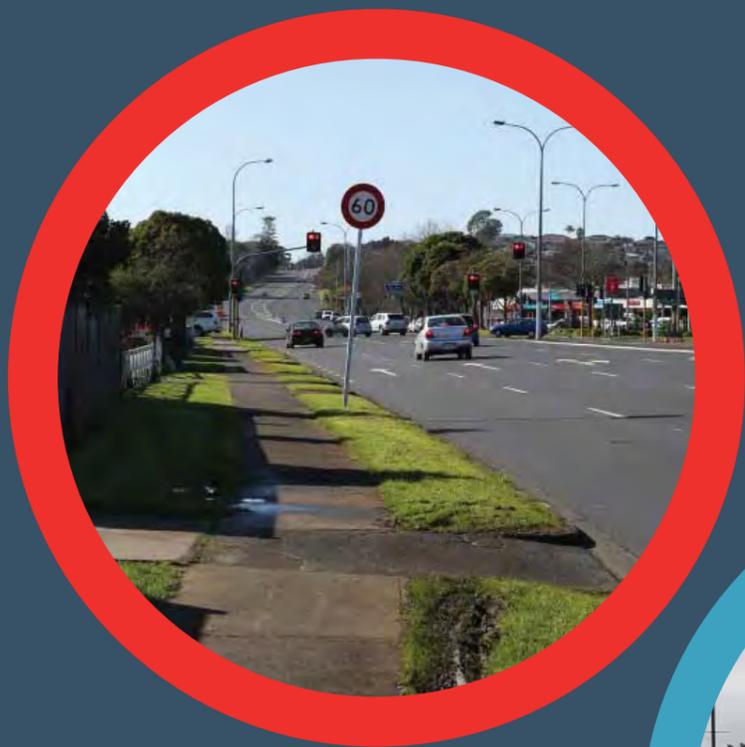


Appendix A

AMETI NOR - Panmure to Pakuranga Urban and Landscape Framework

AMETI NOR – PANMURE TO PAKURANGA URBAN AND LANDSCAPE DESIGN FRAMEWORK



REVISION NO.	PREPARED BY	DESCRIPTION	DATE
A	Lynne Hancock	Text only for internal review	5/3/2015
B	Lynne Hancock	Text draft for client review	3/4/2015
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F	Lynne Hancock	Final draft for client review (NB: excepting revised drawing required for relocated bus stop - layout to be provided by Auckland Transport)	21/1/2016
G	Lynne Hancock	Final draft	29/1/2016
H	Lynne Hancock	Final draft (revised)	22/12/2016

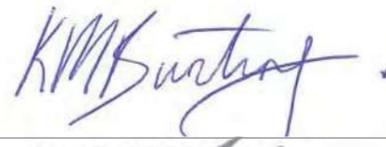
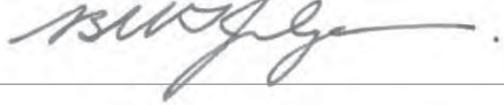
ACTION	NAME	SIGNED	DATE
Prepared by	Lynne Hancock		22/12/2016
Reviewed by	Kathleen Bunting		22/12/2016
Approved by	Bryce Julyan		22/12/2016
on behalf of	Beca Ltd		

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1.	Description of the project	1
1.2.	Project objectives.....	2
1.3.	Purpose and scope of the Urban and Landscape Design Framework	2
1.4.	Urban Design methodology	3
1.5.	Structure of this document	4
2	DESIGN CONTEXT	5
2.1.	Strategic and policy context.....	5
2.2.	Maori design values and principles.....	6
2.3.	Heritage context.....	10
2.4.	The existing environment.....	11
2.5.	Urban and landscape character	11
2.6.	Existing features and opportunities	15
2.7.	Project effects.....	15
3	DESIGN INTENT	19
3.1.	Corridor-wide design principles.....	19
4	PANMURE ROUNDABOUT & LAGOON DRIVE DESIGN	21
4.1.	Design drawings.....	22
4.2.	Planting palette	30
4.3.	Design rationale and principles	33
5	PANMURE BRIDGE DESIGN	39
5.1.	Design drawings.....	40
5.2.	Planting palette	45
5.3.	Design rationale and principles	47
6	PAKURANGA ROAD DESIGN	53
6.1.	Design drawings.....	54
6.2.	Planting palette	61
6.3.	Design rationale and principles	63

