

Waitematā Urban Ngahere

Action Plan

September 2019





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Introduction



Image 1: View of streetscape within the City Centre

The Waitematā Urban Ngahere Action Plan is a positive step towards seeking to recognise and replenish Auckland's urban forest. It is the result of determined advocacy of the Waitematā Local Board, community groups and stakeholders.

We are proud to be the first local board to deliver a localised urban ngahere action plan, which is intended to deliver on Auckland Council's Urban Ngahere (Forest) Strategy (reference graphic on page 8). We also committed to enhance the urban forest and biodiversity in the Becoming a Low Carbon Community Action Plan (2015).

We developed the Waitematā Greenways Plan (2013) to connect our parks and open spaces and will continue to explore planting opportunities through these corridors to increase biodiversity and will continue to encourage community initiatives such as native urban forest regeneration, pollinator paths and fruit trees. In the Urban Forest of Waitematā Local Board in 2013 (March 2017) report, the Waitematā Local Board requested the development of an action plan to address the pressures on the urban forest and loss of tree cover and to meet the targets set in Auckland's Urban Ngahere Strategy.

The strategy has a stated target to increase Auckland's tree canopy cover from an estimated 18 per cent to 30 per cent by 2050. In addition, the strategy also states an aim of having at least 15 per cent tree canopy cover in every local board area within this timeframe. Given the above, it is clear that a coordinated approach to achieving the targets for both local board areas and region-wide is necessary.

With the extent of the urban forest within the Waitematā local board area having now been assessed¹ we understand the need for a large number of planting projects to be initiated, committed to and advanced in the short and medium term so that a flourishing urban forest can continue to develop into the future. Extensive national and international urban forest studies are in unison when extolling the benefits that the "lungs of a city" can bring to its inhabitants [reference graphic on page 6].

There are numerous benefits associated with having, developing and maintaining a flourishing urban forest.

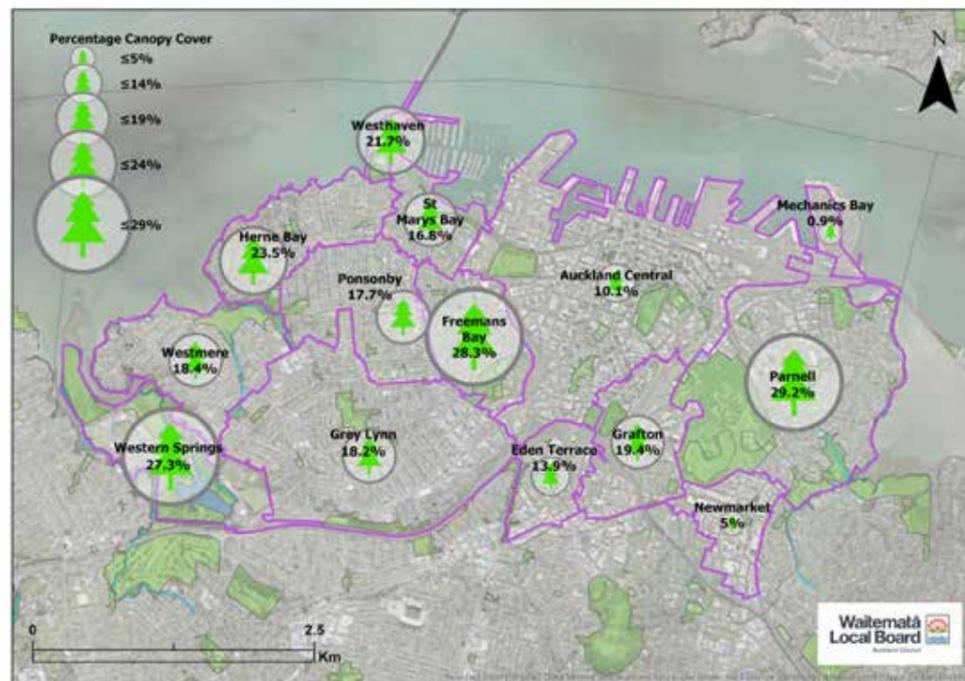
The Urban Forest of Waitematā Local Board in 2013 report states that, as at November 2013, the Waitematā local board area has 19 per cent tree canopy cover; 4 per cent over the desired minimum local board target detailed in Auckland's Urban Ngahere (Forest) Strategy – please refer to the 'Waitematā Local Board – Urban Tree Map' LiDAR map in the appendices of this report and Map 1 below.

It is important to note that the supporting data is now over 5 years old. With approximately 45 per cent of the local board area's 'suburban' urban forest growing on private land which is subject to little, if any, tree protection legislation, by-laws or policies it is reasonable to assume that over the passage of time since the data was last recorded, with no coordinated tree planting plan in place,

urban forest canopy coverage within the Waitematā local board area will have declined.

Given the array of influences that can impact on our local natural environment, commitment to a well-considered tree planting action plan is required. For the betterment of our collective urban forest, the local board is pleased to make such a commitment.

A coordinated action plan, along with an effective long-term maintenance regime and well considered tree protection legislation, by-laws or policies will go a long way towards protecting, enhancing and maintaining a vibrant and essential urban forest within the Waitematā local board area.



Map 1: Depicts 2013 tree canopy cover in each suburb of the Waitematā local board area

Ngā painga o te ngahere ā-tāone o Tāmaki Makaurau

Benefits of Auckland's urban ngahere



Urban Forest Strategy

Objectives



Growing

Auckland needs to grow its urban ngahere to increase and amplify the benefits trees provide, along with addressing distributional inequity. By expanding and enriching its urban ngahere, Auckland will maximise the social, environmental, economic and cultural benefits that trees, shrubs and other vegetation bring to an urban environment.



Protecting

Protecting existing urban ngahere is crucial to safeguarding the added values and benefits larger mature trees provide. Caring for saplings is critical for ensuring older trees are replenished before the end of their life, ensures our urban ngahere grows over time and publicly-funded planting is successful.

Mechanisms



Engage

Engage with partners and stakeholders – with mana whenua, residents, private landowners, community organisations, network utility operators and the private sector to ensure the urban ngahere is well managed, its benefits are well recognised and that growing and protecting the urban ngahere on public and private land is widely supported.



Manage

Manage the city's urban ngahere on public land through coordinated planning, strategic planting and smart, innovative urban design while facilitating best practice standards for work on and around trees through vegetation maintenance contracts.



The Whats, The Whys & The Whens

What is a urban ngahere action plan?

Why is a urban ngahere action plan needed?

When does a urban ngahere action plan get implemented?

This section provides details and answers to the 'whats', the 'whys' and the 'whens' of an effective urban ngahere action plan.

The What

This urban ngahere action plan:

- Is a road map that spells out what steps are required in order to achieve the stated goals of the Waitemata Local Board as they relate to the urban forest within the local board area boundaries.
- Details objectives and actions that support the Waitemata Local Board's urban forest protection, development and maintenance goals.

The Why

This urban ngahere action plan:

- Is needed as currently there is no coherent tree planting plan to support the promotion, protection and enhancement of the urban forest within the boundaries of the local board area.
- Is required as a recent high level assessment has identified tree canopy cover loss throughout the local board area.
- Is necessary as a high level assessment of the current tree stock within the local board boundaries revealed vulnerabilities in the age spread, condition, species range and longevity of the existing tree canopy cover.

The When

This urban ngahere action plan:

- Outlines the requirements necessary to undertake to develop a ten year tree planting plan.
- Provides timeframes per key actions that support the goals and objectives of the Waitemata Urban Ngahere Action Plan.

Tree Planting Principles

With well over 50 per cent of the Waitematā local board area being coastline, the City Centre with its motorway 'moat' being a dominant presence and with the suburbs containing a large number of intensive residential lots, a range of planting principles are required in order to successfully establish new plantings that can contribute long term to the Waitematā local board area's urban forest canopy cover.

Examples of relevant tree planting principles are: planting the right tree in the right place; having a preference for native species; ensuring urban forest diversity; creating ecological corridors and connections; and seeking to manage the whole lifecycle of urban trees.

