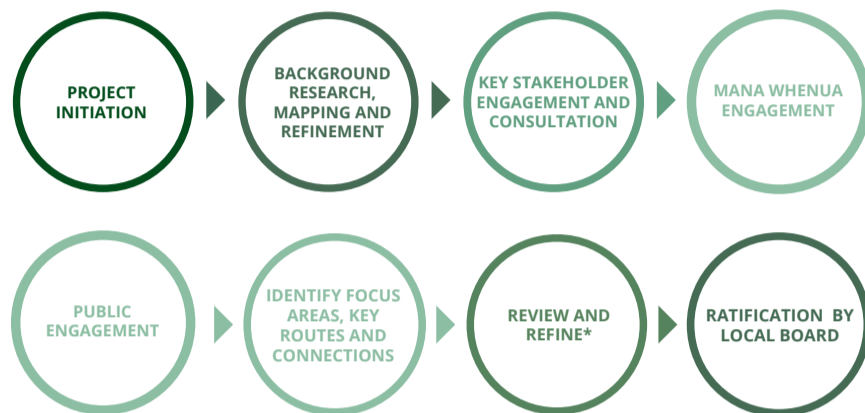




## 2.1 Overview

The process involved to create the Connections Plan consisted of internal and external research, consultation and engagement. An important part of the process was to ensure the Connections Plan would be a robust guiding document that in the course of time maintains its functionality and correspondence to other projects being undertaken within the Henderson-Massey area and surrounding local board areas. The Henderson-Massey Connections Plan was developed via an iterative eight phase process, as outlined below:

### Henderson-Massey Connections Plan Process



*\* This was a highly iterative process that included review from project control group, Mana Whenua, local board, council staff and key stakeholders.*

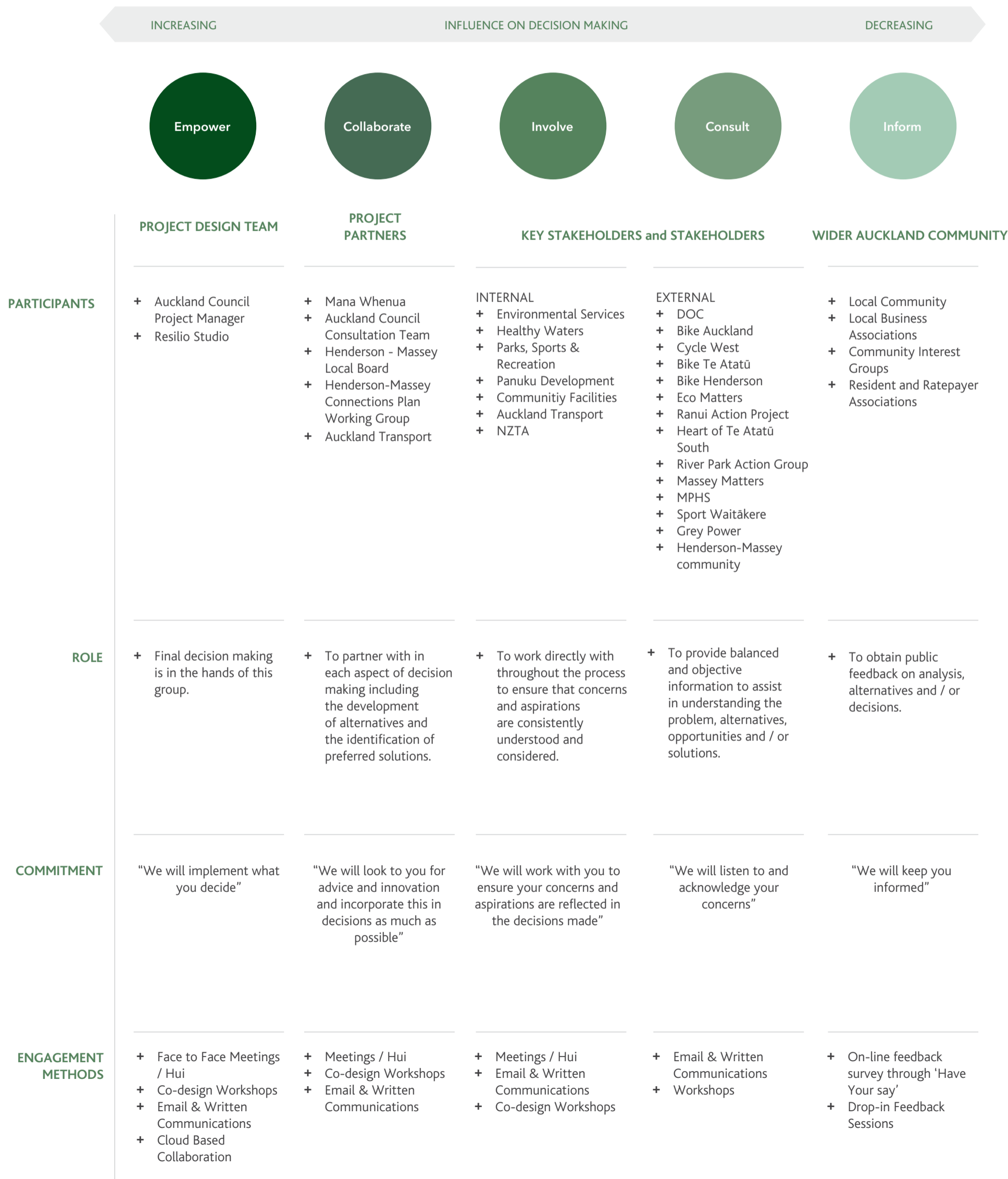
### Objectives of the Engagement Strategy

The engagement strategy builds on relationships previously established by the Henderson-Massey Local Board with Auckland Council, Mana Whenua, and incorporates ways of engaging with the wider community.

- Inform stakeholders of the Connections Plan project and the stages of the consultation process.
- Engage with Mana Whenua about the plan and seek direction and guidance on how to best embed Mana Whenua values, aspirations and concerns in the connections plan and subsequent phases.
- To involve project partners and key stakeholders on aspects of the proposed design and encourage input and feedback on the options as they relate to them.
- To consult with stakeholders on the functional and operational aspects of the connections plan.
- To consult with community stakeholders on aspects of the proposed design and encourage feedback on the options as they relate to them.
- To promote the connections network as a significant community asset for the existing and future residents of the region.
- To use engagement activities as opportunities to inform the design and development of the connections network through stakeholder feedback.
- To record and transparently report on the outcome of the engagement activities.
- To ensure communication occurs throughout all stages of the project.

## 2.2 Who has been Involved

The engagement and consultation process involved a wide range of participants. Utilising the International Association for Public Participation (IAP2) Spectrum of Participation as a reference, people involved in the fell into different groups with corresponding levels of engagement, with different levels of participation at different stages of the project. The diagram below provides an overview of who has been involved in the process of developing the Henderson-Massey Connections Plan and corresponding levels of engagement.



## 2.3 Detail of Process

### Project Initiation

Meetings with the Henderson-Massey Local Board and project partners to discuss and define the project.

### Background Research Mapping and Refinement

Previous studies and planning documents relevant to the area were collected and reviewed. The Henderson-Massey Local Board Plan 2017 was reviewed to gain an understanding of both the strategic vision of the community, and planned projects.

The Henderson-Massey Open Space Network Plan 2015-2025 was used as a guide to identify existing and aspirational trail connections between parks and reserves. Maps identifying conventional destinations, transport routes social cultural sites and environmental elements of the Henderson-Massey area were created. Broad desire lines were drawn to illustrate potential connections between neighbourhoods and destinations. Further desktop studies were carried out to identify strategic routes that would link into both the existing network and to proposed/aspirational connections, forming a high level draft overview of potential strategic connections.

This desktop local path connections plan was taken to the project group for review to ensure that it was aligned with the Local Boards aspirations and objectives of the project. The project group consisted of project partners - Auckland Council, Henderson-Massey Local Board, Mana Whenua and Auckland Transport.

### Key Stakeholder Engagement and Consultation

Following analysis, and review, a day of workshops with internal and external key stakeholders were held.

The purpose of the workshops was to discuss the state of the project, gain insights of key stakeholder knowledge of the Henderson-Massey area and to gain a better understanding of their ambitions for the Connections Plan.

### Mana Whenua Engagement

The project was presented at the North West Mana Whenua Forum to inform Tāmaki Makaurau iwi and receive feedback as to which iwi would like to be involved.

A workshop was set up, at which time Te Kawerau Ā Maki re-affirmed their interest in involvement. Ngā Maunga Whakahii O Kaipara and Te Akitai also communicated their interest to be involved.

It was agreed that exploring the place-based applications of Te Aranga Design Principles was a good first step to the process and that Iwi would like to be involved in reviewing the design details, relevant to Te Aranga Design Principles, as the Connection Plan progresses through subsequent phases.

### Public Engagement

Following project partner and key stakeholder consultation, two open public consultation days were held.

The first was held at 'Come Fly A Kite' day, Harbourview-Orangihina, Te Atatū Peninsula. The second was held at Te Manawa Community Open Day, Westgate. Online feedback was activated through the council website 'Have Your Say' for three weeks.

Targeted consultation with key stakeholders and public engagements with wider community groups combined with online consultation was an intrinsic part of the early investigation process. Feedback assisted the identification of key issues and opportunities within the path network and provided key opportunities to discover the values and aspirations of path network users.

### Identify Focus Areas

The Henderson-Massey area was organised into a series of focus areas. Within each focus areas key routes and connection paths were identified. Including strategic questions surrounding steps of further investigation required to create the desired network.

### Review and Refine

Public feedback was analysed and collated into themes and patterns and applied to the design process of the network. The updated network was presented to the Working Group for review. Subsequently, a refined 80% draft of document was presented to the Local Board, Mana Whenua and Auckland Transport for final review.

### Ratification by Local Board

Final Connections Plan presented to the Henderson-Massey Local Board for ratification.

All project partners and consultation groups were updated on release of final adopted plan.

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# Part Three

## Connections Plan

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## 3.1 Introduction

The Connections Plan map shows the long term network of walking and cycling in the Henderson-Massey area. As outlined in part one, this is a visionary document similar to others developed by local boards in Auckland.

The scale of the Connections Plan network provided a base to analyse the main road, streets and open space network and was used in all engagement processes. It was critical to identifying the desirable and practical links that would strengthen walking, cycling and ecological connections throughout the Henderson-Massey Local Board area.

## 3.2 Overview of Connections Plan

The connections plan network has been structured according to four path types. Each path type is influenced by its purpose and the landscape character of the environment it is located in.

Additionally these path types have been allocated a status according to their stage of planning, commitment or aspiration, which were determined through the consultation process.

The 'existing' network includes express networks that appear along arterial roads and motorways, local network - open space through parks, and trails through reserves. There are very few local network- streets identified as 'existing' in the Henderson Massey area.

'Planned' path status infers these paths are currently within the planned and/or construction phase and have a foreseeable completion date. Te Whau Pathway and Lincoln Road express path are examples of this, both have sections complete, or near complete, with remaining sections subject to funding availability.

The 'proposed' path network occur where there is no current formed connection, but would improve network connectivity and/or with a high degree of commitment. The proposed path network has been collated from published plans and strategies created by councils, transport agencies, and local interest groups. An example is The Henderson-Massey Open Space Network Plan.

'Aspirational' paths refer to paths that have been proposed or suggested by the local community or local board through the consultation phase of this project. They have been included in the same key as 'proposed paths' as they are regarded as desirable connections that represent comparable value.

Aspirational paths also include existing paths that need upgrading to improve their level of service. This has been decided based on the level of planning and construction involved in repairing and widening an existing path being very similar to constructing a new path.

## Future Growth and Development

The Auckland Unitary Plan enables significant growth in the Henderson metropolitan area over the next 25 years. It is identified as having the potential to grow as a high-quality, safe, attractive and vibrant mixed-use business and residential destination. Currently Panuku Development is developing an Unlock Henderson Plan to guide development and planning, their vision includes establishing new walking and cycling links to better connect development sites around the Henderson metropolitan area. The intention of the Connections Plan is to link into the Unlock Henderson Plan.

A large number of Special Housing Areas have been identified and are currently being developed in the Henderson-Massey Local Board area to accommodate current and predicted population growth. Henderson-Massey Local Board Plan 2017/18 estimates the population will increase by approximately 30,000 people by 2033.

NZTA's SH16 upgrade between Lincoln Road to Westgate includes extending the express path, improving direct cycle connections to the Auckland CBD from the northern sections of Henderson-Massey local board area. In addition, the April 2018 update of the Auckland Transport Alignment Project (ATAP) identifies a rapid transit corridor for the City Centre to Northwest Auckland. It is proposed that a light rail line will follow State Highway 16 between the City Centre and Kumeu/Huapai and is scheduled for delivery in the decade between 2018-2028.

Westgate has been identified as a future growth node with anticipated population, housing and employment expansion over the next 30 years and is in the process of being developed by New Zealand Retail Property Group. A new town centre incorporating the North West Shopping Centre, a large pedestrian oriented town square, a new library /community centre - Te Manawa, a town park - Te Hauāuru and areas of big box development with corresponding car parks have all been completed to date.

A frequent Service Network bus station has been proposed for Te Atatū intersection and SH16, expected delivery of this project is unknown at the time of this report.

# 3.3 Henderson-Massey Connections Plan



Scale: 1:40,000 @ A3



## KEY

- |                                                                                                                                                            |                                                                                                                                                         |                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>— Local Board Boundary</li> <li>— Parcel Boundaries</li> <li>— Road Network</li> <li>■ Recreations Areas</li> </ul> | <p><b>PATH TYPE STATUS</b></p> <ul style="list-style-type: none"> <li>— Existing</li> <li>- - - Planned</li> <li>••• Proposed / Aspirational</li> </ul> | <p><b>PATH TYPE</b></p> <ul style="list-style-type: none"> <li>— Express Network</li> <li>— Local Network - Street</li> <li>— Local Network - Open Space</li> <li>— Trail Network</li> </ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

1\_ Paths currently within the planning and/or construction phase  
 2\_ Paths proposed to improve network connectivity.

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# Part Four

## Focus areas

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## 4.1 Focus Areas

The Henderson-Massey Local Board area has been organised into seven focus areas to clearly identify, evaluate and determine key routes and connections for each area.

The seven focus areas are:

- 1\_ Massey and Westgate
- 2\_ West Harbour and Royal Heights
- 3\_ Te Atatū Peninsula
- 4\_ Birdwood, Rānui, Sturges, Western Heights and Sunnyvale (west)
- 5\_ Lincoln
- 6\_ Te Atatū South, Glendene and Sunnyvale (east)
- 7\_ Henderson

Each focus area has its own character, different needs, aspirations and unique set of constraints and challenges.

Key routes are often express paths but not always and provide a primary cycling network within and between the focus areas. In some cases there is already a path requiring an upgrade to accommodate a greater number of uses, and / or to improve safety, amenity and ecological performance. In other cases a new route will be introduced.

Key connections highlight a link to and between key destinations, such as a residential area, school, a village centre or other connecting path. Key connections are often local paths either along streets, through parks or open spaces. They form a finer grain of connectivity to and between local destinations as well as into the express path network.

### For all of the focus areas the following constraints, challenges and opportunities will exist

#### Constraints and Challenges

- Major arterial roads, particularly State Highway 16 restrict connections through the Henderson-Massey Local Board Area.
- Space conflicts between on street parking, cycling, buses and bus stops along main arterials.
- Streets and intersections are typically designed to prioritise cars and private vehicles.
- Significant vehicle movement through peak hours of the day.
- The steep topography in parts of the Local Board area.
- High numbers of unconnected cul-de-sacs.
- Single use land areas and a lack of mixed use encourage car use for daily trips.
- Transit through large roundabouts.
- Constrained access along coastal margins.

#### Opportunities

- Create a pedestrian and cycle connection between local town centres.
- Create clear and safe connections to the express path on SH16.
- Create a walking and cycle network within communities.
- Reduce vehicle volumes and speeds on local street network to improve safety for pedestrians and cyclists.
- Enhance intersections to improve accessibility and safety for pedestrians and cyclists.
- Create new crossing for pedestrians and cyclists on main roads and busy streets where they don't already exist.
- Improve tree coverage and integrate water sensitive design into street network, parks and open spaces to improve character, amenity and ecological function.

## 4.2 Focus Areas in Context of the Local Board Area Boundary

The adjacent map shows the boundary of the seven focus area. The borders of each focus area may overlap to show shared strategic connections.