LIST OF FIGURES

Figure 1. Project area showing urban design sectors	1
Figure 2. The cultural landscape	8
Figure 3. Historic map of Panmure area	9
Figure 4. Mokoia, after the construction of the first Panmure bridge	9
Figure 5. Fencible enclosure, 1850s	10
Figure 6. Toll keeper's house, Pakuranga side	10
Figure 7. The first Panmure Bridge showing its swivel span.....	10
Figure 8. LVA sectors compared to ULDF sectors.....	11
Figure 9. Sector 1 key views.....	12
Figure 10. View NW from Queens Road to Mt Wellington / Maungarei	12
Figure 11. The 'back of house' character of the Panmure town centre.....	12
Figure 12. Recreation centres / community uses separated by Lagoon Drive.....	12
Figure 13. Pohutukawa and steep vegetated cliff framing views to Maungarei	12
Figure 14. Sector 2 key views	13
Figure 15. View SE at the Lagoon Drive / Church Crescent intersection	13
Figure 16. View along the (narrow) footpath of the existing bridge towards Mokoia Pa.....	13
Figure 17. Existing Panmure bridge in context	13
Figure 18. Sector 3 key views	14
Figure 19. Oblique views from Pakuranga Road open up towards the mangrove inlet	14
Figure 20. Typically single-storey houses with clusters of planting in front gardens.....	14
Figure 21. View towards the corner of Ti Rakua Drive and Pakuranga Plaza	14
Figure 22. Existing features	16
Figure 23. Project effects.....	17
Figure 24. Area opportunities.....	18
Figure 25. Lagoon Drive: photomontage / impression of general arrangement	21
Figure 26. Panmure Roundabout & Lagoon Drive: key to landscape plans.....	22
Figure 27. Artist's impression of new space at Queens Road / Lagoon Drive.....	22
Figure 28. Panmure Roundabout (sheet 1)	23

Figure 29. Section A–A, Lagoon Drive near Panmure Roundabout.....	24
Figure 30.. Section B–B, Lagoon Drive near Basin View Lane	24
Figure 31. Lagoon Drive (sheet 2).....	25
Figure 32. Section C–C, Lagoon Drive	26
Figure 33. Section D–D, Lagoon Drive through the rock bolt wall	26
Figure 34. Artist's impression of rock bolt wall.....	26
Figure 35. Lagoon Drive (sheet 3).....	27
Figure 36. Lagoon Drive near Church Crescent (sheet 4).....	28
Figure 37. Section E-E, Lagoon Drive through the vegetated soil nail wall	29
Figure 38. Open space and steps at Panmure Station – precedent for Church Crescent terracing.....	29
Figure 39. Panmure Bridge: photomontage of general arrangement.....	39
Figure 40. Panmure Bridge: photomontage showing relationship of new bridge to existing bridge ..	39
Figure 41. North-west bridge abutment and approach	40
Figure 42. Panmure Bridge, south-east abutment and approach.....	41
Figure 43. Section F–F through the new terraced pocket park at Church Crescent	42
Figure 44. Section G–G through the new terraced park at the Mokoia Pa headland	42
Figure 45. 3D render showing the bridge carriageway arrangement and the viewing platforms	43
Figure 46. 3D render showing the underside of the bridge	43
Figure 47. Section H–H through the new busway bridge	43
Figure 48. Long elevation looking north-east to show pier positions in the river	44
Figure 49. Birds' eye 3D render looking south-west, showing the relationship of the two bridges...	44
Figure 50. Pakuranga Road: photomontage showing general arrangement.....	53
Figure 51. Pakuranga Road: key to landscape plans.....	54
Figure 52. Pakuranga Road, immediately south-east of Panmure Bridge (sheet 6).....	55
Figure 53. Section J–J near new open space at Kerswill Place	56
Figure 54. Section K–K, through bus stop between Williams and Millen Avenues	56
Figure 55. Pakuranga Road (sheet 7)	57
Figure 56. Pakuranga Road (sheet 8).....	58

1 INTRODUCTION

1.1. Description of the project

AMETI is a package of improvements focused on promoting an integrated, multi-modal transport system to support population and economic growth in south-east Auckland. This involves the provision of a greater number of improved transport choices and aims to enhance the safety, quality and attractiveness of public transport and walking and cycling environments, while recognising that not all transport demand can be met by these modes alone.