Tree planting principles are to be developed in a manner that address a range of issues (some being specific to the Waitematā local board area) such as:

- Salt tolerance
- Soil type
- Structural form
- Plant large where we can
- Heritage context
- Climate change species susceptibility/ effects resilience
- Availability of space above and below ground
- Shading
- Leaf drop
- Future sight and view lines
- Visual amenity
- Infrastructure conflict
- Private property planting opportunities/assistance
- Pest and disease resistance
- Maintenance requirements
- Increasing biodiversity
- Bird and wildlife corridor creation/ enhancement/linkages
- Have a well-proportioned mix of saplings, semi mature and mature trees across the Ward
- A species composition of at least 70 per cent native species, no more than 10 per cent exotic species, 10 per cent fruit-producing species and 10 per cent of species with functional uses (i.e. carbon sequestrers)

When addressing species selection, the tree planting principles are to be supported by the Auckland Council 'Indigenous Terrestrial and Wetland Ecosystems of Auckland' (published 2017) report. This document identifies species that are part of the various terrestrial and wetland ecosystems (and their variants) that have been located through Auckland boundaries.

In addition it is important to consider the extension of or creation of pollinator paths to help create corridors for birds, and insects to move along. Selecting tree varieties that provide flower sources for birds and insects are important to help build pathways for movement and to build the extent of habitat to support increased biodiversity at a local street and park scale.

Consideration is to be given to large trees that provide a diverse food source and habitat for native birds, as well as the maintenance of tall tree stumps that could provide nesting opportunities for birds.

Where appropriate, adopting the strategic principle of 'native first' when seeking to plant with appropriate species in ecologically relevant locations will assist in the enhancement of biological diversity, as well as aiding in ecological restoration.





In addition, consideration relating to the effectiveness of individual species to remove carbon dioxide from the atmosphere and store it as carbon as part of their overall biomass over their lifetime is considered to be an important tree planting principle.

Platforms and opportunities for the applying the planting principles can be found in the following appendices of this report:

- high level 'Suburb By Suburb Planting Opportunities'
- survey; draft results of which are represented in the 'Heat Map', individual suburb maps and possible species selection details.

When it comes to identifying planting locations and options, there are a wide range of opportunities, to consider:

- Auckland Council sports fields, parks and reserves (i.e. Meola Reef Reserve; a large expanse of land with few tall trees)
- Auckland Transport land (i.e. grass berms, footpath tree pits, kerb build-outs, car parking spaces, new street gardens)
- Public cemeteries (note that some countries are now using trees as 'headstones')

- Government land (i.e. schools, hospitals, fallow sites)
- NZTA land (i.e. the motorway 'moat')
- Large planters along cycle lanes
- Future open space programmes and projects
- Green walls (i.e. amenity plantings that can be installed in planters/on fencing/on wires attached to sides of public/commercial buildings)

Where possible, consideration of planting large grade specimens helps ensure we get 'larger trees faster' so as to give rise to the urban forest benefits sooner.

Planting with a variety of species is particularly important when addressing resilience issues such as pest and disease, and climate change species vulnerabilities; a small species range could get decimated by a pest and/or disease infestation (think Dutch Elm Disease, and sadly, Kauri Dieback), just as a cooler, dryer climate-loving species may well suffer in the predicted warmer and more moist seasons that Auckland is likely to face in the future.

We will work with the community, Auckland Council, Ministry for

Primary Industries and iwi to isolate incidents, prevent further spread of pest trees, educate and plant a diversity of tree species that are resilient to current disease to ensure the survival of our urban forest.

Of equal importance is ensuring that we address 'Seed to Succession' issues, with a focus on 'end of useful life' timing (as Kew Gardens in the UK found out in the 1987 storm, when they lost a large number of over-mature specimens and did not have sufficient middle age trees to carry them through), as well as providing bird and wildlife corridor creation and enhancement, along with linking Significant Ecological Areas (SEAs).

It is the combination of the above points that will ensure that, by introducing and maintaining a wide range of tree species, sizes and ages, a future healthy, vibrant and benefit-producing urban forest will be present for many years to come.

As stated in Auckland's Urban Ngahere (Forest) Strategy – 'Together, growing Auckland's urban ngahere for a flourishing future.'



Map 2: Depicts SEAs (and 2013 tree canopy heights) in the Waitematā local board area. Note: above insert is detailed in below map



Map 3: Depicts SEAs (red lines) and tree canopy heights (yellow, green and blue colours) as assessed in 2013 in the eastern aspect of the Waitematā local board area, as well as Fraser Park, Parnell which could be enhanced with large grade tree planting so as to become a future possible 'linkage' between the surrounding SEAs

Partners

The results of this urban ngahere action plan will benefit not only the residents of the Waitematā local board area but also the wider city community as a whole. Given this fact and the very relatable nature of planting a tree, creation of a viable and sustainable network of partners who can provide support in a myriad of ways is deemed important; so much so that it is listed as one of the goals of this plan.

Examples of those entities who could partner in the deliverables of this plan are as follows:

- Auckland Council's Community Facilities department (by engaging with and supporting the renewals programme, create new planting locations by undertaking the removal of oleander, pollarded plane trees, noxious trees/plants)
- Auckland Domain (explore opportunity to fit in with the Auckland Domain tree maintenance and planting plan)
- Auckland Transport (engage with the maintenance programme i.e. retire hard stands to create new planting spaces)
- Healthy Waters (engage with the revegetation program, assist in the creation of educational rain gardens)
- Work with Panuku and Auckland Regional Facilities to develop and incorporate new planting opportunities within their new development and facility maintenance projects
- Network Utility Operators (engage regarding planting location restrictions around network assets, support Vector's Overhead Improvement Program)
- NZTA (discuss species used in motorway plantings and their future long term protection and
- explore planting opportunities on surplus land)
- Government departments (opportunity to plant large trees for shading benefits in schools and hospitals, support from Department of Corrections to grow seedlings)
- Private land owners (possible for Auckland Council to fund the planting of trees on private properties)
- Commercial land owners (possible to install climbing green walls on/up sides of privately-owned buildings where trees can't be established)
- National environmental entities (Forest and Bird, Project Crimson, Trees That Count)
- Local school/community groups to operate eco-sourced nurseries
- Local community volunteer groups (Friends of Coxes Bay, Grey Lynn Park Volunteers, etc. Possible for them to operate a Council-funded eco-sourced nursery)
- Matariki/Arbor Day planting events (fund trees and consumables and assist the public in tree planting events)
- Nursery Association (gain support by way of quality production donation/price reduction)
- The wider public residents



Goals



Knowing, Growing, Protecting.

The goals of the Waitemātā Local Board in relation to the assessment, protection, management and development of the urban forest within the Waitemātā local board area are as follows:

- To create sustainable urban forest within the Waitemātā local board area that meets the needs of our community and surroundings
- To achieve 30 per cent of tree canopy cover within the Waitemātā local board area boundaries by 2050
- To further enhance and amplify efforts to establish corridors of vegetation to link small and large open space areas
- To increase public awareness around the need to promote, protect and enhance the urban forest within the Waitemātā local board area
- To create a network of partners to support the development and maintenance of the urban forest within the Waitemātā local board area



Image.3: View of streetscape in residential area

Objectives



Knowing, Growing, Protecting.

In order to achieve the Waitematā Local Board's goals in relation to the assessment, protection, management and development of the urban forest within the Waitematā local board area, the following objectives are required to be undertaken:

- Research and compile a list of planting opportunities within the road reserve, parks and reserves, and commercial environments within the Waitematā local board area
- Develop a suitable species list of small, medium and large trees to be used in the identified list of planting opportunities
- Develop a urban forest tree planting promotional program that engages stakeholders and partners
- Review and set up an accurate tracking system of Auckland Council's tree planting and maintenance practices
- Auckland Council Call Centre can log maintenance requests to attend to newly planted trees, to review a site for a replacement tree planting, and to request that a new tree is planted. The call centre can be contacted on (09)3010101 or via the council website www.aucklandcouncil.govt.nz
- Develop a 10 Year Tree Planting Plan (supported by a suitable funding framework)
- Engage with tree nursery suppliers and develop a nursery 'Growing Plan' that will service the 10 Year Tree Planting Plan
- Provide a report to the local board that outlines the financial requirements to support the funding commitments of the 10 Year Tree Planting Plan
- Discuss with Auckland Council the current levels of tree protection rules and their effectiveness as they relate to the protection and enhancement of the urban forest
- Waitematā Local Board requests; the Governing Body considers advocating Central Government for changes to the Resource Management Act to enable new or better rules to protect large trees of importance in Auckland

Objectives (continued)

By implementing these objectives, and in line with the stated goals, this urban ngahere action plan intends to ensure that the:

- Explore the options for setting up a tree fund to help with maintenance of large notable trees in the local board area
- Arrange an annual tree planting event
- Right trees will be planted in the right places
- Tree supply and planting works will be cost effective
- Action plans will ensure engagement with all stakeholders, partners, schools & local community groups so as to seek support regarding the planting & maintenance of future urban forest plantings