State Highway 16  
Towards Kaipara Coast Highway

State Highway 18  
Towards Auckland North Shore



Scale: 1:40,000 @ A3



1\_MASSEY and WESTGATE

2\_ROYAL HEIGHTS  
and WEST HARBOUR

3\_TE ATATŪ PENINSULA

5\_LINCOLN

4\_BIRDWOOD, RĀNUI,  
STURGES, WESTERN  
HEIGHTS and SUNNYVALE

6\_TE ATATŪ SOUTH  
GLENDENE and  
SUNNYVALE

7\_HENDERSON

Te Wai o Pareira

Waitematā Harbour

State Highway 16  
Towards Auckland CBD

Whau River

Towards Waitakere Ranges  
Regional Park

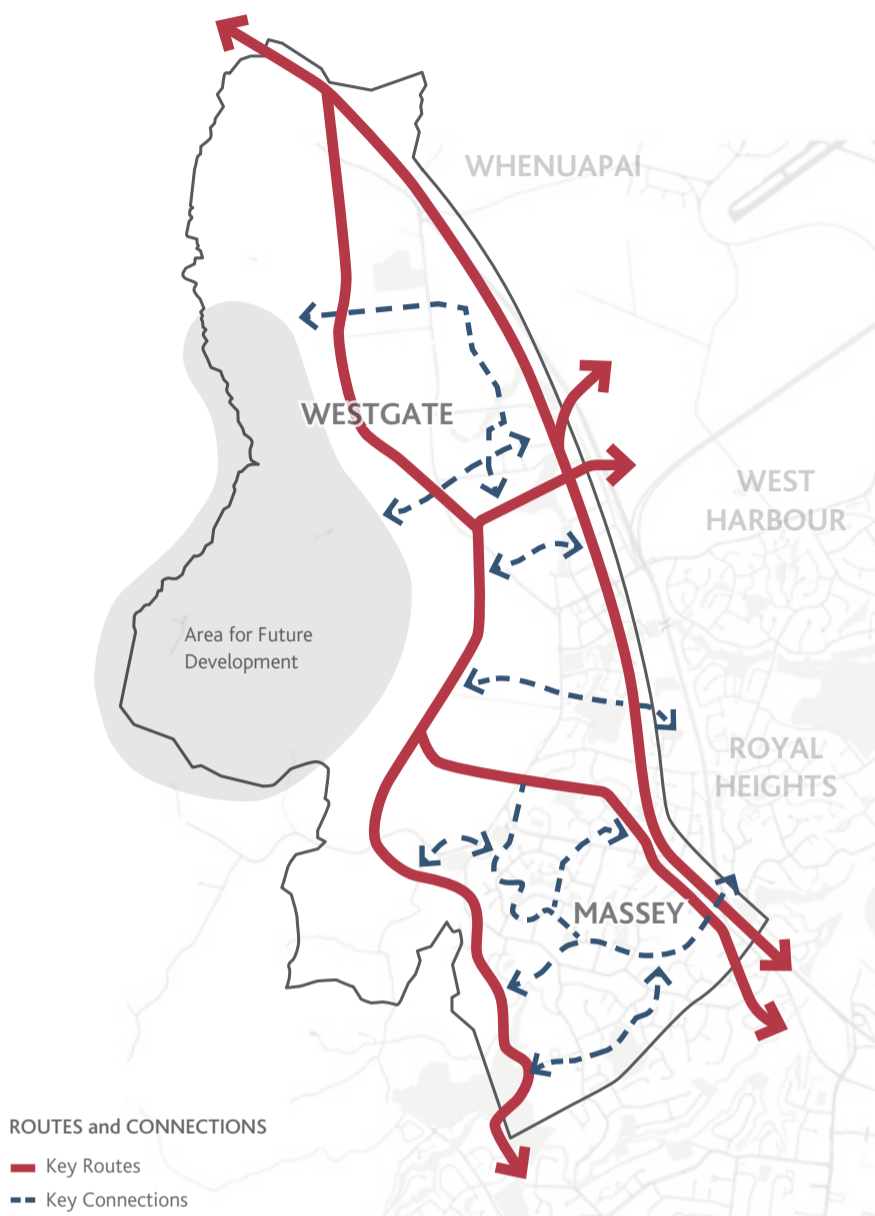
# Focus Area 1 - Massey and Westgate

The suburbs of Massey and Westgate are located in the north west of the Henderson-Massey Local Board area and are bound to the east by the North Western Motorway and the rural urban boundary to the west. Rising from Te Wai-o-Pairera / Henderson Creek, the steep topography of the area distinguishes it from other parts of the Henderson-Massey Local Board area and provides spectacular views over central Auckland and the rural hinterland to the west. Massey is predominantly residential with small pockets of neighbourhood centres but these are generally serviced by the business and commercial areas of Westgate. Don Buck Road is the main connector road through the local street network and accommodates most of the schools in the area.

The Westgate area has been earmarked for growth and is currently undergoing major residential and commercial development. The near completed Westgate Town Centre hosts a variety of community facilities and amenities with the recent opening of Te Manawa Library and Community Centre. This facility serves Massey and the north west, which in turn creates an additional demand for a safe and clear pedestrian and cycle link between them.

A well designed shared street and town square provide an attractive retail and commercial environment, with the intention of encouraging a more pedestrian oriented environment. Surrounding land has been earmarked for future development, with expectations of transformational population growth over the next 10 years.

## Key Routes and Connections



### Key Routes and Connections

#### Create a north-south connection between Massey and Westgate

##### Constraints and Challenges\*

- Vehicle congestion on Fred Taylor Drive.
- Limited space for protected barriers on existing cycle path on Fred Taylor Drive.
- Intersections Don Buck Road and Fred Taylor Drive roundabout.
- Side roads in and out of old Westgate shopping area crossing express path.

##### Opportunities\*

- Introduce road signage specifically for cyclist safety and road sharing on Fred Taylor Drive.
- Create narrow express path barrier infrastructure for Fred Taylor Road.
- Create express path on Tawhai Drive.
- Develop some clear wayfinding signage on either side of Maki street signaling pedestrian links crossing Fred Taylor Drive.

#### Create an east-west link to the north western expressway

##### Constraints and Challenges\*

- Steep topography of Triangle Road towards Don Buck Road.
- Interference from on street car parks between footpath and cycle path.
- Very limited space on Royal Road to accommodate an on street cycle path.
- Royal Road potentially too busy for a local path - street network.

##### Opportunities\*

- Upgrade express path on Triangle Road, consider narrow barriers.
- Make Waimumu Road the main local street east west connection to Royal Heights.
- Introduce berm planting on Waimumu as street calming technique.
- Use NZTA Lowerhurst Reserve compensation funds to introduce cycle paths on upgraded bridges over Northwestern motorway at Royal and Huruhuru Roads.

#### Create a safe walking and cycling network in Massey

##### Constraints and Challenges\*

- Steep topography of main access streets through Massey.
- Existing alleyways too narrow to develop both cycle and pedestrian connections.

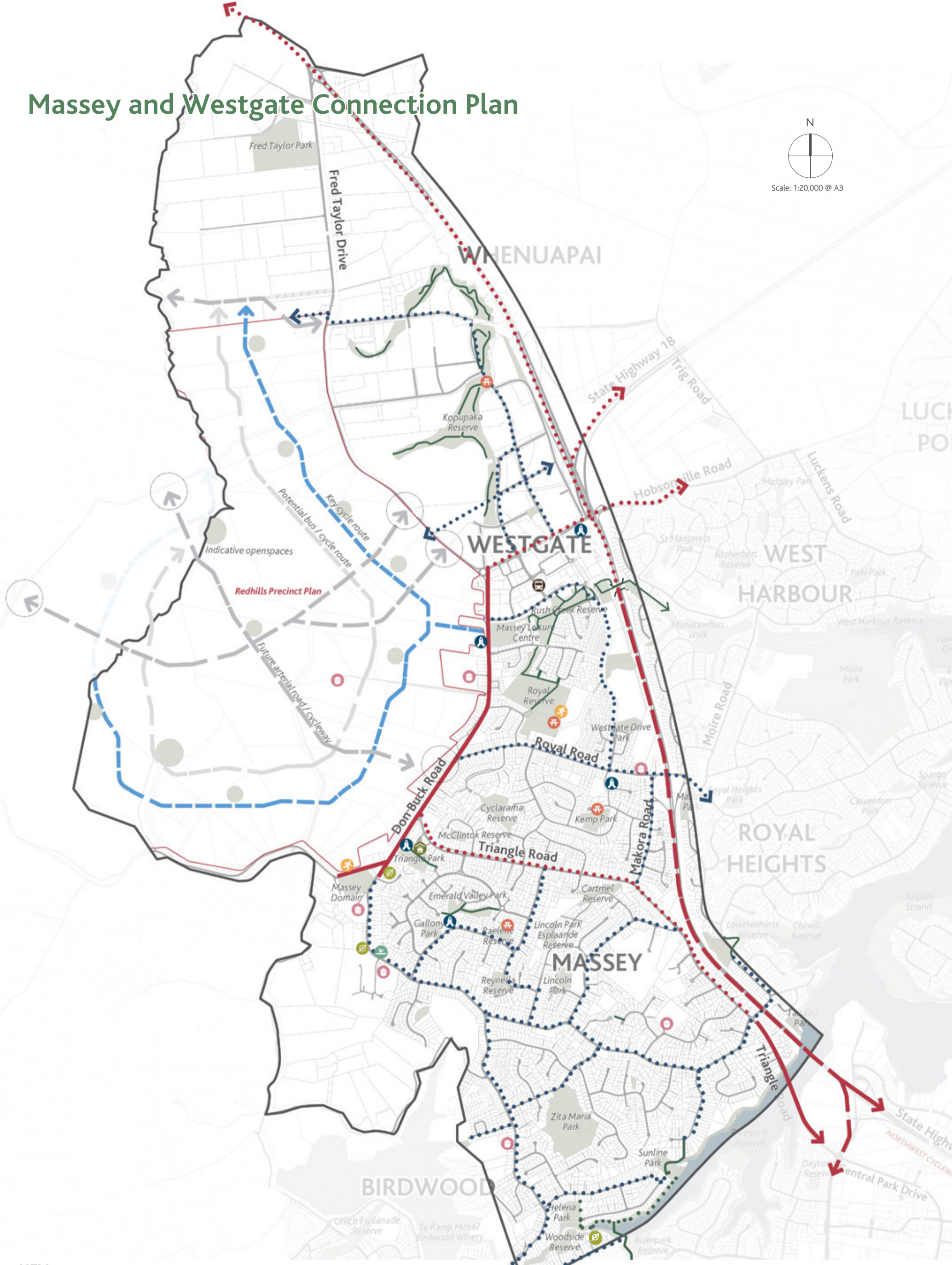
##### Opportunities\*

- Local path street network along Waimumu Road and Gallony Ave providing local connection to Massey High School.
- Local Path street network from Waimumu Road to Zita Maria Drive providing connection to Don Buck Primary School and Zita Park.
- Introduce berm planting on the above mentioned local street as a traffic calming technique and as an improvement to local streetscape.
- Identify alleyways that could accommodate improved service and CPTED safety applications.

\* In addition to the constraints, challenges and opportunities in section 4.1

# Massey and Westgate Connection Plan

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Scale: 1:20,000 @ A3



## KEY

- |                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                           |                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>— Focus Area Boundary</li> <li>— Parcel Boundaries</li> <li>— Road Network</li> <li>■ Recreations Areas</li> </ul> | <p><b>PATH TYPE</b></p> <ul style="list-style-type: none"> <li>— Express Network</li> <li>— Local Network - Street</li> <li>— Local Network - Open Space</li> <li>— Trail Network</li> </ul> <p><b>PATH TYPE STATUS</b></p> <ul style="list-style-type: none"> <li>— Existing</li> <li>- - - Planned</li> <li>... Proposed / Aspirational</li> </ul> | <p><b>RECREATION</b></p> <ul style="list-style-type: none"> <li>🏊 Active Recreation</li> <li>🌳 Passive Recreation</li> </ul> <p><b>SOCIAL</b></p> <ul style="list-style-type: none"> <li>🌱 Community Gardens</li> <li>🏠 Community Hub/Neighbourhood Centre</li> </ul> | <p><b>PUBLIC FACILITIES</b></p> <ul style="list-style-type: none"> <li>🏊 Pools/Swimming facilities</li> <li>🏥 Hospital</li> <li>🕌 Place of Worship</li> <li>📖 Public Library</li> <li>🎓 School</li> </ul> | <p><b>TRANSPORT</b></p> <ul style="list-style-type: none"> <li>🚣 Possible Boat/Kayak Ramp</li> <li>🚗 Park &amp; Ride RTN</li> <li>🚊 Public Transport</li> </ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|

1\_ Paths currently within the planning and/or construction phase  
2\_ Paths proposed to improve network connectivity.

# Focus Area 2 - Royal Heights and West Harbour

## Character

Located in the northeast of the Henderson-Massey Local Board area, Royal Heights and West Harbour are on the coastal edge of the Upper Waitemata Harbour and have impressive easterly views towards central Auckland. Serviced by small neighbourhood centres, the area is occupied predominantly by low density residential neighbourhoods and a plentiful supply of parks and reserves. The local road network supports large residential blocks that branch into numerous small cul-de-sac. Moire Park is a large popular reserve centrally located between both suburbs and has a variety of established trail paths.

In 2016 NZTA acquired 25% of Lowerhurst Reserve to create stormwater ponds as part of the the SH16 upgrade from Lincoln to Westgate. As part of the mitigation process to remedy the loss of public reserve land the Henderson-Massey Local Board recommended to make any compensation received, available to improve walking and cycling connections over and along Huruwhuru bridge and road.

## Key Routes and Connections



### Key Routes and Connections

#### Extend and enhance north-south link along the North western express path

##### Constraints and Challenges\*

- Interface and connectivity of Fred Taylor Road and Hobsonville Road intersections.
- Limited land available between SH16 and SH18.
- Restricted access points.

##### Opportunities\*

- Introduce dedicated signalised cyclist crossing.
- Investigate land adjacent to motorway to create express path extension.
- Future proof express path to provide opportunities to extend to Kumeu.
- Reduce congestion on SH16.

#### Create connections between Royal Heights, West Harbour and the Upper Harbour Local Board area

##### Constraints and Challenges\*

- Interface and connectivity of Fred Taylor Road and Hobsonville Road intersection.
- Complicated motorway arrangement between SH16 and SH18.
- Busy local arterial roads.

##### Opportunities\*

- Create connection to population growth area of Whenuapai.
- Improve Whenuapai and Hobsonville connection to Westgate.
- Introduce berm planting on busy arterial roads to help reduce vehicle speeds.
- Promote as a tourist cyclist route.

#### Create connections connecting Royal Heights and West Harbour with Massey and Westgate

##### Constraints and Challenges\*

- Main access streets through Royal Heights are quite steep.
- Number and frequency of driveways (and on street parking).
- Width of Westgate pedestrian and other road bridges across SH16.

##### Opportunities\*

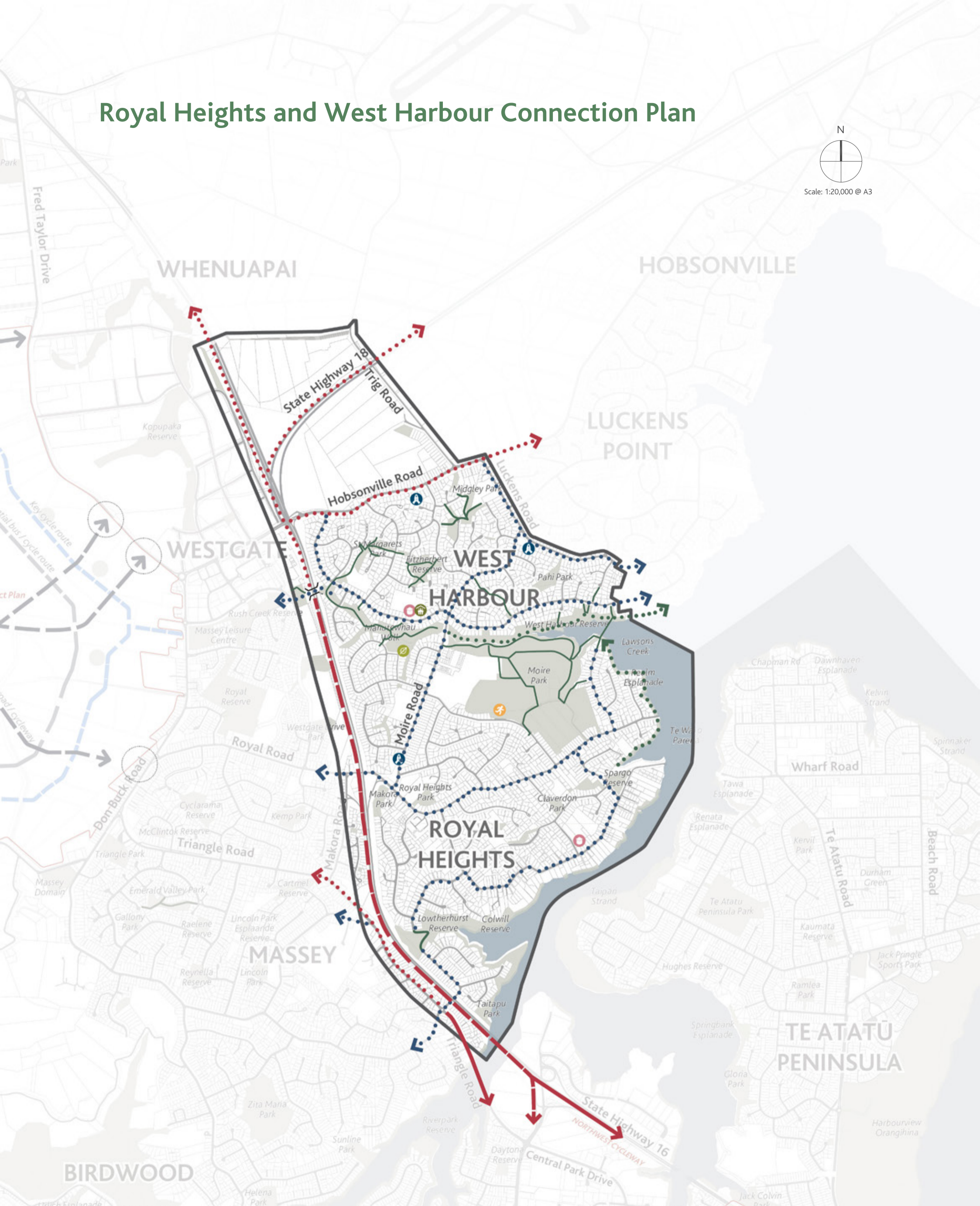
- Link local path network to bridges crossing SH16.
- Highlight and upgrade existing trail network from Moire park to Manutewhau track over pedestrian bridge to Westgate.
- Introduce berm planting on local street network as a traffic calming technique and as an improvement to the local streetscape.
- Linking a local street network from Huruwhuru Road to Redwood Drive to Colwill Road and Royal Road will connect Colwill School and kindergarten and Spargo Reserve and onwards to Moire reserve and trail network.
- Create Local path - street along Oriel Road from pedestrian bridge to West Harbour Drive, encouraging east west pedestrian and cycle connections to Manutewhau Community hub and West Harbour School.
- Improve character, amenity and ecological function of Manutewhau stream.
- Introduce local artwork to parks and trails.
- NZTA compensation (acquired from land designated for stormwater ponds in Lowerhurst Reserve) recommended available land be used to improve walking and cycle paths -aiding in connections to Huruwhuru Road, Huruwhuru bridge and through to Massey.