The overall AMETI project involves the construction of a dedicated busway between Panmure, Pakuranga and Botany town centres, the construction of new stations at Panmure and Pakuranga, as well as roading improvements at traffic bottlenecks across the extent of the overall AMETI project area; which encompasses Panmure, Mt Wellington, Sylvia Park, Pakuranga and Botany.

1.1.1. Delivery of AMETI

AMETI has been divided into a number of different phases for delivery. AMETI Phase 1, which included the upgrade of Panmure Station and the construction of Te Horetia Road, is complete. Stage 2a, the current phase, includes the construction of a new busway and other transport improvements between Panmure and Pakuranga. Future phases following Stage 2a will be required to deliver the overall AMETI project.

This report relates specifically to Stage 2a components.

Auckland Transport proposes to designate the land required for the Stage 2a project, and is giving Notice of Requirement (NoR) to provide for its construction, operation and maintenance. In addition, Auckland Transport seeks resource consents to undertake works associated with its construction and operation.

1.1.2. Project Area

The Stage 2a Project Area ('the Project Area') comprises Panmure Roundabout in the north, Lagoon Drive and Panmure Bridge, and Pakuranga Road to Ti Rakau Drive in the south. Figure 1 below shows the Project Area. The ULDF breaks down the Project Area into three sectors: Panmure Roundabout and Lagoon Drive; Panmure Bridge; and Pakuranga Road.