Action Plans

Plan No. 1

Years One to Three

Year One Winter 2019 – Autumn 2020

1	<p>Undertake a detailed assessment of planting opportunities within the Waitemata local board area's road reserves, parks and reserves, and commercial environments</p> <p>The assessment will involve consideration of any opportunities that exist in the work program to plant more trees as part of the implementation the Waitemata network of walking and cycling track network outlined in the Waitemata Greenways Plan (2013). Consider planting opportunities to help support increasing the pollinator paths that are already in place and consider tree species that provide flowers and nectar to help support biodiversity</p>
2	<p>In accordance with the principles outlined in Auckland's Urban Ngahere (Forest) Strategy, research and compile a 'suitable species list' and 'tree planting principles' that will apply to all identified planting opportunities</p>
3	<p>Work with Auckland Council and the Waitemata Local Board to collaboratively explore the development of an advisory service for tree care to help provide advice to customers on tree care and maintenance. Promote the value of professional tree care and work with national organization to develop advisory service</p>
4	<p>Develop a detailed 'Planting Opportunities List' that will help to deliver the goal of providing 30 per cent of tree canopy cover within the Waitemata local board areas by 2050</p>
5	<p>Record metrics that reflect estimated tree canopy cover percentage increase across the local board area post completion of all identified planting opportunities, as well as the estimated growth of existing trees up to 2050</p>
6	<p>Discuss and confirm best practice tree planting and ongoing maintenance methods with Auckland Council's Community Facilities department</p>



Plan No. 1 (continued) **Years One to Three**

Education

- Research, engage and enrol tree nursery suppliers regarding tree stock production standards, current stock availability and species selection for future plantings
- Undertake an assessment regarding the necessity for effective tree protection to support the long term protection, management and development of the urban forest
- Develop a promotional program that engages with identified stakeholders, partners and the wider public

Planting

- Research, engage and enrol tree nursery suppliers regarding tree stock production standards, current stock availability and species selection for future plantings
- Compile indicative tree supply and planting pricing (that includes 3 years post-planting maintenance, metrics assessments and reporting) to deliver the functional 'Planting Opportunities List'
- Develop a 1 to 3, a 4 to 6 and a 7 to 10 Year Funding Framework to deliver on the 'Planting Opportunities List'

Community Support

- Confirm with the Waitemata Local Board a funding commitment for the 10 Year Tree Planting Plan and the 10 Year Funding Framework
- Develop a detailed 10 Year Tree Planting Plan (including a 3 yearly review to track progress) that fits within the Ten Year Funding Framework
- In Autumn 2020, implement year one of the 10 Year Tree Planting Plan
- Encourage and support volunteers in the community to be enabled to support the growth of the urban forest, working with contractors and local volunteer groups to deliver outcomes, e.g through community grants
- Investigate opportunity to establish an annual resident scheme which would allow residents to nominate heritage and notable trees in the local board area
- Investigate opportunity to establish a contestable fund that would support private property owners to maintain large heritage and notable trees in their private property, enhancing biodiversity in the local board area
- Investigate opportunity to establish an initiative that would provide the local board with a platform to acknowledge individuals for their contributions to making reserves and private properties pest plant free



Action Plans (continued)



Image 4: View of streetscape in commercial/residential area

Plan No. 1 (continued) Years One to Three

Year Two Winter 2020 to Autumn 2021

1	In Spring 2020 and Autumn 2021, implement year two of the 10 Year Tree Planting Plan
2	At the completion of the Autumn aspect of year two's tree planting program, undertake a review of year one's tree planting program (including the recording and comparison of standardised urban forest assessment metrics, tree quality, tree supply, tree planting methods, tree maintenance deliverables and a pricing review), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	At the completion of the Autumn aspect of year two's tree planting program, seek reconfirmation of commitment of funds from the Waitemata Local Board for the 10 Year Tree Planting Plan and the continuation of the 10 Year Funding Framework

Year Three Winter 2021 to Autumn 2022

1	In Spring 2021 and Autumn 2022, implement year three of the 10 Year Tree Planting Plan
2	At the completion of the Autumn aspect of year three's tree planting program, undertake a review of year two's tree planting program (including the recording and comparison of standardised metrics), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	At the completion of the Autumn aspect of year three's tree planting program, seek reconfirmation of commitment of funds from the Waitemata Local Board for the 10 Year Tree Planting Plan and the 10 Year Funding Framework
4	<p>Undertake a full review of the first Action Plan Period (Plan No.1) of the 10 Year Planting Plan and then report back to the Waitemata Local Board with a detailed update, metrics and recommendations in respect to the effectiveness of works undertaken to date by Auckland Council and its partners as they relate to the goals of the Waitemata Urban Ngahere Action Plan</p> <p>The assessment will involve consideration of any opportunities that exist in the work program to plant more trees as part of the implementation the Waitemata network of walking and cycling track network outlined in the Waitemata Greenways Plan (2013). Consider planting opportunities to help support increasing the pollinator paths that are already in place and consider tree species that provide flowers and nectar to help support biodiversity</p>

Plan No. 2 Years Four to Six

Year Four Winter 2022 – Autumn 2023

1	In Spring 2022 and Autumn 2023, implement year four of the 10 Year Tree Planting Plan
2	At the completion of the Autumn aspect of year four's tree planting program, undertake a review of year three's tree planting program (including the recording and comparison of standardised urban forest assessment metrics, tree quality, tree supply, tree planting methods, tree maintenance deliverables and a pricing review), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	At the completion of the Autumn aspect of year four's tree planting program, seek reconfirmation of commitment of funds from the Waitemata Local Board for the 10 Year Tree Planting Plan and the continuation of the 10 Year Funding Framework

Year Five Winter 2023 to Autumn 2024

1	In Spring 2023 and Autumn 2024, implement year five of the 10 Year Tree Planting Plan
2	At the completion of the Autumn aspect of year five's tree planting program, undertake a review of year four's tree planting program (including the recording and comparison of standardised metrics), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	At the completion of the Autumn aspect of year five's tree planting program, seek reconfirmation of commitment of funds from the Waitemata Local Board for the 10 Year Tree Planting Plan and the 10 Year Funding Framework

Year Six Winter 2024 to Autumn 2025

1	In Spring 2024 and Autumn 2025, implement year six of the 10 Year Tree Planting Plan
2	At the completion of the Autumn aspect of year six's tree planting program, undertake a review of year five's tree planting program (including the recording and comparison of standardised metrics), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	At the completion of the Autumn aspect of year six's tree planting program, seek reconfirmation of commitment of funds from the Waitemata Local Board for the 10 Year Tree Planting Plan and the 10 Year Funding Framework
4	<p>Undertake a full review of the second Action Plan Period (Plan No.2) of the 10 Year Planting Plan and then report back to the Waitemata Local Board with a detailed update, metrics and recommendations in respect to the effectiveness of works undertaken to date by Auckland Council and its partners as they relate to the goals of the Waitemata Urban Ngahere Action Plan</p> <p>The assessment will involve consideration of any opportunities that exist in the work program to plant more trees as part of the implementation the Waitemata network of walking and cycling track network outlined in the Waitemata Greenways Plan (2013). Consider planting opportunities to help support increasing the pollinator paths that are already in place and consider tree species that provide flowers and nectar to help support biodiversity</p>



Plan No. 3 Years Seven to Ten



Image 5: View of streetscape in residential area

Year Seven Winter 2025 to Autumn 2026

1	In Spring 2025 and Autumn 2026, implement year seven of the 10 Year Tree Planting Plan
2	At the completion of the Autumn aspect of year seven's tree planting program, undertake a review of year six's tree planting program (including the recording and comparison of standardised urban forest assessment metrics, tree quality, tree supply, tree planting methods, tree maintenance deliverables and a pricing review), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	At the completion of the Autumn aspect of year seven's tree planting program, seek reconfirmation of commitment of funds from the Waitemata Local Board for the 10 Year Tree Planting Plan and the continuation of the 10 Year Funding Framework

Year Eight Winter 2026 to Autumn 2027

1	In Spring 2026 and Autumn 2027, implement year eight of the 10 Year Tree Planting Plan
2	At the completion of the Autumn aspect of year eight's tree planting program, undertake a review of year seven's tree planting program (including the recording and comparison of standardised metrics), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	At the completion of the Autumn aspect of year eight's tree planting program, seek reconfirmation of commitment of funds from the Waitemata Local Board for the 10 Year Tree Planting Plan and the 10 Year Funding Framework