\* In addition to the constraints, challenges and opportunities in section 4.1

# Royal Heights and West Harbour Connection Plan



Scale: 1:20,000 @ A3



## KEY

- Focus Area Boundary
- Parcel Boundaries
- Road Network
- Recreations Areas
- PATH TYPE STATUS**
- Existing
- Planned
- Proposed / Aspirational

- PATH TYPE**
- Express Network
- Local Network - Street
- Local Network - Open Space
- Trail Network

- RECREATION**
- 🏊 Active Recreation
- 🌳 Passive Recreation
- SOCIAL**
- 🌱 Community Gardens
- 🏠 Community Hub/ Neighbourhood Centre

- PUBLIC FACILITIES**
- 🏊 Pools/Swimming facilities
- 🏥 Hospital
- 🕌 Place of Worship
- 📖 Public Library
- 🎓 School

- TRANSPORT**
- 🚤 Possible Boat/Kayak Ramp
- 🚗 Park & Ride RTN
- 🚌 Public Transport

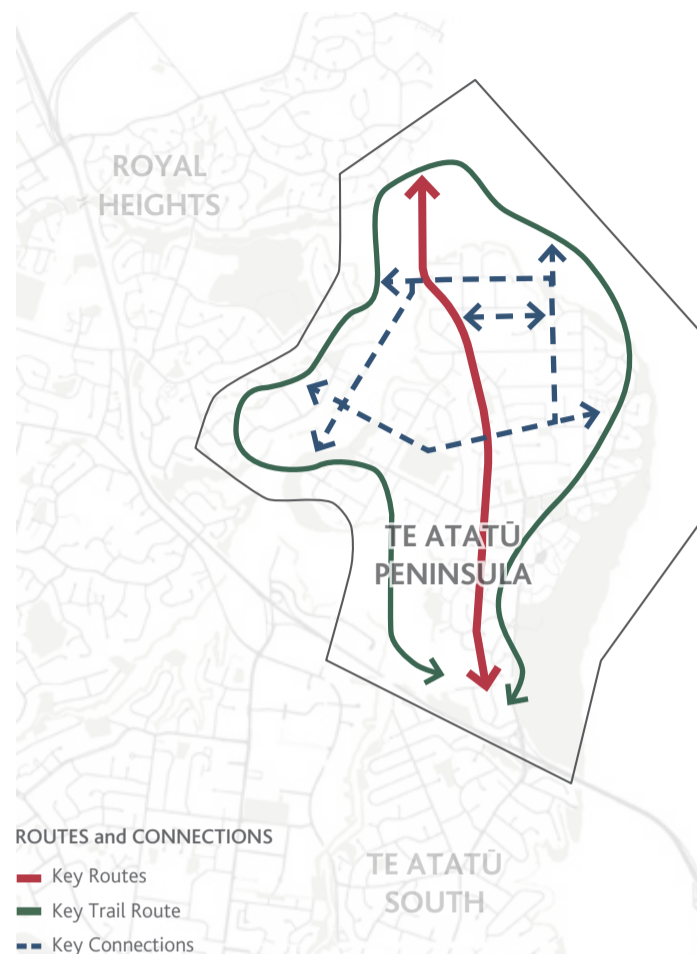
1\_ Paths currently within the planning and/or construction phase  
 2\_ Paths proposed to improve network connectivity.

# Focus Area 3 - Te Atatū Peninsula

## Character

Te Atatū Peninsula is a waterfront suburb with a well established local town centre, clear main street and a variety of local community amenities and facilities. The flat landscape of the peninsula and its abundant parks and reserves provide an ideal environment for a connective local path network. The urban environment of the peninsula is currently experiencing major change with the development of higher density housing projects. The existing trail network which circumnavigates the waterfront has helped facilitate an active walking and cycling culture on the Peninsula.

## Key Routes and Connections



## Key Routes and Connections

### Create a central connection along Te Atatū Road

#### Constraints and Challenges\*

- Single entry into and out of the peninsula.
- Increased peak traffic congestion.
- State Highway 16 restricts connections to Te Atatū South.
- Constrained and changing dimensions of Te Atatū Road.
- Number and frequency of driveways (and on street parking).

#### Opportunities\*

- Provide a central spine creating direct access into local street and trail network.
- Improve link into State Highway 16 express path.
- Increase the number and safety of crossing points along Te Atatū Road.
- Increase number of commuter cyclists and reduce vehicle congestion on Te Atatū Road.
- Create express passage to local town centre facilities and schools.

### Create a secondary loop connecting central spine to residential areas and coastal trail

#### Constraints and Challenges\*

- On street parking reduces width of street.

#### Opportunities\*

- Create connections along Wharf Road, Beach Road, Harbour View Road, Taikata Road and Matipo Road.
- Introduce berm planting to encourage lower vehicle speeds.

- Link local streets to local primary schools.
- Encourage local streets being reclaimed as public spaces for recreation.
- Te Atatū Peninsula becoming a cyclist tourist and visitor destination.
- Increase visitor numbers to local businesses.

### Complete the recreational trail around the coastal margin of Te Atatū Peninsula

#### Constraints and Challenges\*

- Works will be required within ecologically significant and sensitive areas.
- Limited access along coast due to private ownership of land.
- Medium to long term risk of coastal inundation.

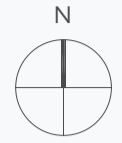
#### Opportunities\*

- Create a complete recreational loop trail around Te Atatū Peninsula.
- Maintain and enhance natural and ecological features of the coastal margin.
- Involve community in ecological restoration projects.
- Encourage community to assist in the maintenance of trail paths.
- Introduce local artwork to trail network.

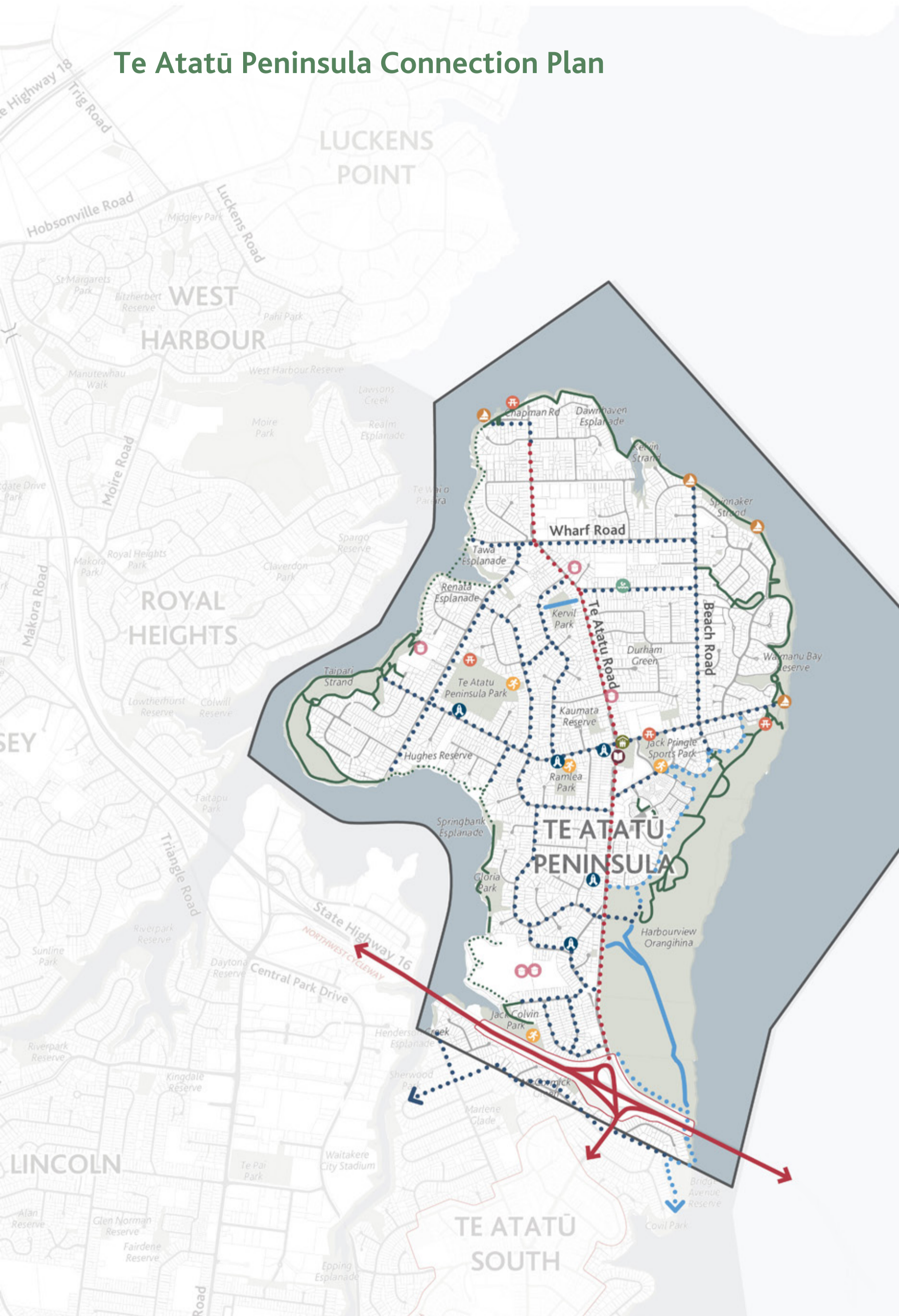
\* In addition to the constraints, challenges and opportunities in section 4.1



# Te Atatū Peninsula Connection Plan



Scale: 1:20,000 @ A3



## KEY

- Focus Area Boundary
- Parcel Boundaries
- Road Network
- Recreations Areas
- PATH TYPE STATUS**
- Existing
- Planned
- Proposed / Aspirational

- PATH TYPE**
- Express Network
- Local Network - Street
- Local Network - Open Space
- Trail Network

- RECREATION**
- 🏊 Active Recreation
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- SOCIAL**
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- 🏊 Pools/Swimming facilities
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- 🕌 Place of Worship
- 📖 Public Library
- 🎓 School

- TRANSPORT**
- 🚤 Possible Boat/Kayak Ramp
- 🚗 Park & Ride RTN
- 🚌 Public Transport

1\_ Paths currently within the planning and/or construction phase  
 2\_ Paths proposed to improve network connectivity.

# Focus Area 4 - Birdwood, Rānui, Sturges, Western Heights and Sunnyvale

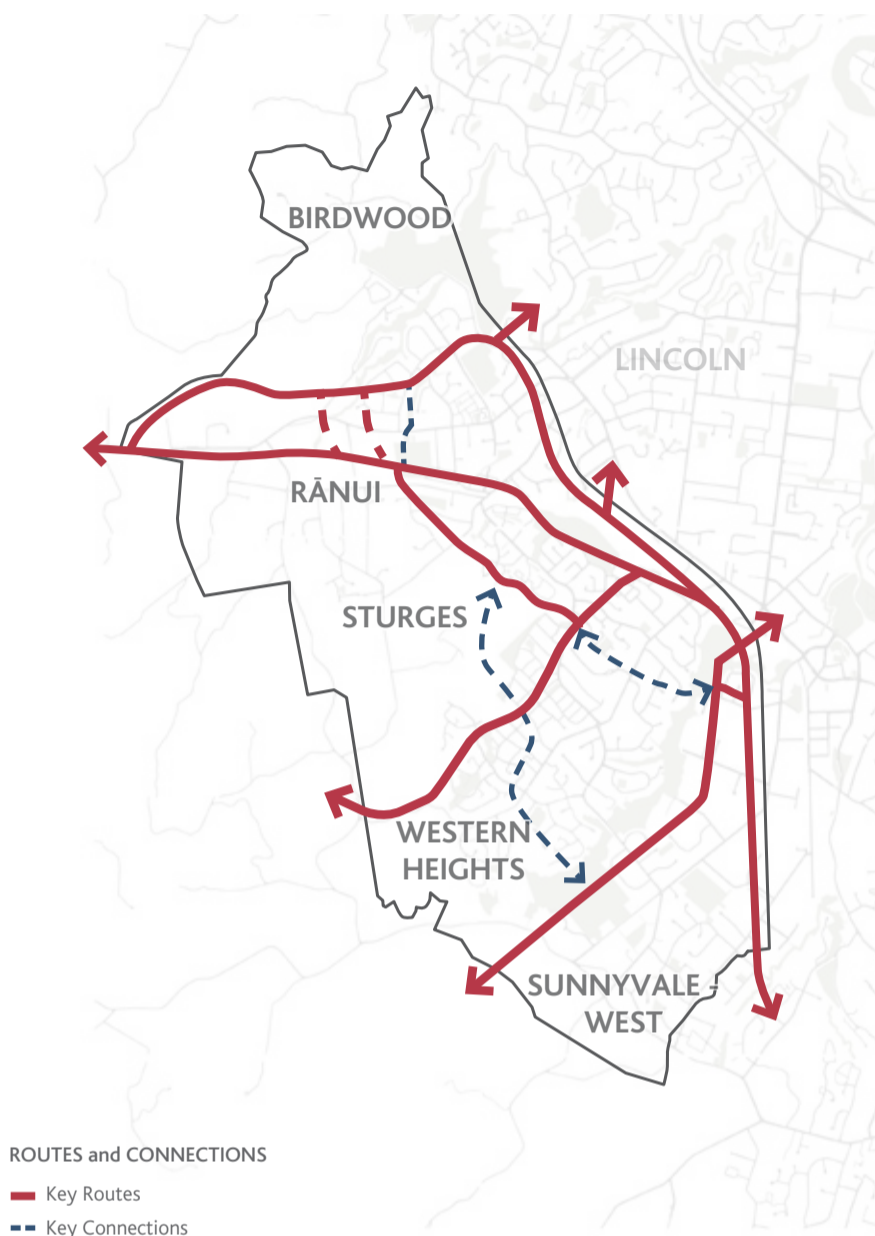
## Character

Located in the southwest of the Henderson-Massey Local Board area, Sturges, Western Heights and Sunnyvale are bordered by the rural urban boundary to the west and the Western Rail Line to the east. Birdwood and half of Rānui lie north of the western rail line but remain situated on the rural urban boundary (RUB). The rural edge lies at the base of the Waitakere foothills and provides these locations a unique feel and outlook with upper Sturges and Western Heights experiencing impressive easterly views over Henderson. Large blocks of contemporary residential development dominates these suburbs, however Sunnyvale also includes a light industrial area extending from the Henderson town centre.

The boundary of the local board area cuts a large chunk out of Sunnyvale between the Oratia stream and the western Rail line. For the purpose of this report Sunnyvale - west will appear in focus area four and Sunnyvale - east will appear in focus area six.

Plentiful in parks and reserves, these areas are strongly characterised by the Oratia, Opanuku and Paramuka streams passing through, all of which have existing trail or local paths alongside, providing good recreational connections to central Henderson. Sturges and Western Heights are rich in horticultural and viticulture history with vineyards still in production.

## Key Routes and Connections



## Key Routes and Connections

### Create an express path along rail corridor

#### Constraints and Challenges\*

- Sections of the rail corridor may not be suitable for cycle path, in terms of space and terrain.
- Creating strong safe barriers separating rail line and path.
- Providing safe crossings or underpasses.
- Barriers could provide challenges to maintenance and utility crews.
- Land ownership.

#### Opportunities\*

- Investigate local path on streets where rail corridor isn't suitable for cycling.
- Provide an appealing commuter express route as topography of rail corridor is generally flat.
- Enhance transit by improving access to more destinations.
- Carefully plan intersections and barriers make the corridor safer and predictable.
- Upgrade manage and maintain the ecological edge.
- Provide off road cycle access to schools near the rail line, such as those on Rathgar Road.

### Create a network of express paths to connect Birdwood, Rānui, Sturges, Western Heights and Sunnyvale

#### Constraints and Challenges\*

- Steep topography of Sturges road acts as a barrier.
- Variety of vehicles, such as buses and trucks on arterials roads restricts space for cyclists.
- Space on busy arterials for separated cycle lanes.