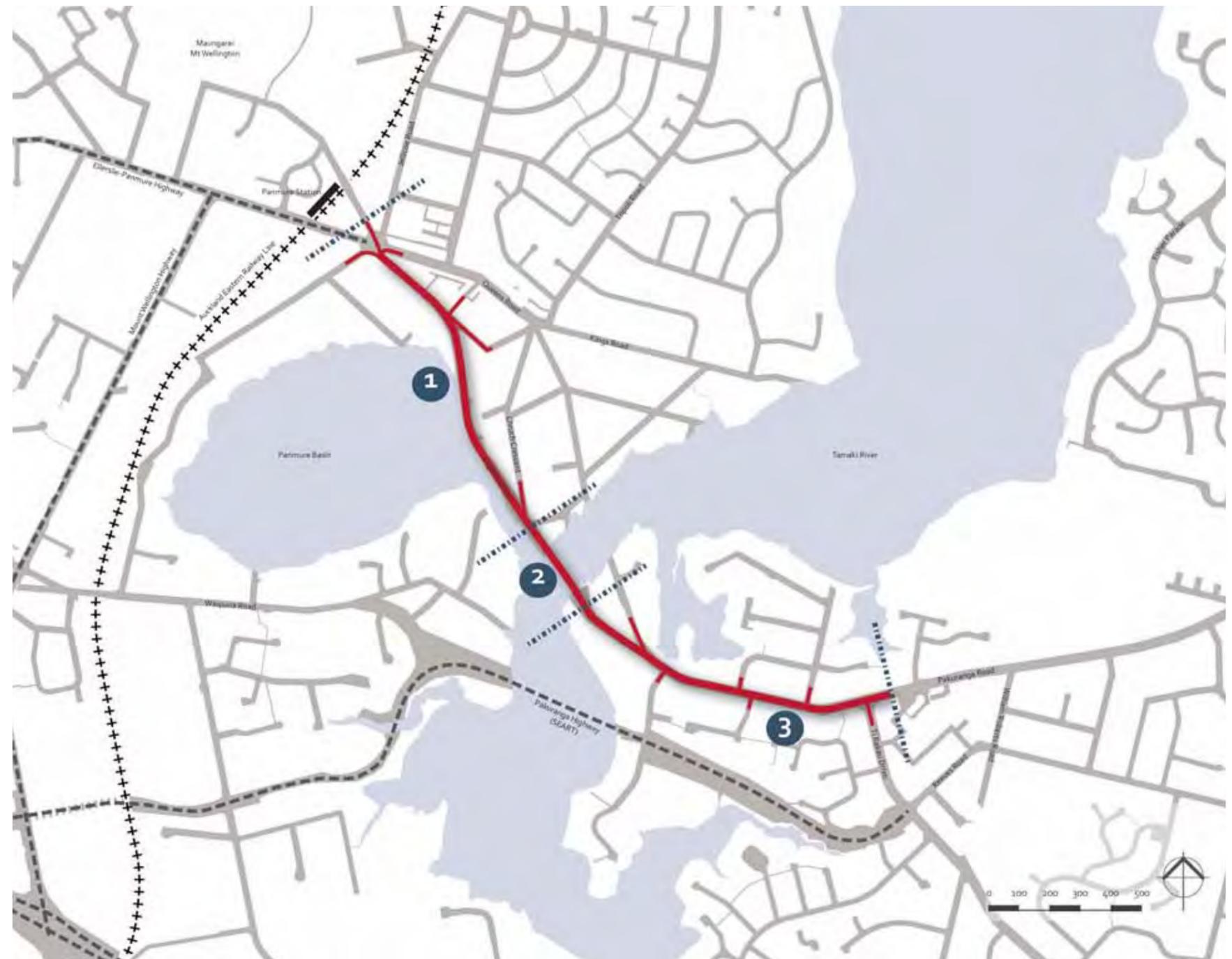


Figure 1. Project area showing urban design sectors

1.1.3. Proposed Design

Auckland Transport proposes to reconfigure the Panmure roundabout to a signalised intersection, and provide a new 2.4km long dedicated busway from this intersection along Lagoon Drive, across the Tamaki River and along Pakuranga Road to the intersection with Ti Rakau Drive. The project will also provide for shared or separated cycle and footpaths, medians and stormwater treatment devices. The works will require widening of Lagoon Drive and Pakuranga Road (on the northern/eastern side) and a duplication of the Panmure Bridge. In addition, as part of the project, a number of changes are proposed to existing intersections and property access arrangements.

Key elements of the proposed design include:

- The Panmure Roundabout will be replaced with a four-legged signal controlled intersection, including bus priority and pedestrian crossings;
- A 7.0m wide segregated busway, with one 3.5m wide lane in each direction, located along the northern side of Lagoon Drive and Pakuranga Road between the existing Panmure Roundabout and Ti Rakau Drive;
- One new bus stop on Pakuranga Road between the Millen Ave and Williams Ave intersections;
- A 4.0-4.3m wide shared path alongside the northern side of Lagoon Drive, and a separate cycle path (3.0m) and footpath (2.0m) alongside Pakuranga Road;
- An additional bridge (approximately 200m long) across the Tamaki River, on a parallel alignment with, and on the northern side of the existing bridge, comprising two 3.5m wide dedicated bus lanes and a 4.3m wide shared path, to provide a pedestrian/cyclist connection across the Tamaki River and link the proposed busway on Lagoon Drive and Pakuranga Road. The proposed bridge will be 1.7m higher (max) than the existing Panmure Bridge, to minimise excavation on the Mokoia Pā headland at the western abutment. This also provides navigational benefits in the future;
- Planted medians (1.2m wide) along Lagoon Drive to provide separation between traffic lanes and the proposed busway, and a 1.4m high pedestrian fence between the busway and the shared path to provide separation for pedestrians;
- Planted swales and raingardens (approx. 3.0m wide) along Pakuranga Road to provide for stormwater treatment as well as separation between traffic lanes and the busway, and between the busway and the cycle/footpaths;
- Landscaping is proposed throughout the project length to provide a higher degree of public amenity. Particular design treatment is proposed in the following locations:

- Terraced pocket parks at the corner of Lagoon Drive and Queens Road, and at the corner of Lagoon Drive and Church Crescent;
- A linear park alongside Pakuranga Road between the Millen Ave and Williams Ave intersections;
- Grassed parkland area alongside Pakuranga Road between the Williams Ave and Ti Rakau intersections (noting that this is a temporary land use and that ultimately this land is expected to be developed).