Year Nine Winter 2027 to Autumn 2028

1	In Spring 2027 and Autumn 2028, implement year nine of the 10 Year Tree Planting Plan
2	At the completion of the Autumn aspect of year nine's tree planting program, undertake a review of year eight's tree planting program (including the recording and comparison of standardised urban forest assessment metrics, tree quality, tree supply, tree planting methods, tree maintenance deliverables and a pricing review), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	At the completion of the Autumn aspect of year nine's tree planting program, seek reconfirmation of commitment of funds from the Waitemata Local Board for the 10 Year Tree Planting Plan and the 10 Year Funding Framework

Year Ten Winter 2028 to Autumn 2029

1	In Spring 2028 and Autumn 2029, implement year 10 of the 10 Year Tree Planting Program
2	At the completion of the Autumn aspect of year 10's tree planting program, undertake a review of year nine's tree planting program (including the recording and comparison of standardised metrics), formulate a 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
3	Undertake a full review of the third Action Plan Period (Plan No.3) of the 10 Year Planting Plan and then report back to the Waitemata Local Board with a detailed update, metrics and recommendations in respect to the effectiveness of works undertaken to date by Auckland Council and its partners as they relate to the goals of the Waitemata Urban Ngahere Action Plan
4	In Autumn 2030, undertake a review of year 10's tree planting program (including the recording and comparison of standardised metrics), formulate the final 10 Year Tree Planting Plan - Annual Update Report and supply it to the Waitemata Local Board for consideration
5	Produce a '10 Year Planting Program Results Report' that contains a detailed update, metrics and recommendations in respect to the effectiveness of tree planting and maintenance works as they relate to the goals of the Waitemata Urban Ngahere Action Plan undertaken over the full 10 year period of the 10 Year Tree Planting Program The assessment will involve consideration of any opportunities that exist in the work program to plant more trees as part of the implementation the Waitemata network of walking and cycling track network outlined in the Waitemata Greenways Plan (2013). Consider planting opportunities to help support increasing the pollinator paths that are already in place and consider tree species that provide flowers and nectar to help support biodiversity

References



Image 6: View of streetscape within the City Centre

Bishop, Craig and Lawrence, Grant (2017).
The Urban Forest of Waitemata Local Board
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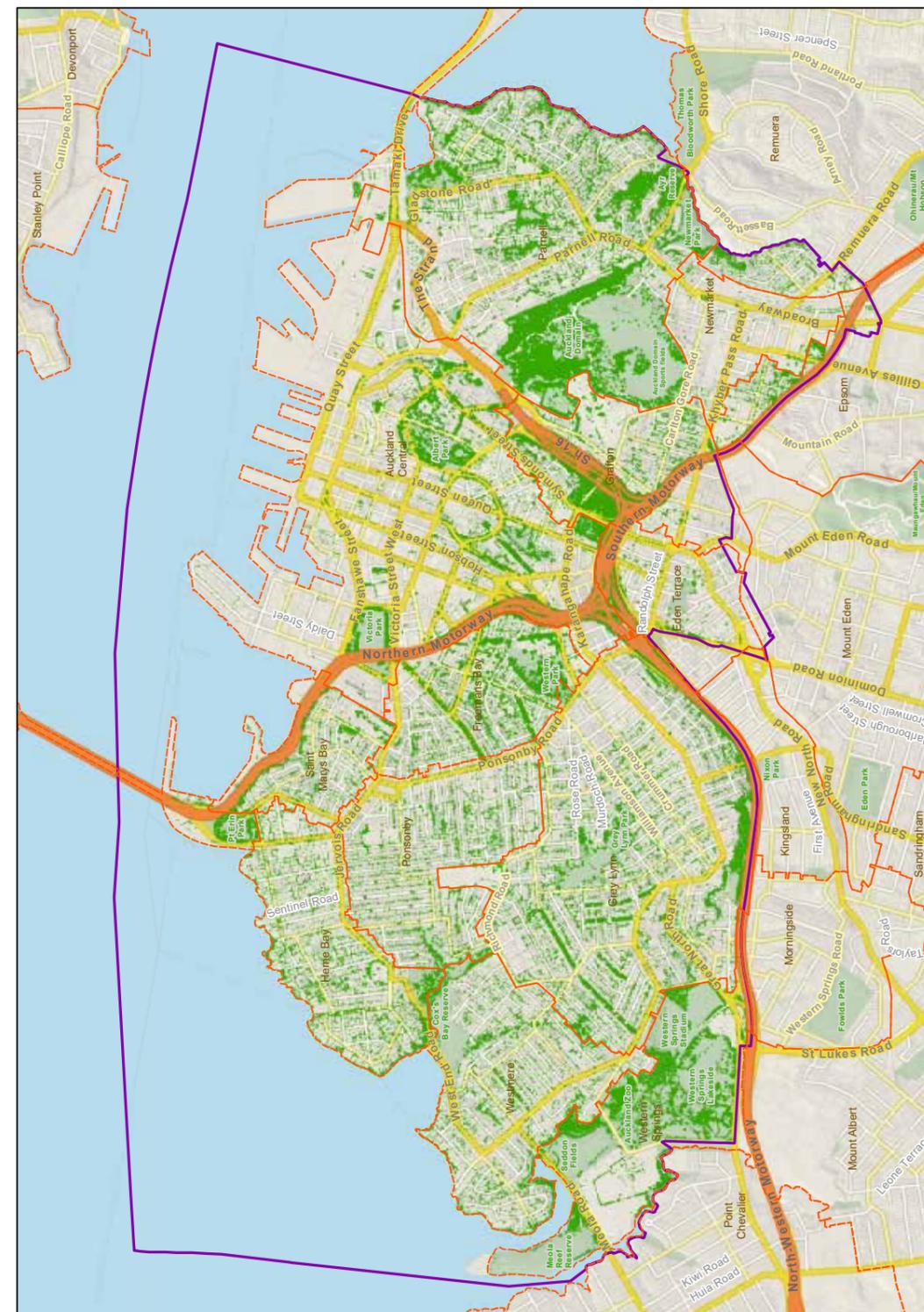
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and Wetland Ecosystems of Auckland

Gordon, Laurie and Bowater, Mark (2002).
Tree Plan

Appendices

The Waitematā local board area – Urban Tree Map



Map No.4: Green colour represents tree cover within the Waitematā local board area

Limitations

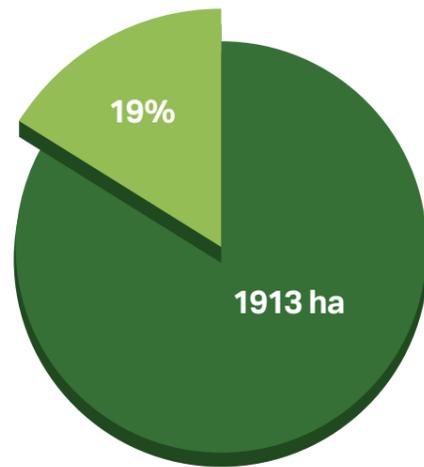
There are limitations with the data collected for potential planting opportunities. The recently completed high level assessment was limited to the Council road reserve within the Waitemata local board suburbs only. The City Centre, parks and private properties within the Waitemata local board area have not been assessed. Berms measuring over

1 metre in width and concrete footpaths measuring over 3 metres in width were assessed as suitable for potential tree planting and tree pit sites. The actual position of the planting locations is affected by the accuracy of instruments and detailed site assessment. For this reason, the location of potential tree planting sites must be treated as an approximate.

As outlined in the aforementioned action plans, a further detailed investigation is required to be undertaken so as to confirm suitability of locations; taking into account a variety of issues, i.e. underground services, visual amenity issues, plant species selection, future growth, form and site suitability.

1. Waitemata local board area — Canopy Cover (as at 2013)

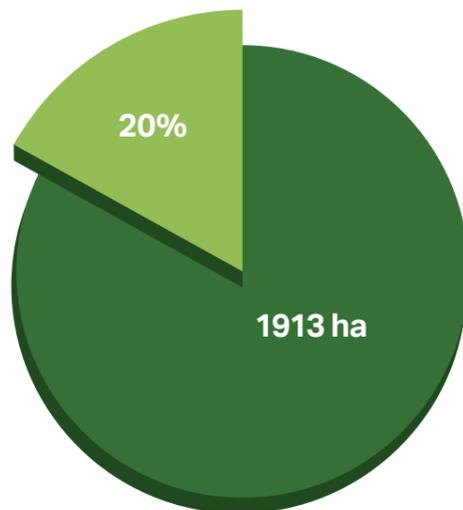
- Total Land Area
- Current Canopy Cover



Source: Data based on 2013 LIDAR data.