#### Opportunities\*

- Creating a variety of express path options provides route choice.
- Introduce berm planting and other traffic calming techniques on busy sections of arterial roads.
- Introduce visual barriers that use minimum space on road corridor.
- Improve cyclist signage on busy roads.

### Promote cycle and walking connections into the Waitakere foothills

#### Constraints and Challenges\*

- Ensuring equivalent infrastructure extends beyond Henderson-Massey Local Board area.
- More rural traffic in foothills.
- Steep and undulating terrain of foothills.
- Narrow rural roads beyond RUB.

#### Opportunities\*

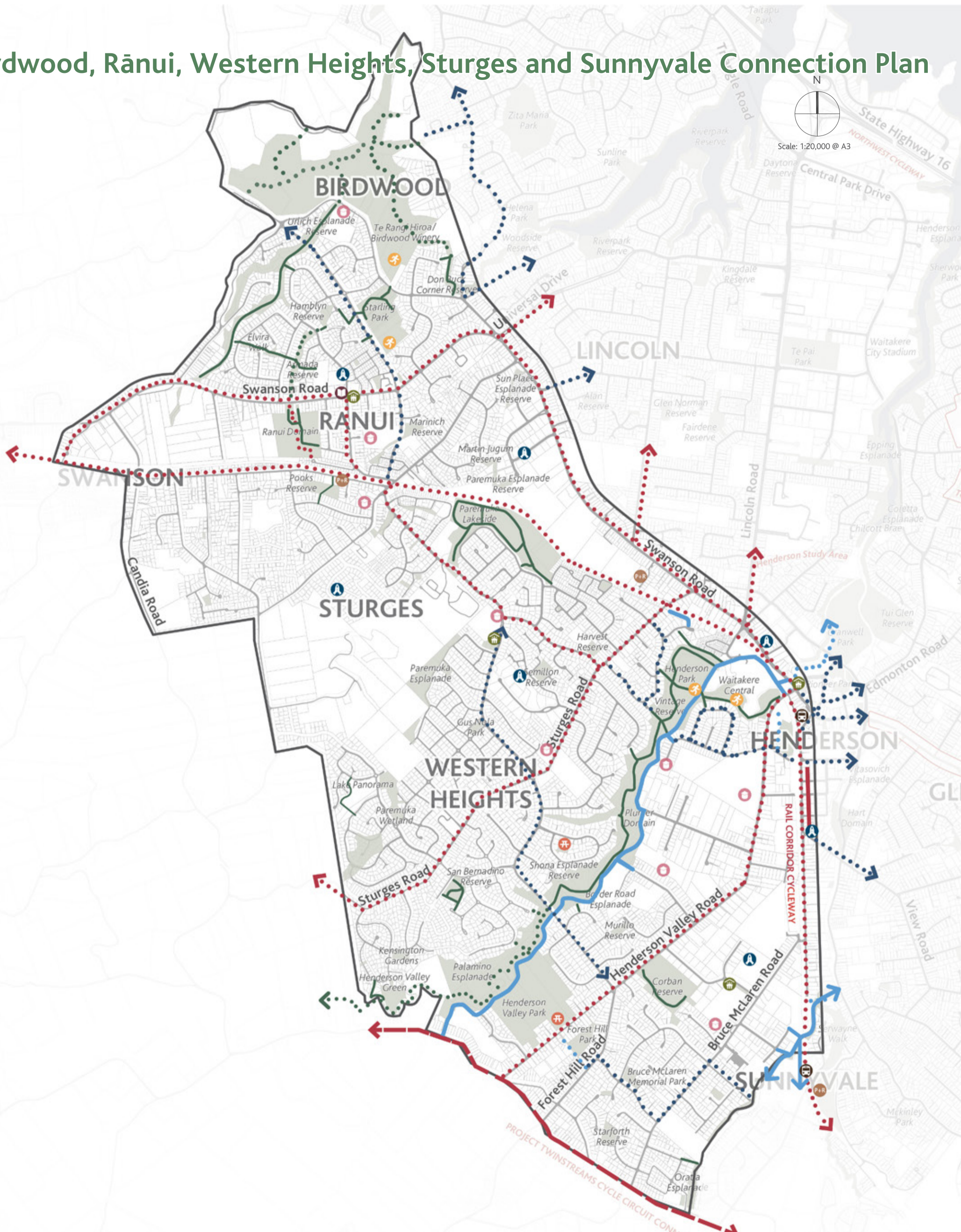
- Connect cycle and pedestrian paths from main express paths.
- Promote cycling in Waitakeres as a tourist and visitor destination.
- Provide recreational alternative to walking in the Waitakere bush tracks - that are now closed.
- Provide a viable alternative transit option for rural residents.

\* In addition to the constraints, challenges and opportunities in section 4.1

# Birdwood, Rānui, Western Heights, Sturges and Sunnyvale Connection Plan



Scale: 1:20,000 @ A3



## KEY

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>— Focus Area Boundary</li> <li>— Parcel Boundaries</li> <li>— Road Network</li> <li>■ Recreations Areas</li> </ul> <p><b>PATH TYPE STATUS</b></p> <ul style="list-style-type: none"> <li>— Existing</li> <li>- - - Planned<sup>1</sup></li> <li>••• Proposed / Aspirational<sup>2</sup></li> </ul> | <p><b>PATH TYPE</b></p> <ul style="list-style-type: none"> <li>— Express Network</li> <li>— Local Network - Street</li> <li>— Local Network - Open Space</li> <li>— Trail Network</li> </ul> | <p><b>RECREATION</b></p> <ul style="list-style-type: none"> <li>🏊 Active Recreation</li> <li>🌳 Passive Recreation</li> </ul> <p><b>SOCIAL</b></p> <ul style="list-style-type: none"> <li>🌱 Community Gardens</li> <li>🏠 Community Hub/Neighbourhood Centre</li> </ul> | <p><b>PUBLIC FACILITIES</b></p> <ul style="list-style-type: none"> <li>🏊 Pools/Swimming facilities</li> <li>🏥 Hospital</li> <li>🕌 Place of Worship</li> <li>📖 Public Library</li> <li>🎓 School</li> </ul> | <p><b>TRANSPORT</b></p> <ul style="list-style-type: none"> <li>🚣 Possible Boat/Kayak Ramp</li> <li>🚗 Park &amp; Ride RTN</li> <li>🚊 Public Transport</li> </ul> |
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<sup>1</sup> Paths currently within the planning and/or construction phase  
<sup>2</sup> Paths proposed to improve network connectivity.

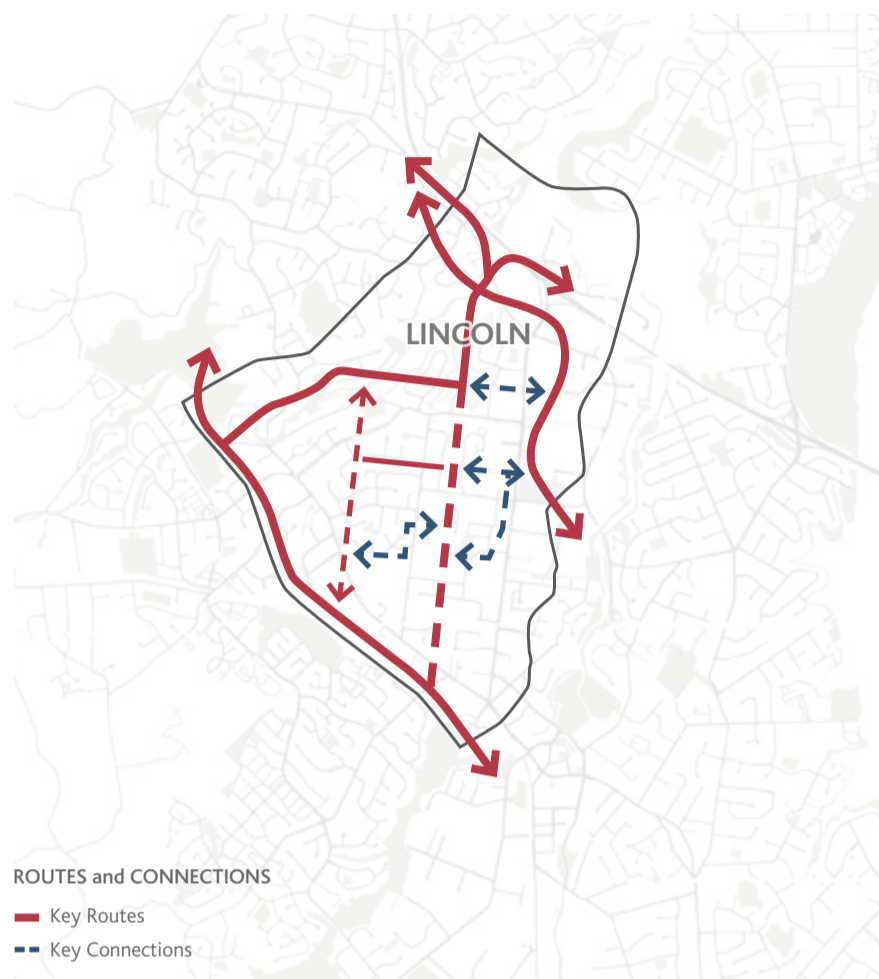
# Focus Area 5 Lincoln

## Character

Lincoln is an area characterised by its arterial road network. Bordered by Central Park Drive to the east and Swanson Road to the west and the extremely busy central arterial spine of Lincoln Road. The Lincoln area possesses a large number of schools and public facilities that service the wider region -i.e Waitakere Hospital and the Trust Stadium and athletic track.

East of Lincoln Road consists of a variety of business, services and park facilities, including a light industry towards the edge of Te Wai-o-Pareira / Henderson Creek. The west is distinctly suburban with large residential blocks ingrained with numerous cul-de-sac and small neighbourhood amenity centres.

## Key Routes and Connections



## Key Routes and Connections

### Create a central connection along Lincoln Road

#### Constraints and Challenges\*

- Vehicle congestion on Lincoln Road restricts connections between local residents and local destinations.
- Interrupted flow from high numbers of entries and exits from commercial businesses along Lincoln Road.
- Width of Lincoln Road.
- Mix-use developments on Lincoln Road.

#### Opportunities\*

- Reduce vehicle volumes and speeds on Lincoln Road.
- Upgrade intersections for safe pedestrian and cyclist passage.
- Improve cycle access to recreational facilities on Lincoln Road.
- Introduce berm planting and traffic calming on Lincoln Road.
- Create attractive walking and cycling environment on Lincoln Road.

### Create a network of paths connecting Lincoln Road with schools, parks and community amenities

#### Constraints and Challenges\*

- Variety of vehicles, such as buses and trucks, on arterials roads restricts space for cyclists.
- There is space on busy arterials for separated cycle lanes.

#### Opportunities\*

- Improve commuter circulation to the number of schools in the area.
- Express paths feed into each other improving transit options and connectivity.

### Create key connections through local street pattern

#### Constraints and Challenges\*

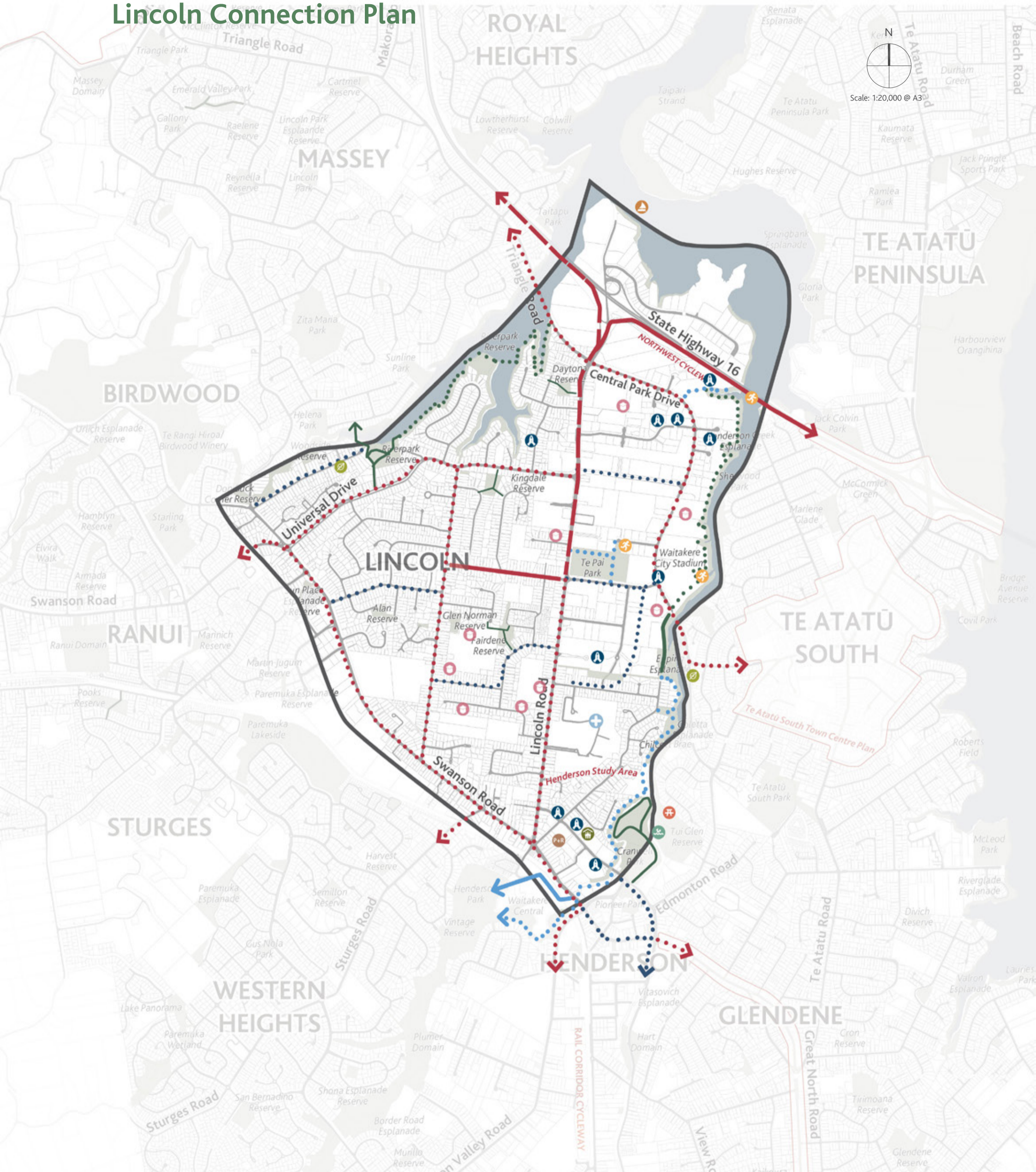
- Narrow streets.
- Large suburban block structure of street pattern.
- Unconnected cul de sac interrupt connectivity.
- Limited route options available.
- On street parking on local streets.

#### Opportunities\*

- Reduce speed limited through local streets.
- Increase cycling and walking to local schools.
- Reduce drop off and pick up congestion around schools.
- Introduce berm planting to improve streetscape.
- Introduce chicanes on local streets around primary schools.

\* In addition to the constraints, challenges and opportunities in section 4.1

# Lincoln Connection Plan



## KEY

- |                                                                                                                                                           |                                                                                                                                                |                                                                                                                                                                                           |                                                                                                                           |                                                                                                                                        |                                                                                                                                                                                                        |                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>— Focus Area Boundary</li> <li>— Parcel Boundaries</li> <li>— Road Network</li> <li>■ Recreations Areas</li> </ul> | <ul style="list-style-type: none"> <li>— PATH TYPE STATUS</li> <li>— Existing</li> <li>— Planned</li> <li>— Proposed / Aspirational</li> </ul> | <ul style="list-style-type: none"> <li>— PATH TYPE</li> <li>— Express Network</li> <li>— Local Network - Street</li> <li>— Local Network - Open Space</li> <li>— Trail Network</li> </ul> | <ul style="list-style-type: none"> <li>— RECREATION</li> <li>— Active Recreation</li> <li>— Passive Recreation</li> </ul> | <ul style="list-style-type: none"> <li>— SOCIAL</li> <li>— Community Gardens</li> <li>— Community Hub/ Neighbourhood Centre</li> </ul> | <ul style="list-style-type: none"> <li>— PUBLIC FACILITIES</li> <li>— Pools/Swimming facilities</li> <li>— Hospital</li> <li>— Place of Worship</li> <li>— Public Library</li> <li>— School</li> </ul> | <ul style="list-style-type: none"> <li>— TRANSPORT</li> <li>— Possible Boat/Kayak Ramp</li> <li>— Park &amp; Ride RTN</li> <li>— Public Transport</li> </ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|

1\_Paths currently within the planning and/or construction phase  
 2\_Paths proposed to improve network connectivity.