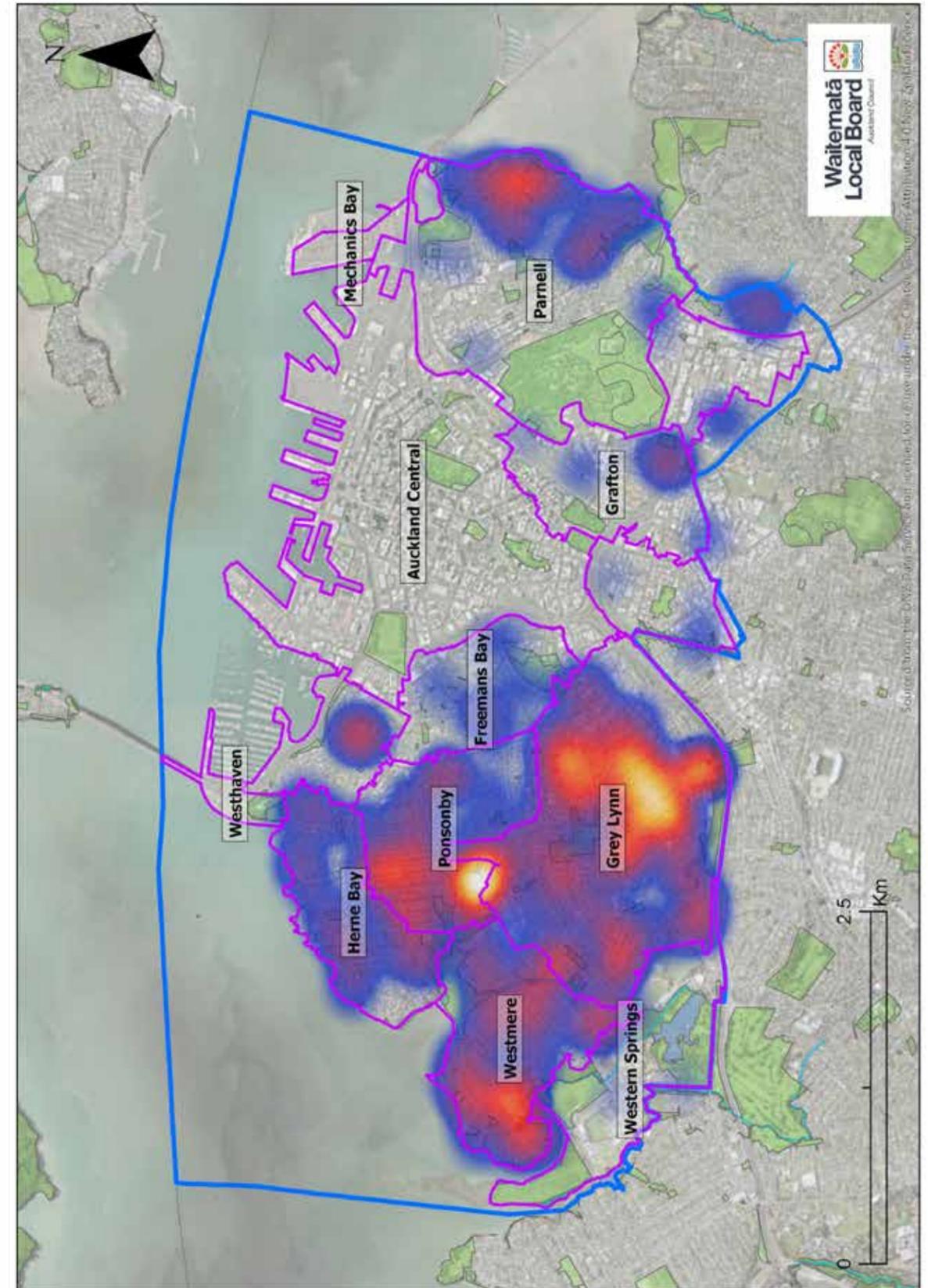
2. Waitemata local board area — Potential Canopy Cover Increase If Suburbs Planting Opportunities Occur

- Total Land Area
- Potential Canopy Cover



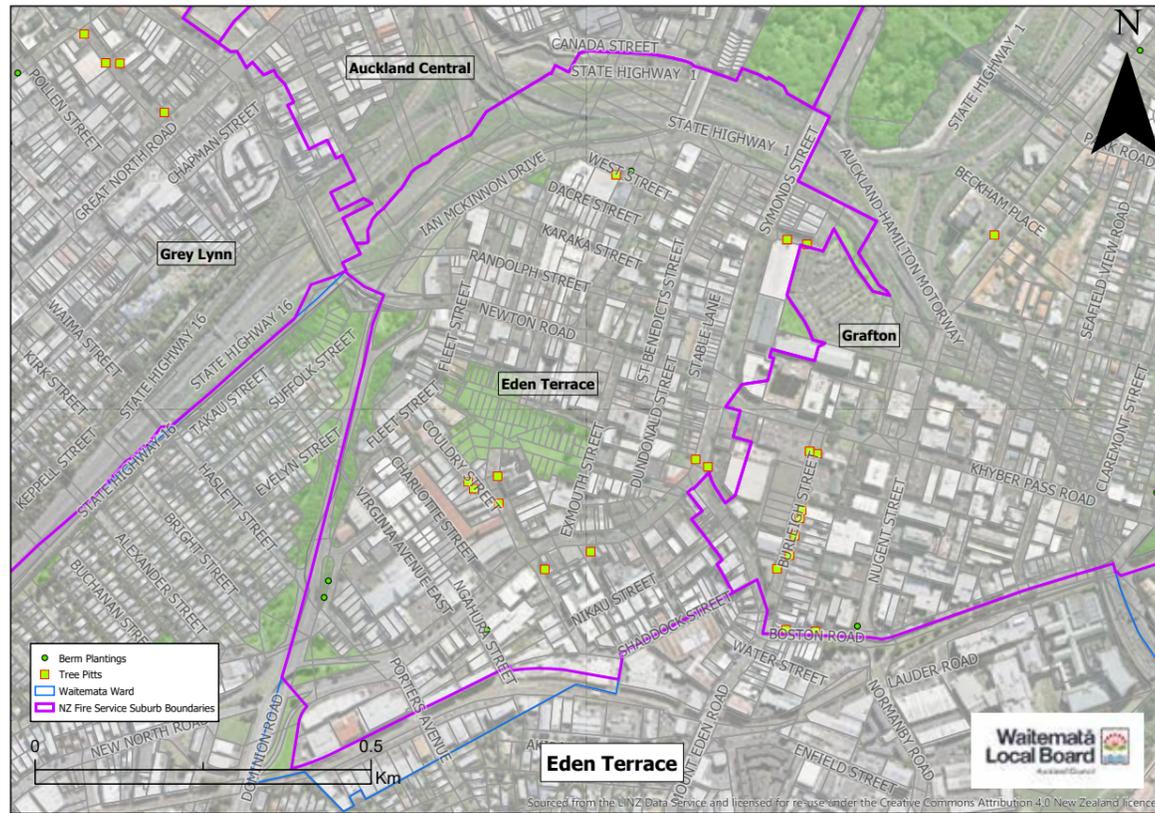
Source: Canopy cover for an individual mature tree taken as an average from 90 existing street trees over 10m in height (2019). Relates to recent high level survey of Ward suburbs. Potential percentage increase does not take into account the Central City or Council Parks and Reserves in the Waitemata Ward.

a) Overall Planting Opportunities Map

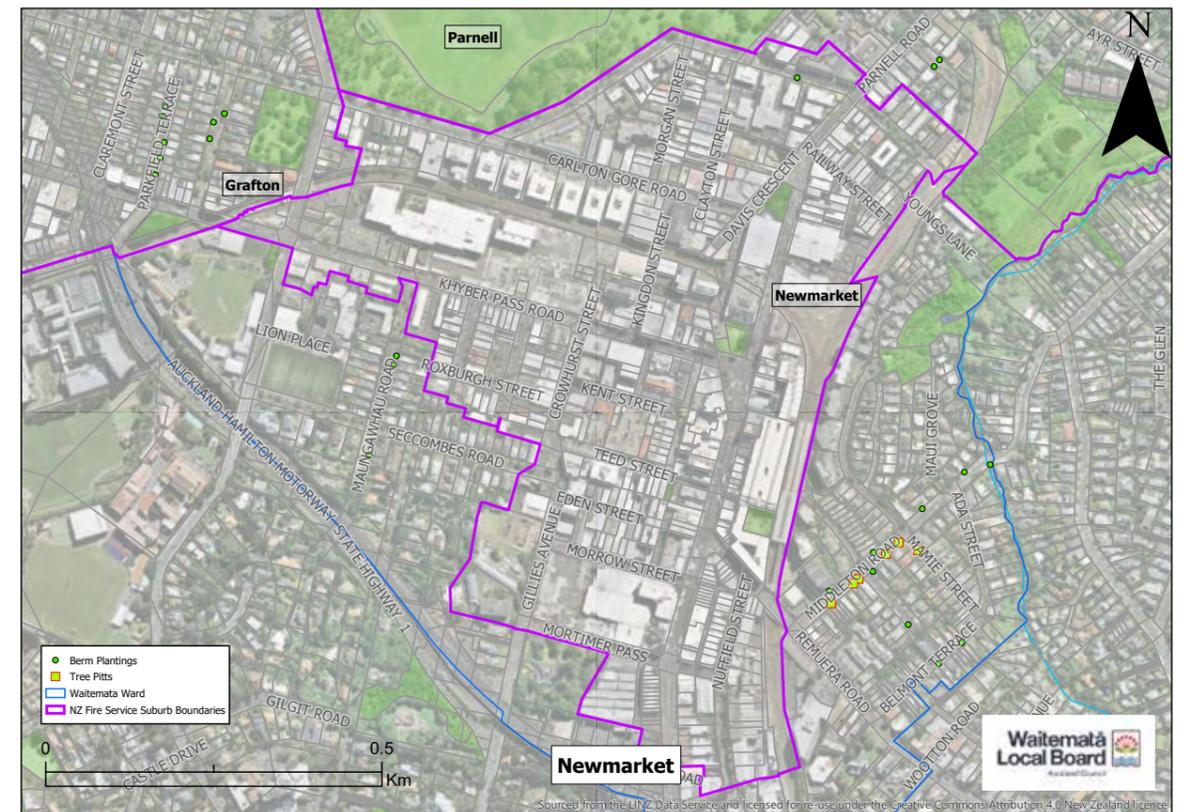
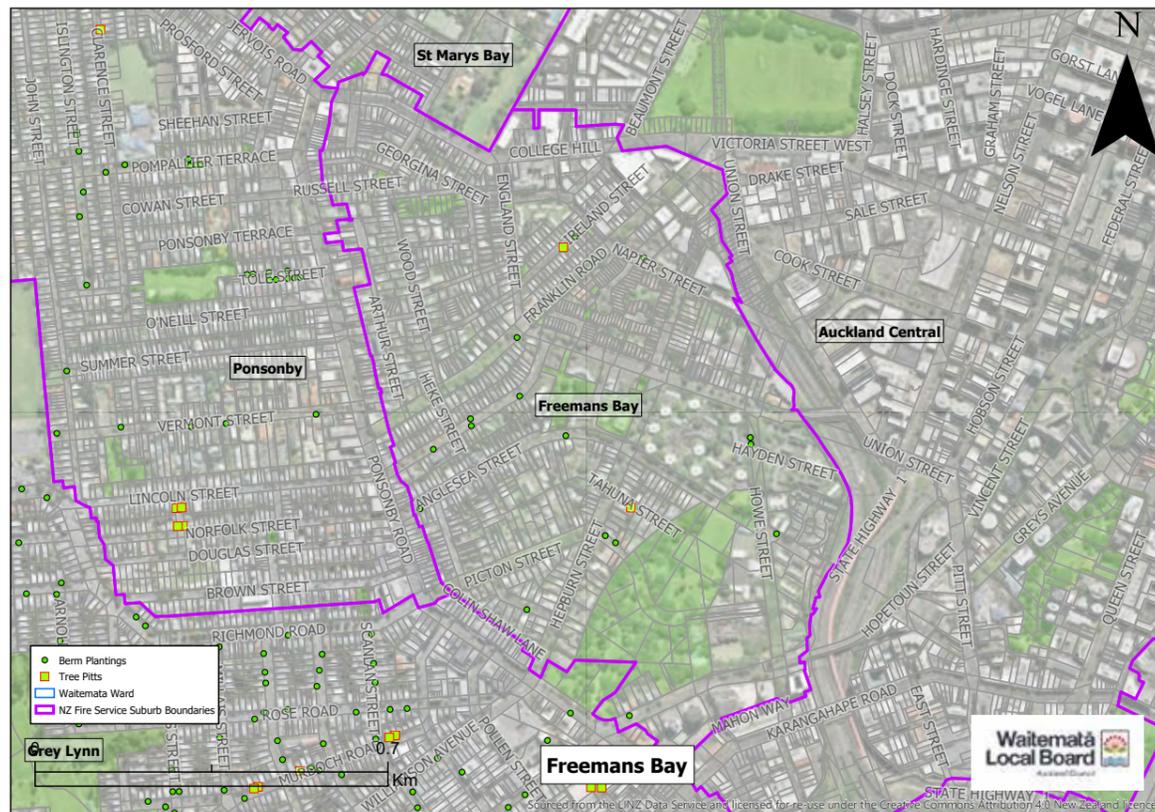


Map No.5: 'Heat gradients' indicate intensity of planting opportunities

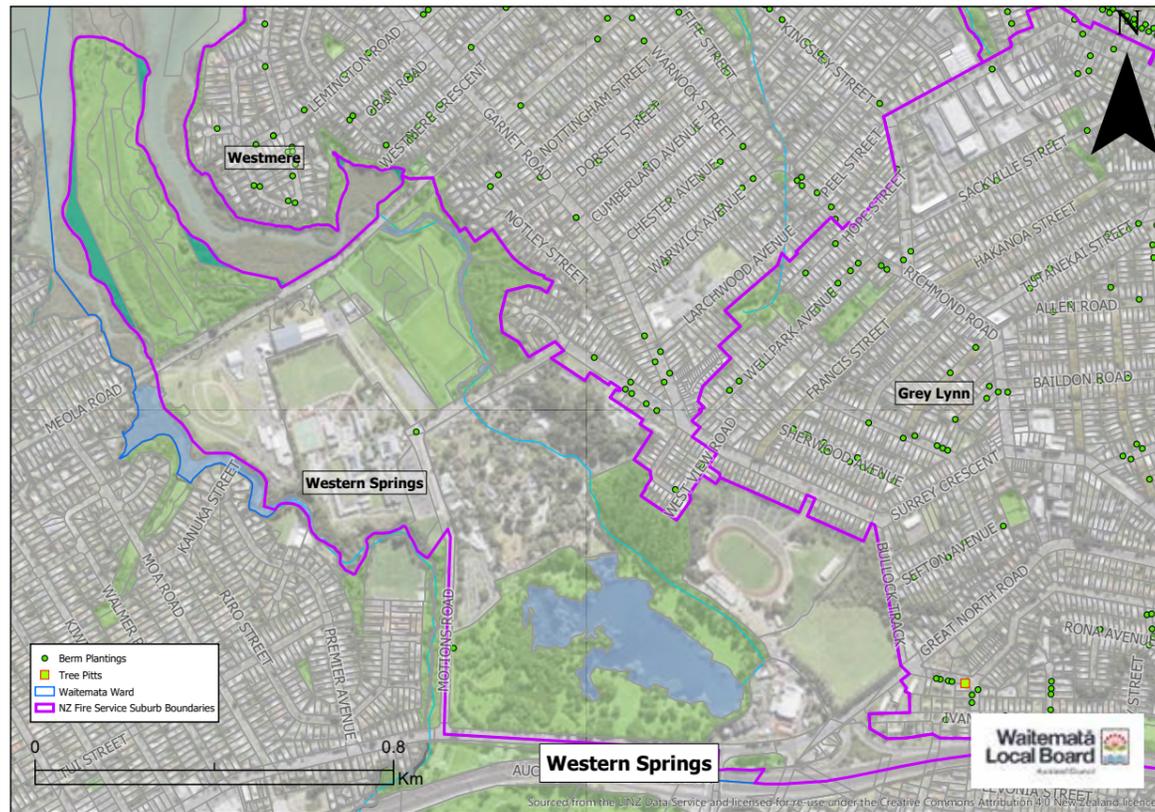
b) Suburb by Suburb Planting Opportunities Map