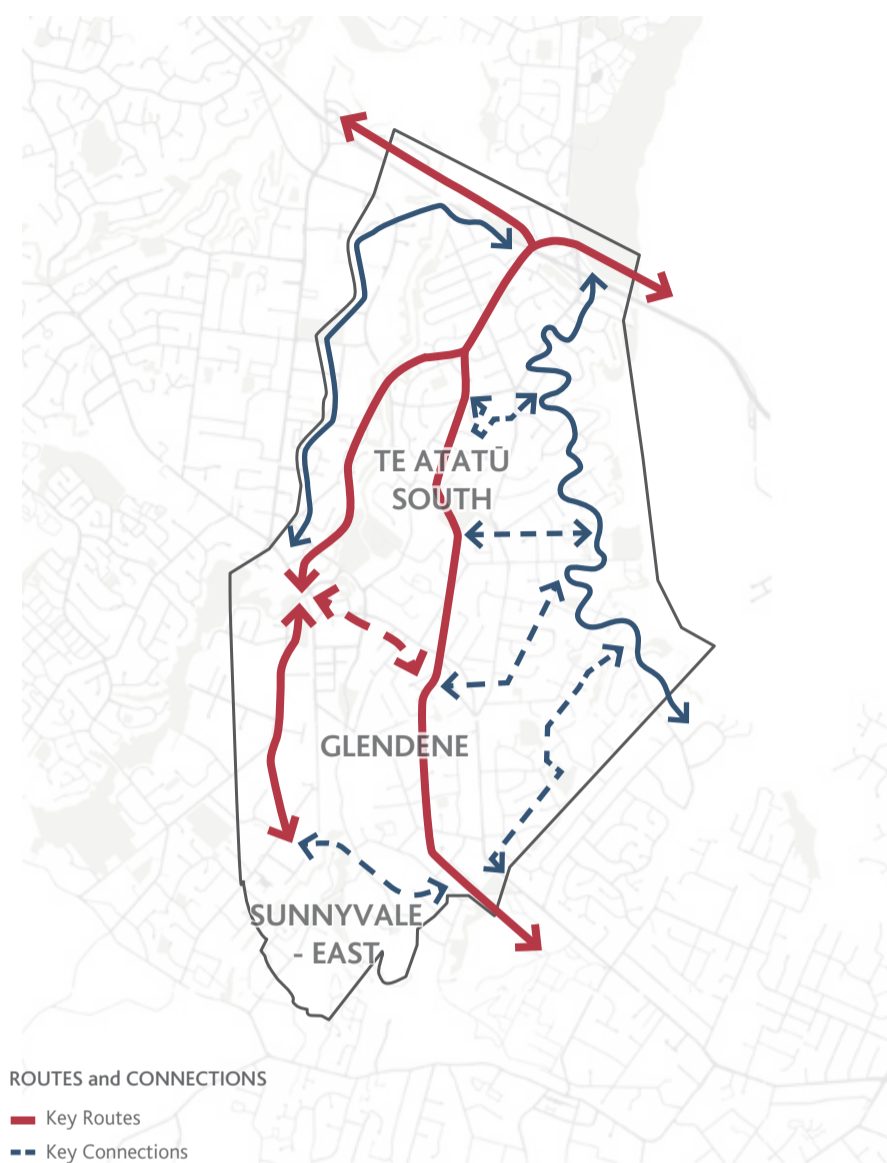
# Focus Area 6 - Te Atatū South, Glendene and Sunnyvale

## Character

Te Atatū South and Glendene form the eastern edge of the Henderson-Massey Local Board area. Te Atatū Road extends from the Western Motorway through to the Glendene local centre and Great North Road, forming the main north-south vehicular spine connecting the two suburbs. Both areas evolved from mass residential subdivision in the 1960/70s and remain predominantly large lot residential. An area of light industrial business exists between the two suburbs located close to the Whau River. Both areas are comfortably serviced with local facilities, schools and parks and due to their raised elevation enjoy exceptional easterly views over the Whau River towards central Auckland.

Separated by the local board boundary the eastern side of Sunnyvale is located to the south of Glendene. Characterised by large residential blocks it is bordered to the west and south by large open spaces - Parrs Park and Waikumete cemetery (both outside the local board boundary).

## Key Routes and Connections



## Key Routes and Connections

### Create a north-south express path network along Te Atatū Road, Great North Road and Edmonton Road.

#### Constraints and Challenges\*

- Vehicle congestion on Te Atatū Road restricts connections between local residents and local destinations.
- Interrupted flow from high numbers of entries and exits from residential and commercial driveways along Te Atatū Road, Great North and Edmonton Road.

#### Opportunities\*

- Improve connection to North Western Express Path.
- Improve safety for cyclists on Te Atatū Road.
- Edmonton Road provides alternative route to Henderson, from Lincoln Road.
- Take pressure off Wai o Pareira / Henderson Creek shared path as a commuter path.

### Create east west connections to Te Whau Path and Te Wai-o-Pareira / Henderson Creek esplanade reserve

#### Constraints and Challenges\*

- Limited number of street terminate at Whau Stream edge.
- Largely unconnected local street pattern.
- Narrow and unsafe walkway network maybe only viable through street connections.

#### Opportunities\*

- Improve recreational opportunities for local residents.
- Provide alternative route connectivity to areas outside local board area.
- Upgrade existing walkways to accommodate more use.
- Introduce CPTED principles into walkway network upgrade.
- Expand recreational and destination options for Te Whau path users.
- Introduce new artwork and wayfinding signage.

### Create a new local path along the Wai o Pareira / Henderson Creek esplanade

#### Constraints and Challenges\*

- Limited space along existing path.
- Ecological restriction surrounding stream edge.
- Overgrown vegetation.

#### Opportunities\*

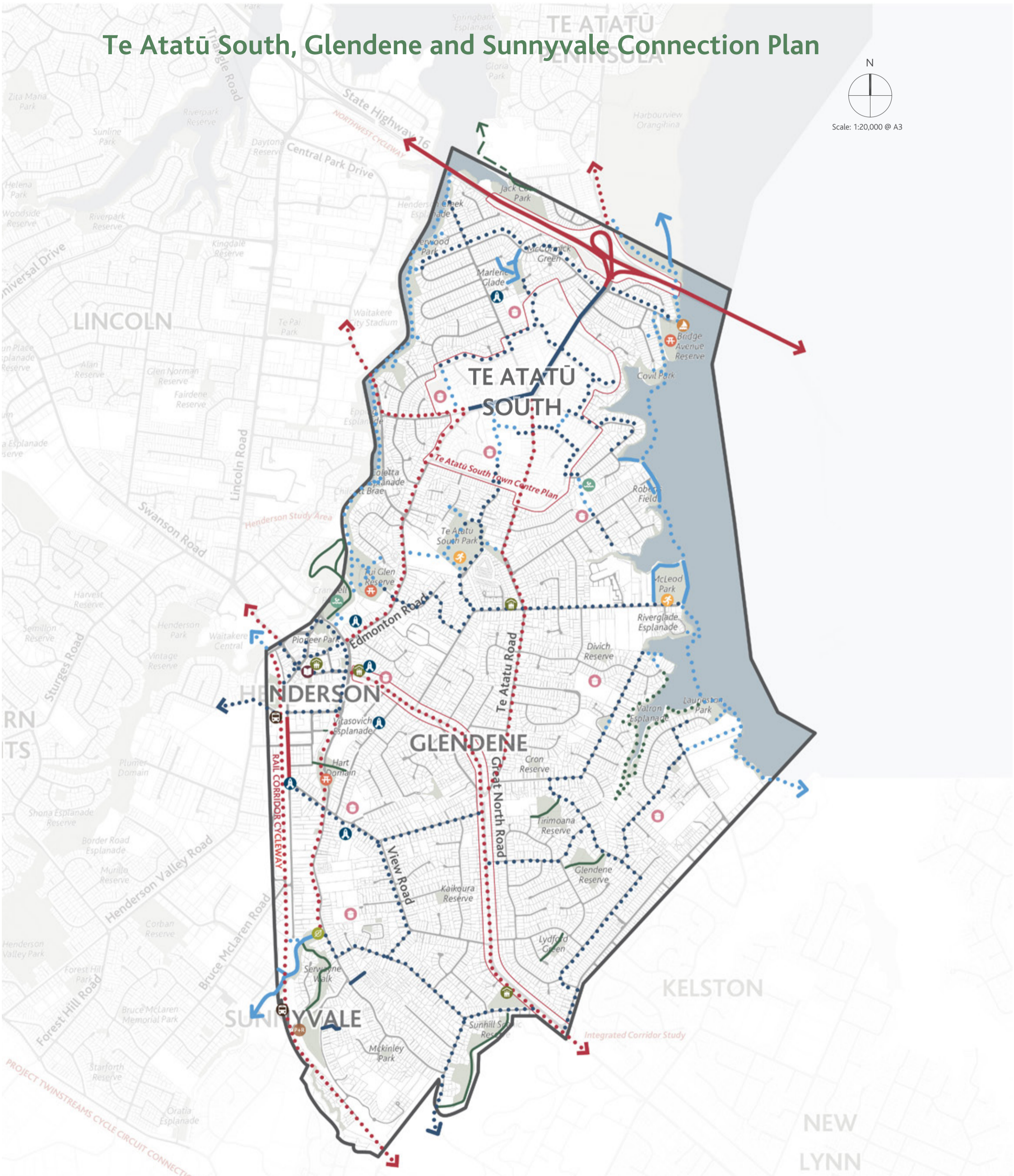
- Upgrade ecological links to stream.
- Remove any invasive plants established along stream edge.
- Reignite community relationship/ sense of ownership with esplanade and Wai o Pareira / Henderson Creek.
- Introduce new artwork and wayfinding signage.
- Improve safety of path - upgrade according to CPTED principles.

\* In addition to the constraints, challenges and opportunities in section 4.1

# Te Atatū South, Glendene and Sunnyvale Connection Plan



Scale: 1:20,000 @ A3



## KEY

- Focus Area Boundary
- Parcel Boundaries
- Road Network
- Recreations Areas
- PATH TYPE STATUS**
- Existing
- Planned
- Proposed / Aspirational

- PATH TYPE**
- Express Network
- Local Network - Street
- Local Network - Open Space
- Trail Network

- RECREATION**
- 🏊 Active Recreation
- 🌳 Passive Recreation
- SOCIAL**
- 🌱 Community Gardens
- 🏠 Community Hub/ Neighbourhood Centre

- PUBLIC FACILITIES**
- 🏊 Pools/Swimming facilities
- 🏥 Hospital
- 🕌 Place of Worship
- 📖 Public Library
- 🎓 School

- TRANSPORT**
- 🚤 Possible Boat/Kayak Ramp
- 🚗 P+R Park & Ride RTN
- 🚊 Public Transport

1\_ Paths currently within the planning and/or construction phase  
 2\_ Paths proposed to improve network connectivity.

# Focus Area 7 Henderson

At the time of writing, Henderson town centre is being investigated by Auckland Transport and Panuku Development to improve walking and cycling connections within Henderson and into neighbouring communities.

This plan will be updated upon completion.

## Key Routes and Connections



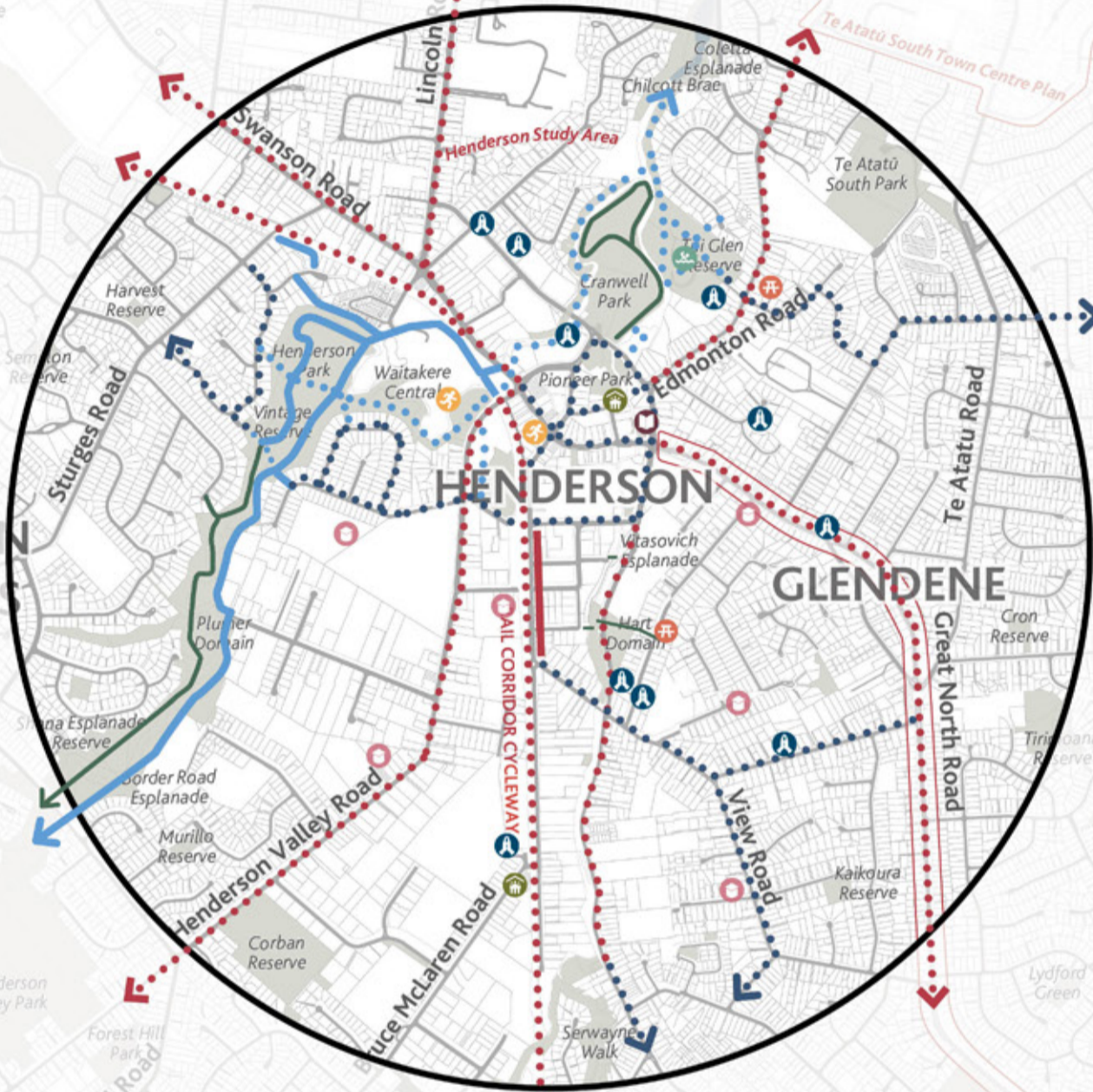
## Key Routes and Connections



# Henderson Connection Plan



Scale: 1:20,000 @ A3



## KEY

- Focus Area Boundary
- Parcel Boundaries
- Road Network
- Recreations Areas
- PATH TYPE STATUS**
- Existing
- Planned
- Proposed / Aspirational

- PATH TYPE**
- Express Network
- Local Network - Street
- Local Network - Open Space
- Trail Network

- RECREATION**
- ⚽ Active Recreation
- ⊕ Passive Recreation
- SOCIAL**
- 🌱 Community Gardens
- 🏠 Community Hub/ Neighbourhood Centre

- PUBLIC FACILITIES**
- 🏊 Pools/Swimming facilities
- 🏥 Hospital
- 🕌 Place of Worship
- 📖 Public Library
- 🎓 School

- TRANSPORT**
- 🚤 Possible Boat/Kayak Ramp
- 🚗 P+R Park & Ride RTN
- 🚊 Public Transport

1\_ Paths currently within the planning and/or construction phase  
 2\_ Paths proposed to improve network connectivity.

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# Part Five

## Next steps

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## 5.1 Overview

The Henderson-Massey Connections Plan will be implemented overtime to achieve the outcomes envisaged in the Local Board Plan. Implementation of this plan will include the upgrade of existing walking and cycling connections (both on and off-road), as well as the creation of new connections on existing streets, within open space land, through designation areas, and/or via property easements. .

### Strategic Questions and Technical Reports

As part of the subsequent phases to develop the design for individual paths and connections further questions will need to be asked of the immediate community to ensure the project fits the community needs, concerns, desires and aspirations. These may include but won't be restricted to.

Examples of some strategic and qualitative questions and technical quantitative investigations that could be required are:

- Are there particular places where the local path network needs to take extra care?
- Are the proposed walking and cycling connections likely to improve access to work, school, recreational facilities or to do shopping?
- Are there any specific issues within the proposed path networks that need to be addressed?
- Are there any concerns which would reduce the use of a particular route - for example: high speed traffic, unsafe environments, difficult road crossings etc?
- Are there any potential heritage, cultural or social stories to be told along the path?
- Are there any potential ecological enhancement opportunities that could be incorporated into the path design?

The process for determining the feasibility and developing the design for individual paths and connections will require further detailed studies. Further investigations/technical reports required may include but not limited to.

- Detailed topographical survey in key locations.
- Geotechnical investigations in key locations.
- Assessment of contaminated land.
- Road safety audit for proposals that include express paths and/or local paths on street.
- Ecological Assessment.
- Arboriculture Assessment.
- Hydrological Assessment.

### Best Practice Guides

Future detailed planning and design shall also take into consideration best practice guidelines, which include:

- Local Path Design Guide (2017)
- Auckland Design Manual
- Te Aranga Design Principles
- Auckland Transport Code of Practice - Cycle Infrastructure design (2013)
- Stormwater Code of Practice (SWCoP 2015)

Related 'best practice' documents such as NZTA's 'Bridging the Gap – Urban Design Guidelines (2013)', DoC's 'Caring for Archaeological Sites' (2007) report, and the Ministry of Justice's 'National Guidelines for Crime Prevention through Environmental Design (CPTED) in New Zealand' shall also be taken into account as designs develop, in addition to all relevant Unitary Plan management layers and area-specific policies.