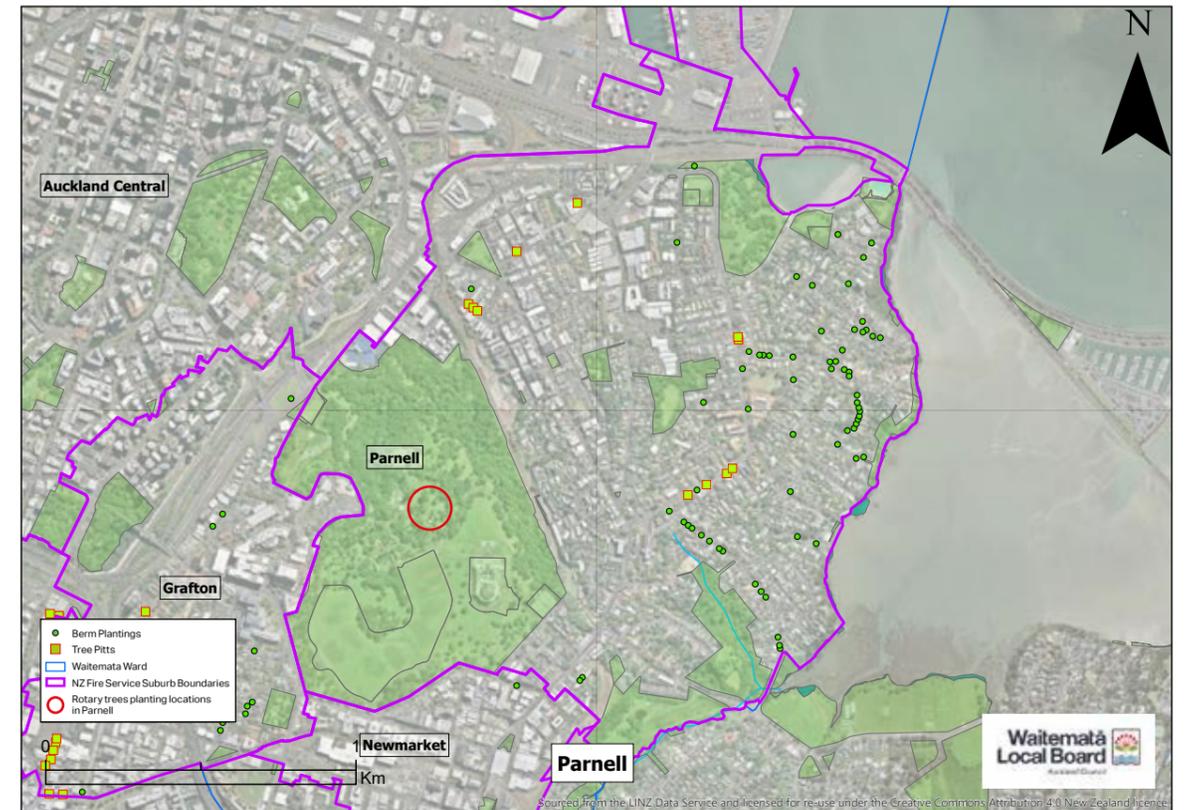
b) Suburb by Suburb Planting Opportunities Map
(continued)



b) Suburb by Suburb Planting Opportunities Map (continued)



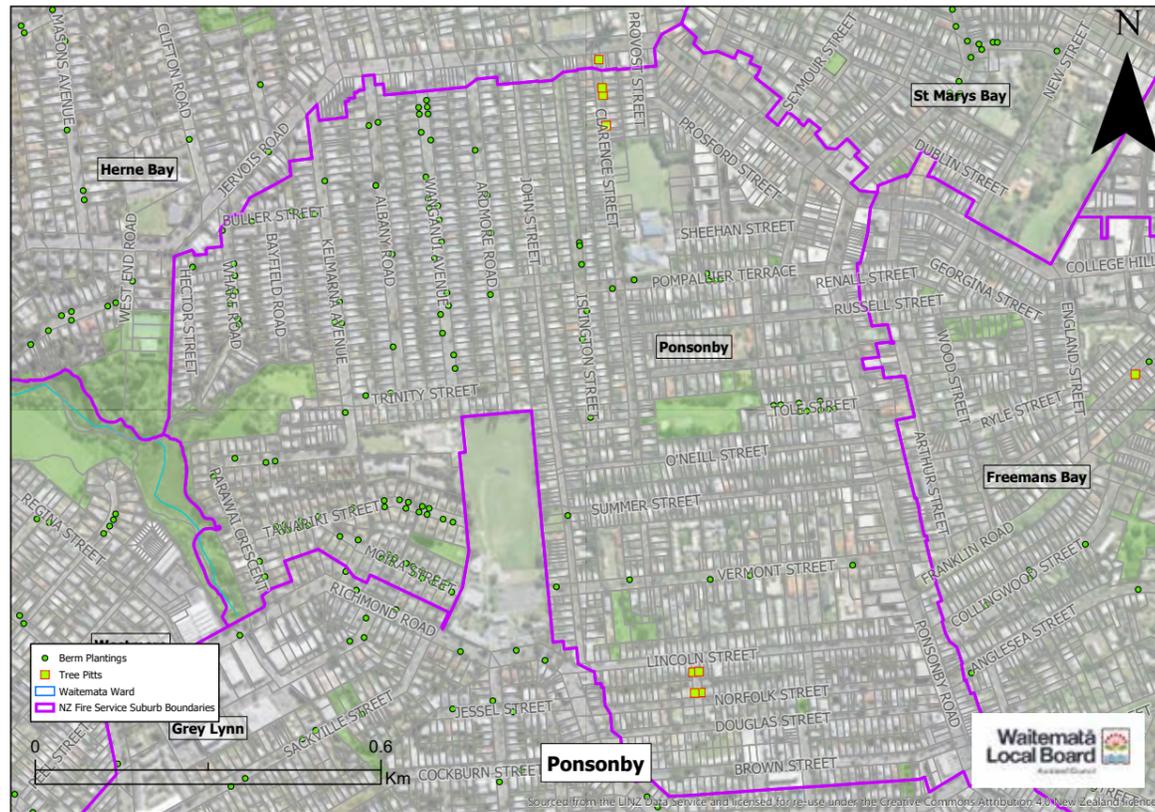
b) Suburb by Suburb Planting Opportunities Map (continued)



b) Suburb by Suburb Planting Opportunities Map (continued)



b) Suburb by Suburb Planting Opportunities Map (continued)



c) Tree Planting Opportunities Data

Waitematā local board area – Potential Planting Sites – Westmere Suburb

Street	Potential for Planting	No. of Trees	Tree Species
CHESTER AVENUE	Yes	4	Alectryon excelsus
CUMBERLAND AVENUE	Yes	2	Tristanopsis laurina
DORSET STREET	Yes	6	Melia azedarach
EDGARS ROAD	No		
FAULDER AVENUE	Yes	4	Magnolia spp.
FIFE STREET	Yes	7	Olea europaea
GARNET ROAD	Yes	16	
KINGSLEY STREET	No		
KOTARE AVENUE	No		
LARCHWOOD AVENUE	No		
LEMINGTON ROAD	Yes	5	
LIVINGSTONE STREET	No		
MEOLA ROAD	No		
NOTLEY STREET	No		
NOTTINGHAM STREET	No		
OBAN ROAD	No		
OLD MILL ROAD	No		
PEEL STREET	Yes	1	
RAWENE AVENUE	Yes	7	
REGINA STREET	No		
RICHARD STREET	Yes	2	
SAVAGE STREET	No		
SUNNY BRAE CRESCENT	Yes	10	
TIROTAI CRESCENT	No		
WARNOCK STREET	Yes	8	
WARWICK AVENUE	Yes	6	Tristanopsis laurina
WEBBER STREET	No		
WELLPARK AVENUE	No		
WEONA PLACE	Yes	1	
WEST END ROAD	Yes	8	
WEST VIEW ROAD	Yes	2	Alectryon excelsus
WESTMERE CRESCENT	Yes	12	
WESTMERE PARK AVENUE	Yes	4	
WILLIAM DENNY AVENUE	Yes	3	
WINSOMERE CRESCENT	No		

EXAMPLE

The above list is for potential tree planting locations in the road corridor (Auckland Transport land)

d) Planting Examples

Tree Pit Planting



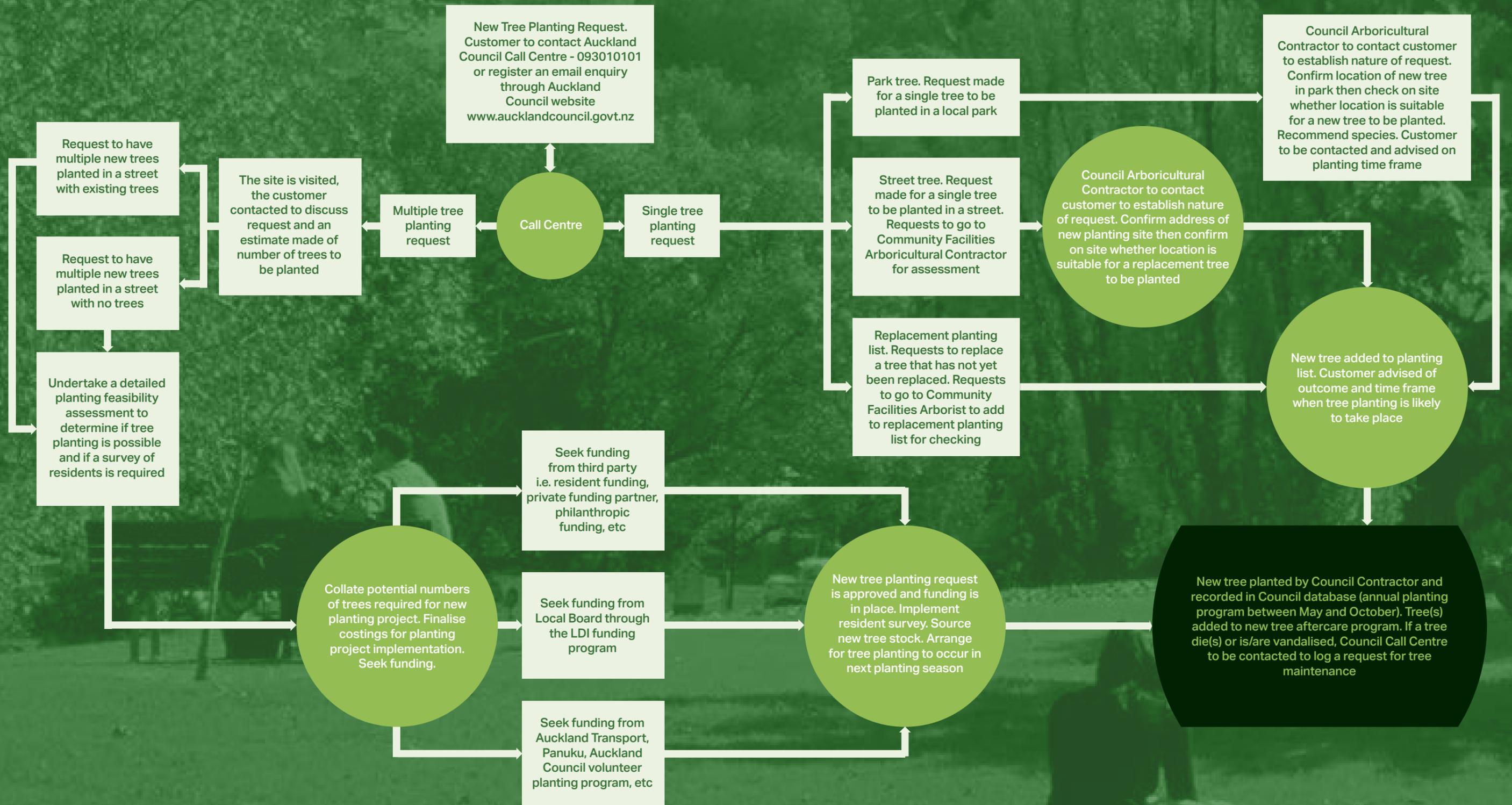
Park Planting



Berm Planting

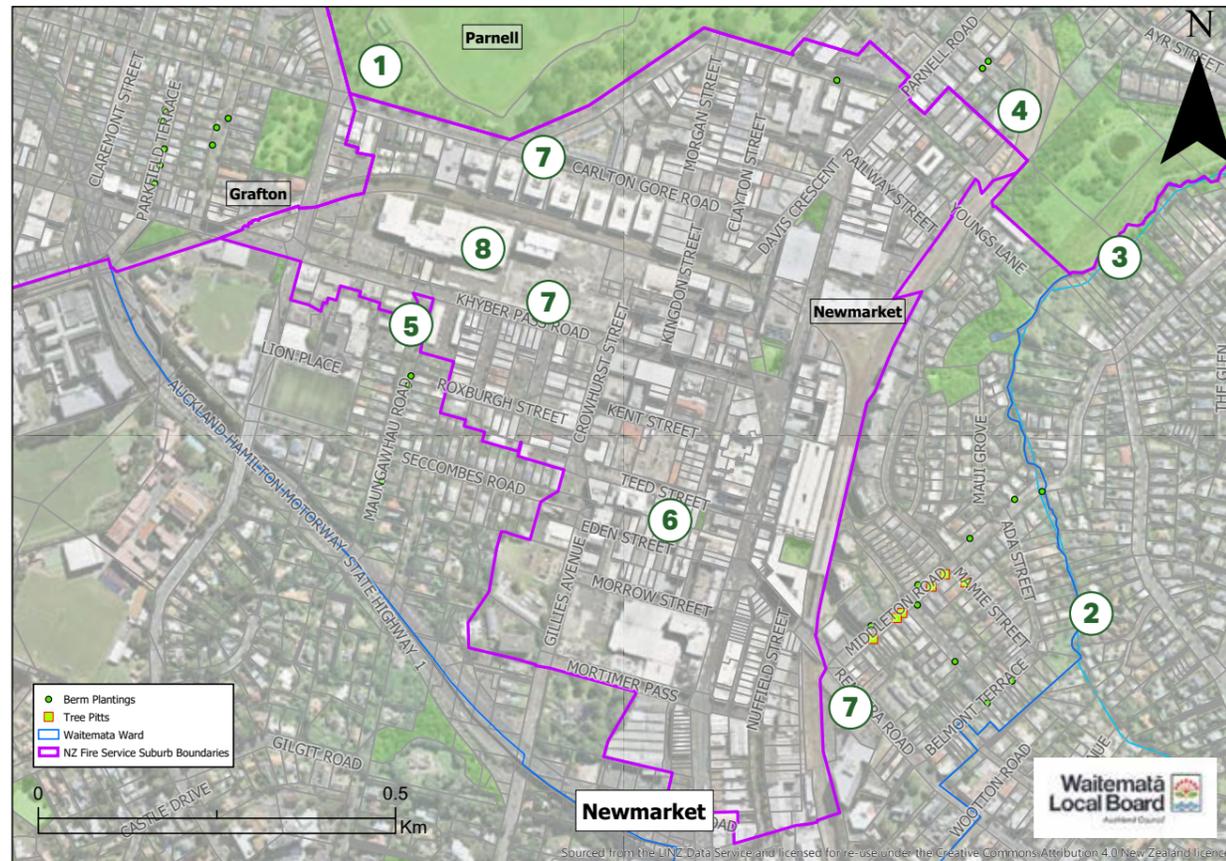


e) Auckland Council - Tree Planting Request Process



f) Tree Planting Maps - Further Planting Opportunities

Newmarket



- ① Acknowledge the Rotary Trees planting locations in the Auckland Domain
- ② Newmarket Stream Restoration Tree Planting
- ③ Newmarket Park Streamside Road
- ④ Planting Rail Corridor Berms
- ⑤ Khyber Pass Road/crn Maungawhau Road (replace mature trees)
- ⑥ All streetscape upgrades in Newmarket to include tree canopy cover of minimum 30%
- ⑦ Street planting opportunities, i.e Carlton Gore Road, Kyber Pass and Broadway, Remuera Road
- ⑧ Auckland University – engage on planting in new plans

Parnell



- ① The length of St Stephen's Ave, Gladstone Road and Brighton Road
- ② Parnell Rise – in support of the Parnell Plan
- ③ Trees as a gateway to Parnell – at Fraser Park & Gladstone Road along the park edges
- ④ Trees at the Parnell Train Station entrance
- ⑤ Waipapa Stream Restoration Planting
- ⑥ Ayr Street Reserve Planting and at the end of Laurie Ave

f) Tree Planting Maps - Further Planting Opportunities (continued)

Grafton



- ① Identify land for planting at Auckland University & ADHB land.
- ② NZTA planting along The Strand & motorway in Eden Terrace
- ③ Glenside Reserve Planting
- ④ Significant planting along Ian McKinnon Drive Road Reserves
- ⑤ Additional large tree planting for shade in Basque Park Reserve

Grey Lynn



- ① Significant planting opportunities along the Greenways on road berms and in reserves
- ② Planting in Arch Hill and along NZTA land
- ③ Planting along the edge of Western Springs
- ④ Replacing trees fallen or removed in Grey Lynn Park
- ⑤ Tree & pollinator connections through Wellpark Reserve
- ⑥ Tree planting in Coxs Bay across the estuary to the south of West End Road
- ⑦ Tree planting on the western edge of Coxs Bay Reserve

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