### Engagement and Consultation

Ongoing community engagement, stakeholder collaboration and partnerships are key to the successful implementation of the Henderson-Massey Connections Plan and will require coordination and commitment from the Henderson-Massey Local Board; Mana Whenua; key stakeholder groups; Auckland Council departments ; Auckland Transport; key related public/utility organisations such as the NZTA, Watercare, Transpower and Vector.

As with this connections plan, it is recommended that project partners and key stakeholders are organised into different groups with corresponding levels of engagement, with different levels of participation at different stages of the

project utilising the International Association for Public Participation (IAP2) Spectrum of Participation. This means that the engagement and consultation process is organised into different engagement streams that run concurrently.

For example, project partners, who include Auckland Council staff, Auckland Transport, Mana Whenua, and the Henderson-Massey Local Board will be involved in key decisions regarding the design, and their concerns and aspirations will be considered and understood during decision making. Where engagement with Mana Whenua will focus on understanding the values, aspirations and cultural narratives specific to the place. Engagement with Auckland Council staff will be more concerned with regulatory compliance and practical matters concerning buildability and maintenance.

Understanding and Mana Whenua values, aspirations and cultural narratives specific to the place will require further engagement and collaboration with Iwi to deliver positive outcomes. It was agreed that exploring the place-based applications of Te Aranga Design Principles was a good first step to the process and that Iwi would like to be involved in reviewing the design details, relevant to Te Aranga Design Principles, as the Connection Plan progresses through subsequent phases.

Key Stakeholders, who include existing network users and the general public, should continue to be involved and consulted during the design process to ensure their concerns and aspirations have been understood and considered. Further engagement will assist key stakeholders to understand the intricacies involved in developing the next stages of the Connections Plan.

Grass-roots community involvement is very important to ensure the ongoing success of the Connections Plan. Local knowledge-sharing and volunteering are needed to provide community ownership, care and responsibility. Community involvement could include but should not be limited to social procurement, youth employment opportunities, planting/weed clearance days, 'adopt a stream' street groups, fundraising, lobbying and artistic input.

### Funding

Funding has been allocated for road improvements in the Local Board areas in Auckland Council's Long Term Plan (LTP) for the next 10 years, and some of this funding could be used to implement the Connections plan. Other funding avenues include Auckland Transport and the NZTA's regional cycleways fund. Henderson-Massey Local Board could also fund paths that occur within open space.

## 5.3 Local Path Design Principles

Local Path networks must primarily meet the needs of all people who use the paths, whether they are walking cycling, in wheelchairs, pushchairs, motorised scooters, with a guide dog, are whether the user is an adult or a child. The design framework is based on the principles of safety, connection, accessibility, comfort and be enabling.



### Safe

Safety and a stress free environment are core tenets of achieving a successful local path network. A consistent level of experience and character within the path type chosen for the route is paramount to its safe function. Crime prevention and enhanced social safety are also keen outcomes of a well designed local path network. CPTED pronounced 'sep-ted' means 'crime prevention through environmental design' and aims to reduce opportunities for crime and antisocial behaviour through designing environments that make committing these acts less easy – reducing opportunities for crime to occur.



### Connected

Local path networks should connect destinations encouraging less use of the motor vehicle. They should seamlessly connect to the wider transport network including express networks. Additionally these networks should be designed to be easily navigated with clear uncomplicated wayfinding signage. Having a consistent look and feel to each path type reduces the need for excess signage, as the route can be logically inferred on the ground.



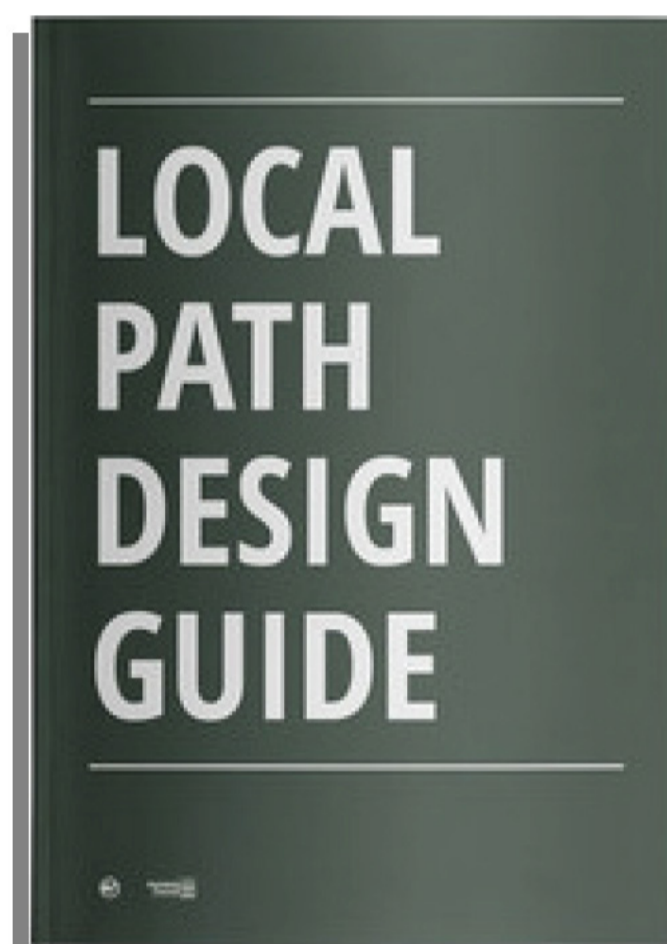
### Accessible and Comfortable

All path/network infrastructure should be accessible to all users no matter what the level of personal mobility. Considerations include ample width, gentle gradients, smooth transition surfaces and attractive surrounds.



### Enabling

Iwi, community and stakeholders should be engaged early in the process to incorporate any local initiatives. Local paths should integrate with the existing streetscape and celebrate Auckland's unique character by responding to and incorporating elements of the surrounding natural and built environment, heritage and culture. Opportunities to include ecological function through planting water sensitive design, low energy/low toxicity materials should be integral to each path network design.



## 5.2 Te Aranga Design Principles

The following design principles are proposed to guide the implementation of the connections plan. The design principles are organised under two headings, Te Aranga Design Principles and Local Path Design Principles.

The Auckland Design Manual (ADM) notes that the key objective of the Te Aranga Māori Design Values and Principles is to enhance the protection, reinstatement, development and articulation of Mana Whenua cultural landscapes and to enable all of us (mana whenua, mataawaka, tauivi and manuhiri) to connect with and to deepen our collective appreciation of 'sense of place'. The following core Māori values have informed the development of the outcome-oriented Te Aranga Māori Design Principles:

- Rangatiratanga
- Kaitiakitanga
- Manaakitanga
- Wairuatanga
- Kotahitanga
- Whanaungatanga
- Maturanga



### Mana Rangatiratanga - Authority

Outcome\_ The status of iwi and hapū as Mana Whenua is recognised and respected.

#### Attributes

Provides a platform for working relationships where Mana Whenua values, world views, tikanga, cultural narratives and visual identity can be appropriately expressed in the design environment.

High quality Treaty based relationships are fundamental to the application of the other Te Aranga principles.



### Whakapapa - Names and Naming

Outcome\_ Māori names are celebrated.

Opportunity for re-naming sites throughout the connections network.

#### Attributes

Recognises and celebrates the significance of Mana Whenua ancestral names. Recognises ancestral names as entry points for exploring and honouring tūpuna, historical narratives and customary practises associated with development sites and their ability to enhance sense of place connections.



### Taiao - The Natural Environment

Outcome\_ The natural environment is protected, restored and / or enhanced.

#### Attributes

Sustains and enhances the natural environment. Local flora and fauna which are familiar and significant to Mana Whenua are key natural landscape elements within urban and / or modified areas. Natural environments are protected, restored or enhanced to levels where sustainable Mana Whenua harvesting is possible.



### Mauri Tū - Environmental Health

Outcome\_ Environmental health is protected, maintained and / or enhanced.

#### Attributes

The wider development area and all elements and developments within the site are considered on the basis of protecting, maintaining or enhancing mauri. The quality of wai, whenua, ngahere and air are actively monitored. Community wellbeing is enhanced.



### Mahi Toi - Creative Expression

Outcome\_ Iwi/hapū narratives are captured and expressed creatively and appropriately.

#### Attributes

Ancestral names, local tohu and Iwi narratives are creatively reinscribed into the design environment including: landscape; architecture; interior design and public art.

Iwi / hapū mandated design professionals and artists are appropriately engaged in such processes.



### Tohu - The Wider Cultural Landscape

Outcome\_ Mana Whenua significant sites and cultural landmarks are acknowledged.

#### Attributes

Acknowledges a Māori world view of the wider significance of tohu/landmarks and their ability to inform the design of specific development sites.

Supports a process whereby significant sites can be identified, managed, protected and enhanced.

Celebrates local and wider unique cultural heritage and community characteristics that reinforce sense of place and identity.



### Ahi Kā - The Living Presence

Outcome\_ Iwi/hapū have a living and enduring presence and are secure and valued within their rohe.

#### Attributes

Mana Whenua live, work and play within their own rohe.

Acknowledges the post Treaty of Waitangi settlement environment where iwi living presences can include customary, cultural and commercial dimensions.

Living iwi/hapū presences and associated kaitiaki roles are resumed within urban areas

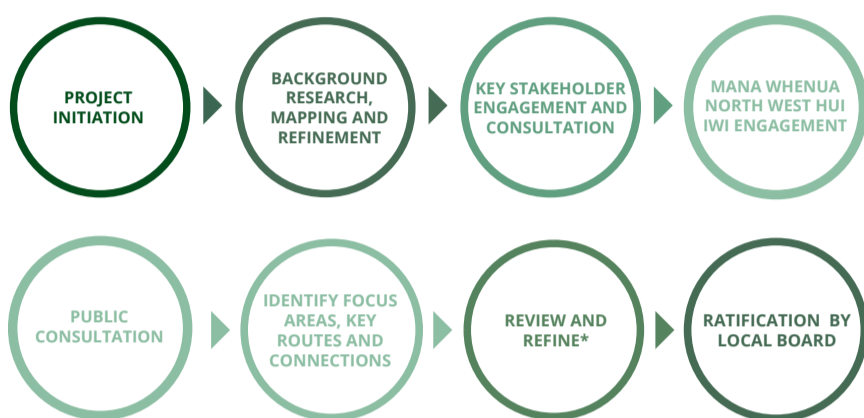
### Application

While the Te Aranga Design Principles are well recognised and formally adopted by Auckland Council it is important to note, that in keeping with the principle Mana Rangatiratanga, it should not be assumed that Mana Whenua want to use these principles to inform their contribution to the design. Whether to use this framework or not should be confirmed as part of the initial engagement with the relevant Iwi authorities.

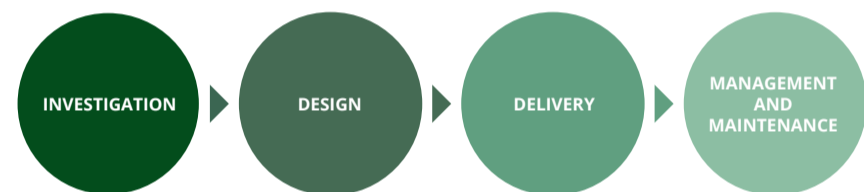
## 5.4 Summary of Process

The Henderson-Massey Connections Plan presents a vision of an entire network of connection paths connecting town centres, schools, public facilities, recreation areas and public transport hubs. It is a long-term plan with the aim to significantly improve walking, cycling and ecological connections within the urban environs of the Henderson-Massey Local Area. The Connections Plan provides a thorough exploration of the places and destinations which would greatly benefit from walking and cycling connections. Key routes and connections have been identified and constraints, challenges and opportunities have been outlined at a high level to help frame the key phases necessary to plan, design, implement and maintain a path as part of the Henderson-Massey Connections Plan.

### Henderson-Massey Connections Plan Process



### Next Steps



### Investigation Phase

The purpose of the investigation phase is to test the feasibility and viability of a key route and/or key connection. A feasibility study is often completed to fulfill the requirements of the investigation phase.

The investigation phase will involve continued engagement with project partners and stakeholders. At a minimum, a draft feasibility design should be prepared with project partners and stakeholders and the public should be consulted.

The investigation phase can be organised into a sequence of 5 key phases:

- Identify and confirm neighbourhood destinations, key routes and connections
- Collect and analyse base data
- Identify and prioritise paths
- Identify key design requirements
- Rough order of costs

### Design Phase

The design phase will continue to develop, refine and confirm the alignment and design requirements developed through the investigation phase. The design phase typically consists of three phases - concept design, developed design and detailed design and tender documentation for construction. The design phase will also include the preparation for lodgement of resource and building consent and as with the investigation phase, continued engagement with project partners and stakeholders.

### Delivery Phase

The delivery phase involves the procurement of a contractor to build the proposed project, the construction of the project and resolution of any issues that emerged through construction before practical completion and the project is formally handed over to the asset owner and party responsible for managing and maintaining the path over the long term. In most cases this will be Auckland Council.

The delivery phase will need to consider:

- Tender evaluation process.
- Staging options.
- Construction timeframes and seasonal considerations.
- Any approvals required during construction such traffic management plan.
- Quality assurance and quality control processes.
- Construction observation and monitoring.

### Management and Maintenance

The ongoing management and maintenance of the project needs to be established early in the process and by the time the construction of the project is complete responsibility for ongoing maintenance and costs need to be agreed with the part of Auckland Council or Auckland Transport responsible for future maintenance of these features, prior to the design being completed.

During the design phase, consideration should be given, but not limited to:

- Durability and ease of maintenance of all surfaces and hard landscape features such as furnishing and lighting.
- Establishment and maintenance requirements of plants and with the expectation that in most cases maintenance is going to be sporadic and low maintenance native plants are recommended.
- In some situations, provision will need to be made for emergency response and maintenance vehicles.



An aerial photograph of a park walkway. In the center, a wide, light-colored paved path runs horizontally. Two people are walking on this path. Above the path, a wooden boardwalk with a railing curves through a lush green area with various plants. Below the path, a concrete ramp leads down to a lower level. The surrounding area is filled with dense greenery, including ferns and trees. The text 'Part Six Appendices' is overlaid on the left side of the image, flanked by two horizontal white lines.

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# Part Six

## Appendices

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## Analysis maps

The following maps provide an overview of the priority features of the Henderson-Massey Local Board Area which have been considered in the development of the Connections Plan and should be considered as part of the planning and design of individual paths / projects.

# A.1 Blue Green Network

This map presents the Henderson-Massey blue green networks including the priority features of the environment that need to be considered.

## **Blue/Water Network**

Henderson-Massey has a wide selection of streams and waterways stretching from the Waitematā Harbour and has a strong existing open space network.

The map displays flood prone areas, floodplains as well as the existing permanent watercourses and catchment boundaries. Some of the connections network will naturally follow streams and waterways as many parks and recreation areas are also located in these landscapes. Areas that are prone to excess water pooling from extreme weather events, should be considered in the alignment and materiality design process of the path network.

## **Green/Vegetation Network**

### **Significant Ecological Areas (SEA)**

An SEA is an area of significant indigenous vegetation or a significant habitat of indigenous fauna, that is identified for protection within the Unitary Plan. Any vegetation removal or alteration within an SEA would require a resource consent. More stringent provisions may also apply for earthworks and other activities in and around paths, to ensure development is directed away from SEAs as much as possible.

Auckland Council used five criteria to assess whether or not a natural area was significant, these were: representativeness; threat status and rarity; diversity; stepping stones, migration pathways and buffers; and uniqueness or distinctiveness. An ecological assessment of a site against these criteria was used to determine the site's significance.

In developing the connection plans network, further protection, improvement, extension and/or connections between any existing SEA should be considered as part of the identification and prioritisation of key routes and connections.

## **Notable Trees**

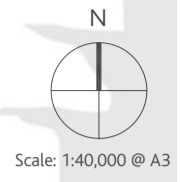
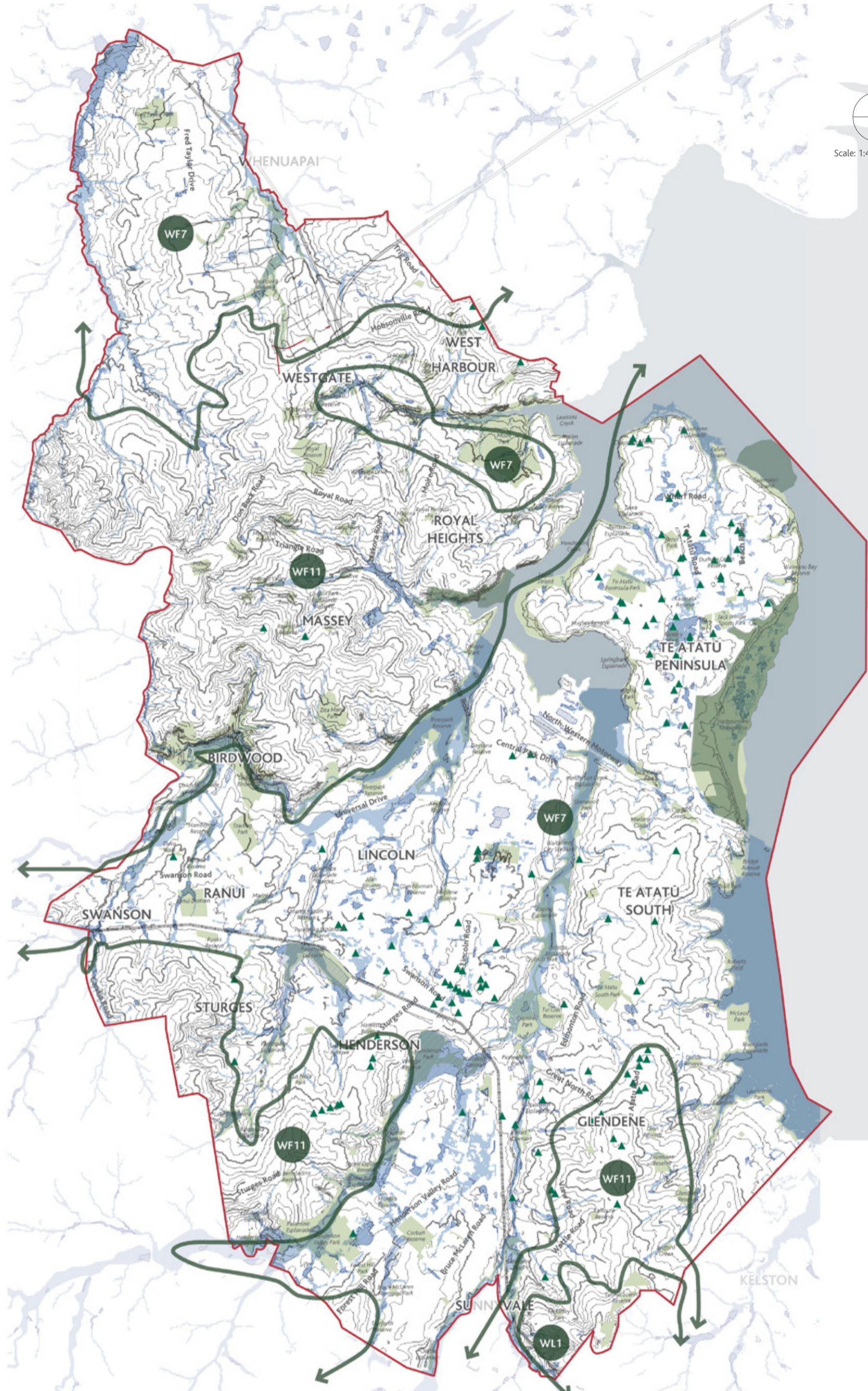
Trees shown on this map have been considered to be notable and identified for protection by provisions in the Auckland Unitary Plan to ensure they are not damaged or destroyed.

## **Terrestrial and wetland ecosystems**

Shown on the map is the regional variants of 'potential' indigenous ecosystem vegetation.

Thirty-six terrestrial and wetland ecosystems, and their regional variants that have been identified by Auckland Council as occurring in the Auckland region. The work is based on the national ecosystem classification system developed by the Department of Conservation.

In simple terms, an ecosystem is a biological community of interacting organisms and their physical environment. As defined by Keith et al. (2013), ecosystems are units of assessment that represent complexes of organisms and their associated physical environment within an area. Three categories occur in the Henderson-Massey.



**KEY**

- Contours
- Local Board Boundary
- Parcel Boundaries
- Road Network
- Recreations Areas
- Ecological Boundaries

**ECOLOGY**

- Significant Ecological Area
- Notable Trees
- WF7 -Puriri Forest
- WF11 -Kauri Podocarp Broadleaved Forest
- WL1 -Mānuka Gumland Grass Tree -Scrub/ Sedgeland

**HYDROLOGY**

- Flood Prone Areas
- Flood Plains

## A.2 Destinations

Destinations highlight the places of employment, services, education and social interaction visited regularly by the community and represent the most likely trip generators for local excursions. Linking local communities with these destinations presents the primary opportunity to promote and enable walking and cycling in the Henderson-Massey Local Board area.

Identifying community destinations assist the decision making and design process in order to allocate and deliver the appropriate route and path type which will encourage safe and accessible walking cycle passage for local trips.

Active Recreation includes sports grounds, such as The Trust Arena and/or Te Pai Park. Passive recreation consists of parks and reserves that have children's playgrounds and conservation areas used for walking and informal recreation.

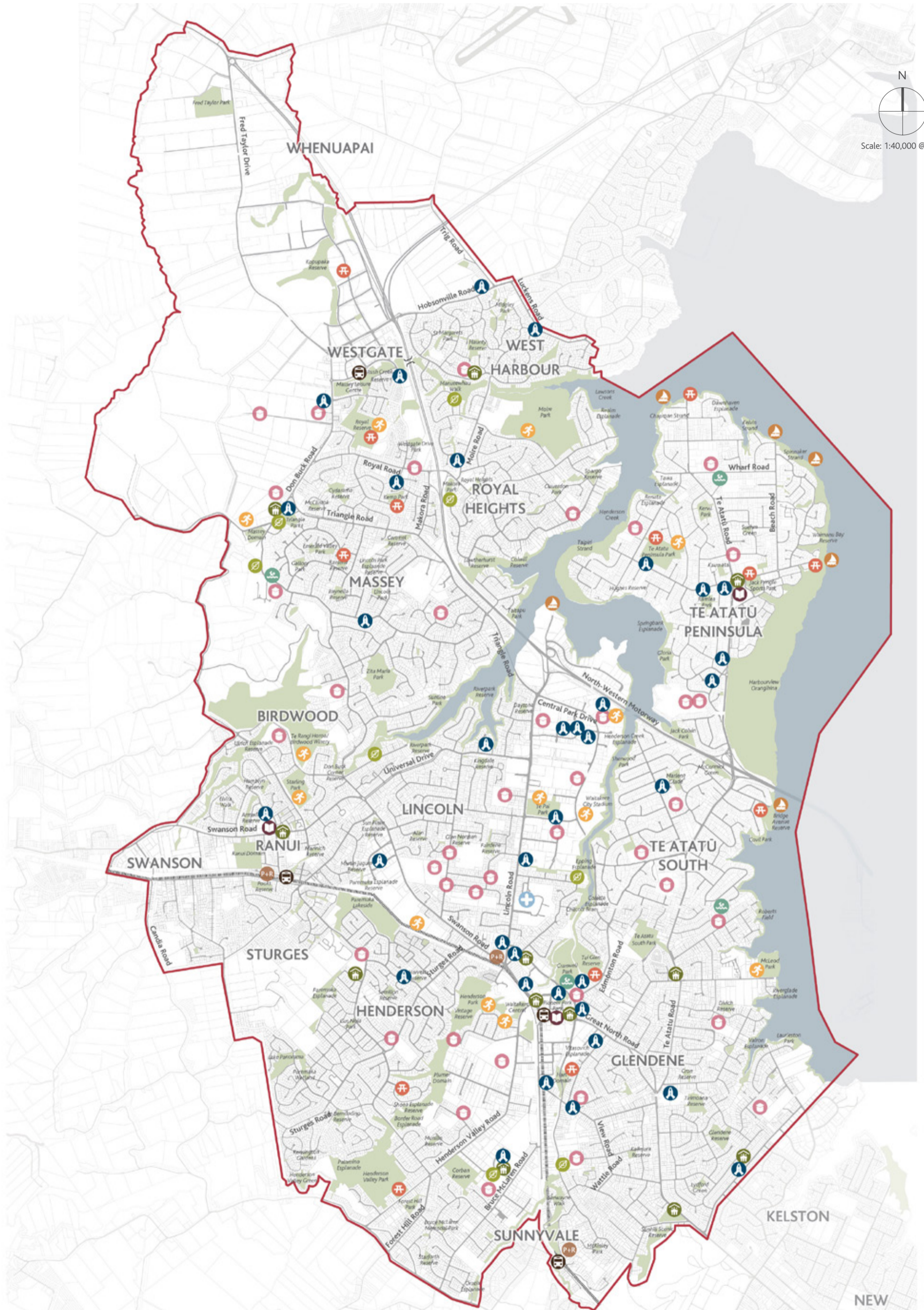
Schools are critical points of focus for the Connection Plan. Provision of safer and more accessible connections to schools has the potential to radically reduce private vehicle use and improve safety around school entrances. Connection to and around schools have the potential to reinforce existing, and enable new walking school buses and bicycle trains.

Community hubs and neighbourhood centres have been assigned together as they are often closely associated with each other. Generally described as locations that form, or are a part of, small shopping strips providing retail, commercial and community services for the surrounding community. These tend to be located in residential locations, however they also appear in business zones.

Library and community centres are occasionally combined and provide multiple opportunities for the community. Henderson-Massey has an exceptional choice of public libraries that double as community centres, such as Te Manawa at Westgate.

Community gardens are becoming more common in Auckland communities. Community gardening attracts a variety of people for a diversity of reasons and has the potential to create inclusive community spaces.

Churches and places of worship are weekly gathering venues and are often host other community events and provide community services. Predominantly located in residential areas they provide an important area of focus for local path networks. Cycle and walkway connections will assist the reduction of weekend traffic and parking congestion.



**KEY**

- Local Board Boundary
- Parcel Boundaries
- Road Network
- Trainline
- Recreations Areas

**RECREATION**

- ⚽ Active Recreation
- ⛶ Passive Recreation

**SOCIAL**

- 🌿 Community Gardens
- 🏠 Community Hub/  
Neighbourhood Centre

**PUBLIC FACILITIES**

- 🏊 Pools/Swimming facilities
- 🏥 Hospital
- 🕌 Place of Worship
- 📖 Public Library
- 🎓 School

**TRANSPORT**

- 🚣 Possible Boat/Kayak Ramp
- P+R Park & Ride RTN
- 🚗 Public Transport

## A.3 Socio Cultural

Socio cultural refers to population/demographics/sites of cultural significance and cultural landscapes.

This map indicates population size according to the designated focus area.\* The total population of Henderson-Massey was recorded as 107,685 in the 2013 Census, 9.0% rise since the 2006 census. Population distribution is concentrated around the Henderson metropolitan centre with smaller suburban centres accommodating most of the residential population.

Population density is important in connections network planning as it shows where potential users will be coming from, and it is logical to focus efforts to promote and enable walking and cycling in and around these areas.

### Heritage

The map also displays heritage sites as indicated on the Auckland Council Historic Heritage Overlay. Historic heritage places may include; cultural landscapes, buildings, structures, monuments, gardens and plantings, archaeological sites and features, traditional sites, sacred places, townscapes, streetscapes and settlements. Identifying the location of heritage sites is crucial to designing the connections network for both protection of the site and the opportunity to incorporate its significance into the design details.

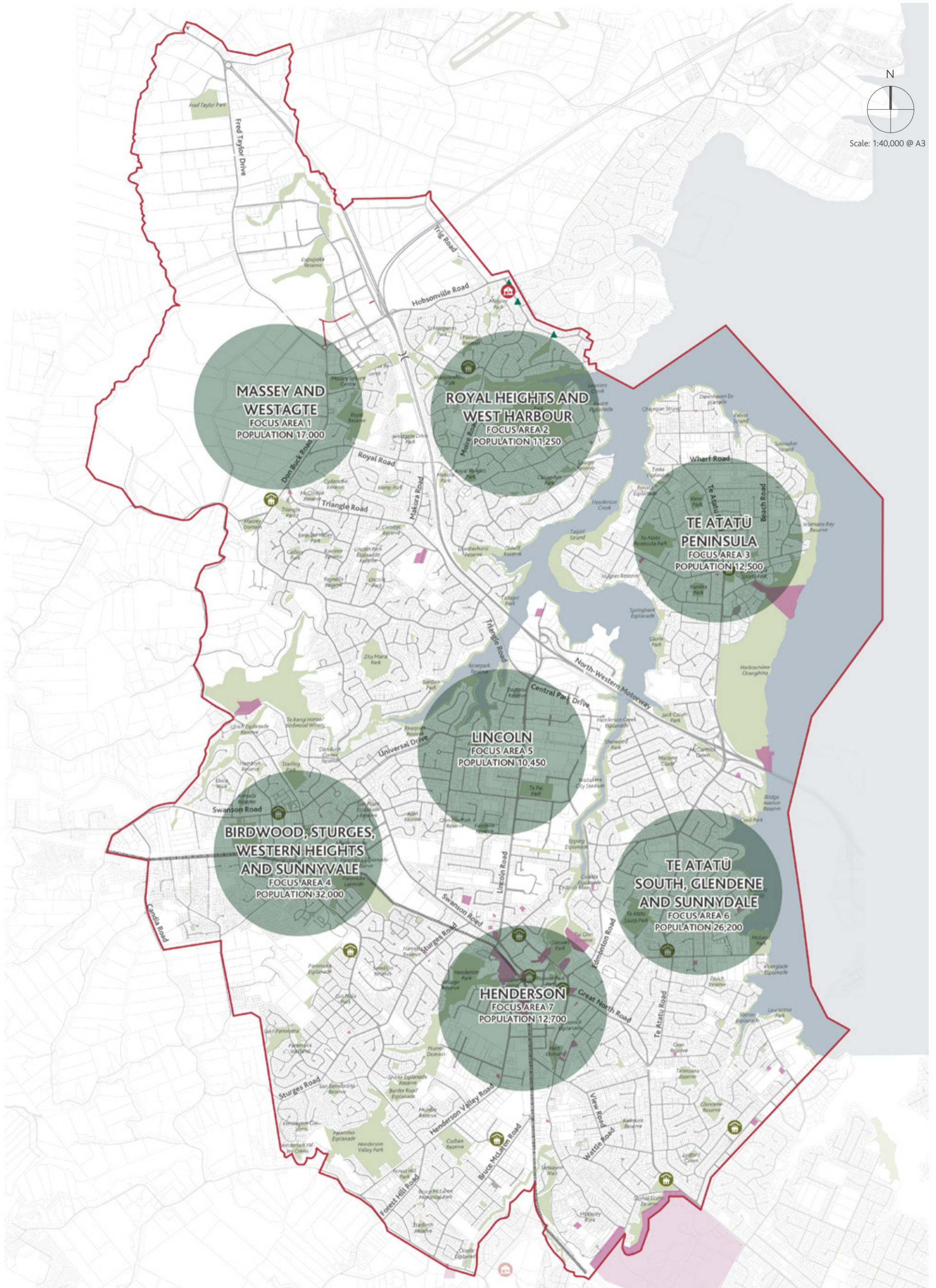
### Community Centres and Marae

Community centres and Marae are also located within this map to highlight their socio cultural significance and to assist identifying keys routes that could further linked them into their surrounding neighbourhoods.

### Cultural Landscapes

Ancestral relationships with Mana Whenua, archeological sites and outstanding or high natural landscapes overlays must be also be recognised and provided for when considering key routes and connections.

\* Population figures were sourced from Stats New Zealand



**KEY**

- Local Board Boundary
- Parcel Boundaries
- Road Network
- Recreations Areas

**RECREATION**

- Community Centres
- Marae
- Heritage Sites

## A.4 Transport

### Road Hierarchy

Auckland's roading is organised into a hierarchical network of motorways, roads and streets. Highways and main arterial roads are typically for heavy traffic and fast direct travel where as local roads are slower speed environments with lower traffic volumes and speeds. Consideration of the road hierarchy is crucial to determining the appropriate path design and safest route choice.

Generally there is no access for walkers and cycling access to highways. Express paths are typically located on regional arterials and connector roads, where as local paths are located on local streets.

The road hierarchy also affects potential street green infrastructure initiatives to support integration of water sensitive design features and the green links network. Methods for providing safe crossing points will also be affected by the road hierarchy - for instance, un-signalised crossings are unlikely to be permitted on arterial roads.

### Public Transport

Park and Ride facilities provide local commuters to connect with core public transport routes. Bike racks are available at the Rānui, Sturges and Sunnyvale Park and Ride's, encouraging and supporting the objective to reduce private motor vehicle use. There are three park and rides in the Henderson Massey area.

A frequent Service Network bus station has been proposed for Te Atatū intersection and SH16, expected delivery of this project is unknown at the time of this report.

### Walking routes

This map shows existing off street walking routes within the Henderson-Massey area. The Connections Plan leverages off this existing network and seeks to link into these established local path - open space and trail networks expanding pedestrian mobility and serviceability.

Walking School Bus (WSB) routes (are not shown on the map) have been promoted and developed by Auckland Transport and local communities to provide a safe and healthy environment for children to walk to and from school under the supervision of an adult. Henderson Massey has an increasing number of WSB routes which could be considered when the Connections Plan key routes proceed to feasibility stages.

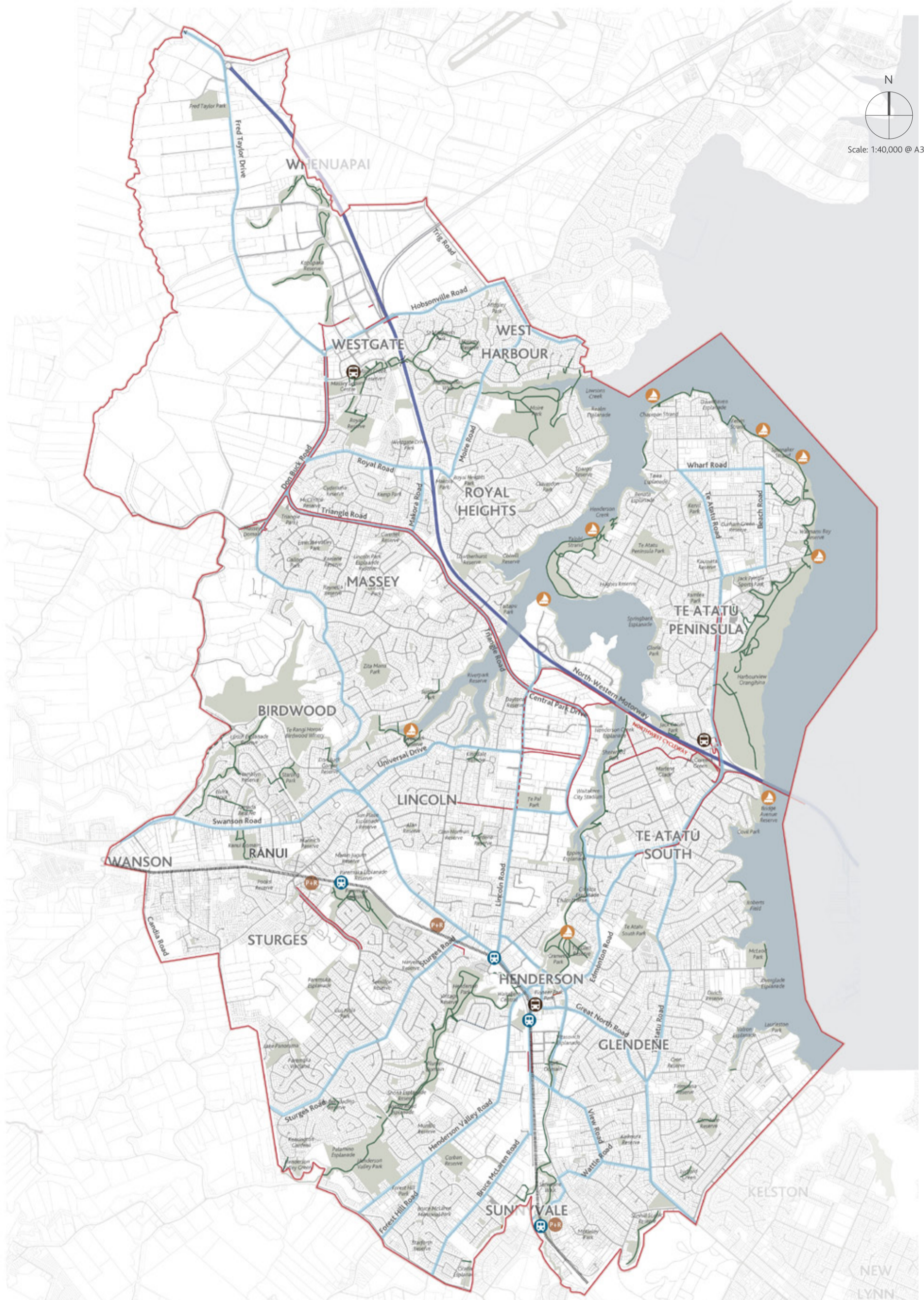
### Cycling routes

The map doesn't differentiate express, open space local paths and trail network throughout the Henderson-Massey area. Identifying and connecting existing paths provides missing links and expand the network. For example, the recent inclusion of a walking and cycling bridge over SH16 at westgate has improved pedestrian and cycle linkage over a major obstacle that previously would have been avoided.

### Boat Ramps

This map illustrates existing entry/exit ramps for kayak or small boat access along the Henderson-Massey stream network and harbour edge. These points have been identified to highlight the potential development of a Kayak trail or a 'blue-way' for the Henderson-Massey Local Board Area, as an extra opportunity to link land and water for recreational and commuting opportunities.





**KEY**

- Local Board Boundary
- Parcel Boundaries
- Road Network
- Train Line
- Recreations Areas

**ROAD HIERARCHY**

- State Highway
- Urban Route
- Local Roads

**ROUTES**

- Walking routes
- Cycling routes

**TRANSPORT**

- Possible Boat/Kayak Ramp
- Park & Ride RTN
- Public Transport

## A.5 Pedestrian and Cycle Sheds

A pedestrian or cycle shed refers to the walkable or cyclable catchment displayed in map form showing the area that can be covered within a 5 or 10 minute distance from any centre, transport hub or specific destination. The walkable or cyclable catchment is simply a technique for the comparative evaluation of how easy it is to move through an urban area to get to and from centres or facilities.

With the help of geospatial analytical data, sourced from Targomo, analysis of cycling and pedestrian catchments surrounding key destinations in the Henderson-Massey area were measured and displayed on a series of maps.

They show the actual street area covered within a 5 minute walking distance and a ten minute cycling distance. These maps inspired some of the proposed and aspirations paths within the Connections Plan.

### Maps created

Local retail centres

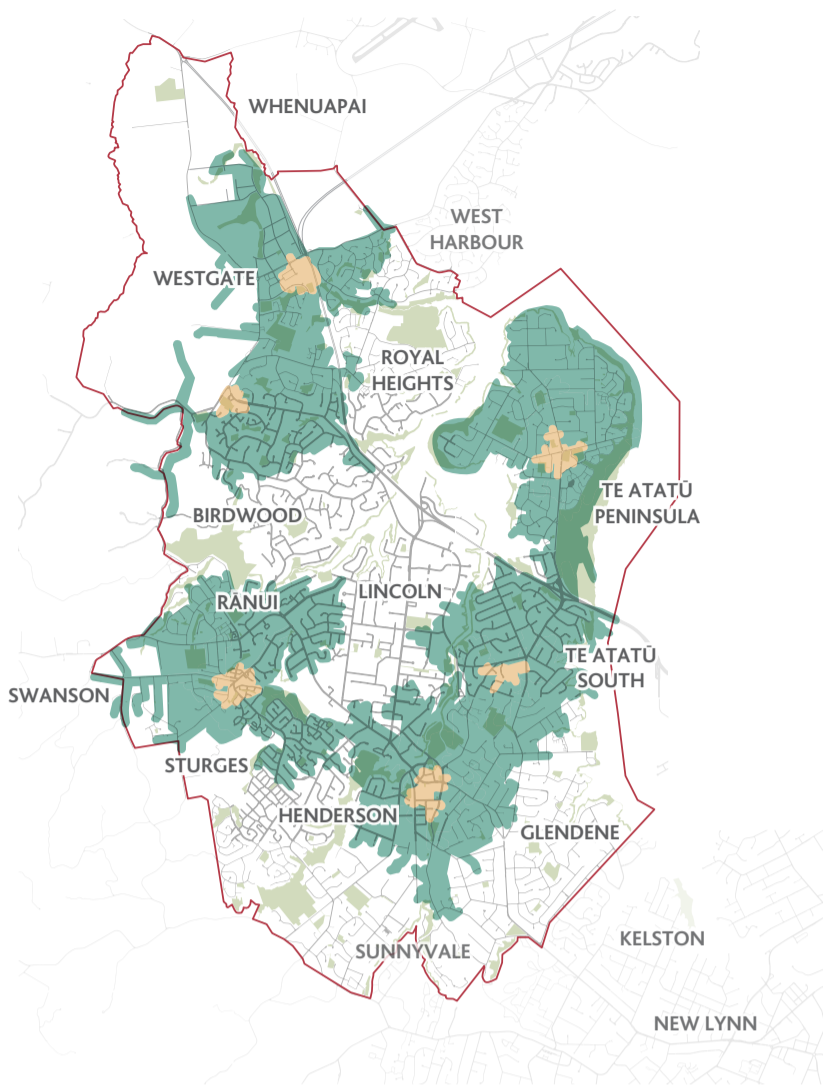
Destinations

Schools

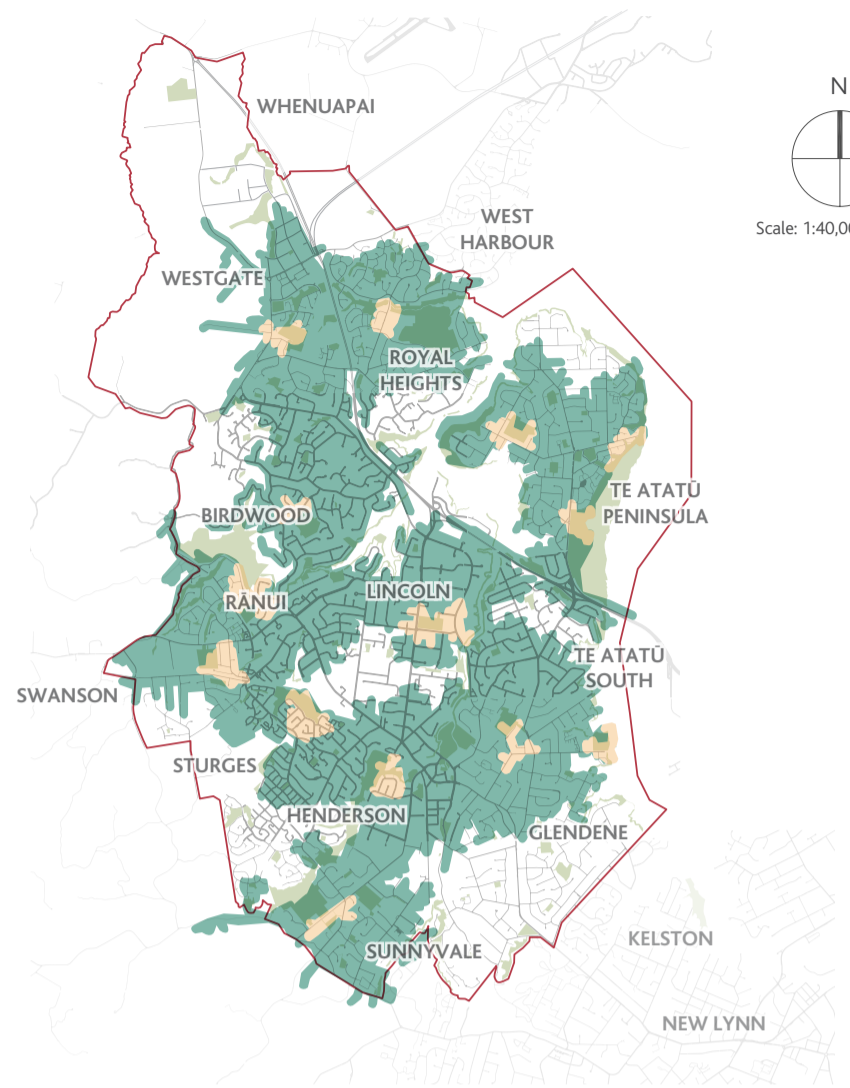
Transport

Analysing a destination based ped shed maps can assist the process of prioritising key routes and connections. As a form of digital ground proofing tool, ped sheds can provide valuable insight into which streets or pathways provide the most trouble free, energy efficient and convenient route to a targeted destination.

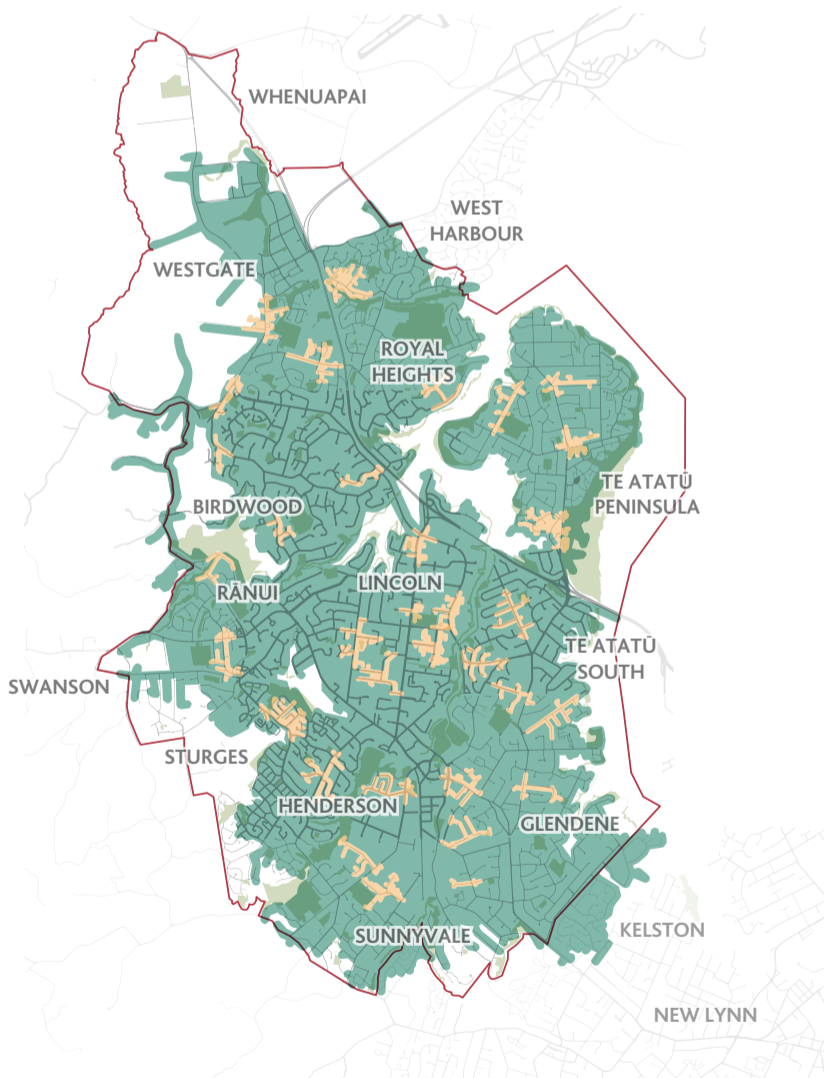
They supply an additional element of detail to assess the extent of pedestrian and cycle movement within communities, and between areas, and can assist decision making surrounding which key routes and connections would be worth investigating further.



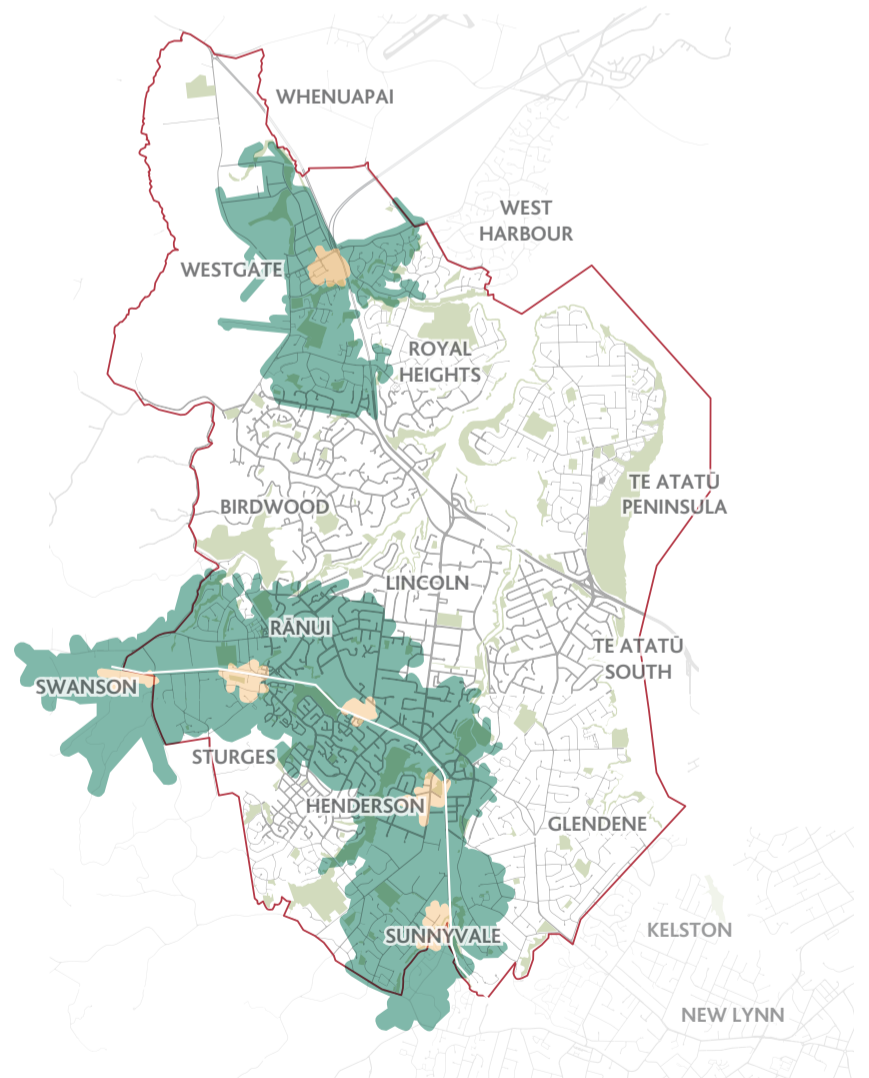
Local Retail Centres



Destinations



Schools



Transport Hubs

KEY

- Local Board Boundary
- Parcel Boundaries
- Road Network
- Trainline
- Recreations Areas
- Pedestrian Shed 5 min
- Cycle Shed 10 min