In addition to the above features, changes are proposed to existing road layouts, intersections and property access arrangements, to provide for the proposed design including:

- Lagoon Drive (which currently provides for two traffic lanes in each direction) will be reconfigured to provide for a single traffic lane in each direction;
- The intersection of Domain Road and Basin View Lane will be re-aligned slightly to the north;
- The existing intersections on Pakuranga Road at Kerswill Place and Williams Ave will become signalised intersections;
- Latham Avenue is proposed to be converted into a cul-de-sac at Pakuranga Road. Access to Pakuranga Road will be via Millen Ave and a new connection created between Latham Avenue and Dillimore Avenue; and
- Tamaki Bay Drive is also proposed to be converted into a cul-de-sac at Pakuranga Road. Access to Pakuranga Road will be via the new signalised intersection at Williams Avenue.

Property access across the new busway will be prevented for safety and efficiency. As a result new access ways for a number of properties are proposed.

1.2. Project objectives

- Contribute to place shaping in Panmure and Pakuranga town centres by providing better connections and accessibility between and within these centres for all transport users, including public transport users, pedestrians and cyclists.
- Provide transport infrastructure that integrates with land uses and supports a quality, compact urban form in Panmure and Pakuranga.
- Provide transport infrastructure that improves linkages, relieves network constraints and improves journey time, frequency and reliability of the transport network overall.

- Improve the efficiency and resilience of the transport network between Panmure and Pakuranga by providing a dedicated route for public transport to and from the eastern suburbs.
- Maximise the benefits of investment in transport infrastructure by extending network connections and delivering network improvements.
- Provide a multi modal transport corridor that connects Panmure and Pakuranga to increase access to a choice of transport options.
- Create a corridor that is safe for all road users, including public transport passengers, cyclists and pedestrians.

1.3. Purpose and scope of the Urban and Landscape Design Framework

The purpose of the Urban and Landscape Design Framework (ULDF) is twofold:

- The ULDF is a supplementary document to the Assessment of Environmental Effects (AEE) to support the Notice of Requirement (NoR) for the AMETI Stage 2a Project.
 - It describes the design outcomes in relation to the AMETI project objectives with an urban design focus, and shows how those outcomes support them
 - It exemplifies the design interface process by which the project objectives, urban design principles, and design responses have been developed iteratively and collaboratively.
- The ULDF is also a guidance document to provide designers and constructors with design guidelines and performance criteria, supporting the development of holistic project outcomes.
 - It includes the landscape concept plans, representative cross-sections, 3D sketches and drawings, to illustrate the proposed urban and landscape design.
 - Following the introductory and corridor-wide chapters, each project sector has its own chapter. This is for ease of use in future stages

The scope of the ULDF design guidance mirrors the project area. However, its design principles, and by extension the design concepts, also consider the area beyond the corridor. They include the public / private realm interface and appropriate urban structure and built form for edging development in the future. The designs for the busway, therefore, are not in isolation but respond to the environmental, social and cultural context of the particular place.

1.4. Urban Design methodology

The urban design methodology was developed to:

- Respond to the AMETI project objectives with an urban design focus
- Address and bring together the different approaches and level of detail in Package 01 (Panmure – detailed design) and Package 04 (Pakuranga Road, Ti Rakau Drive and Reeves Road – concept design), also noting that not all the area of Package 04 is included in the current project.
- Create the ULDF as a living document, one that would be developed alongside the work of the Beca/Opus and Auckland Transport design teams covering Panmure Roundabout and Lagoon Drive, Panmure Bridge, and Pakuranga Road (to Ti Rakau Drive).
- Enable the Design Interface Manager (ULDF document author) for the NoR to work iteratively with the urban designers on the design teams and with the NoR multidisciplinary team, in support of a robust and integrated design process throughout.

The urban design methodology stepped through the following questions:

- What’s been done so far? (audit)
- What’s the situation now? (constraints and opportunities)
- What are our high-level goals? (corridor-wide principles)
- How will the project affect places and people? (issues and effects)
- How does the design address those issues? (design response)
- How do we make the project goals relevant and achievable? (sector-specific design principles)

Consultation was woven through all steps from ‘issues’ onwards.

In consolidating the urban and landscape design work for the ULDF:

- The sector urban designers prepared design reports for their own projects which were set out to readily feed into the ULDF chapters. The drawings they produced are what illustrate the designs in this document. Their descriptions of the project effects, sector-specific design principles, and design response (and how the response meets the principles) are significant inputs to the document.
- To the extent that the sector urban designers ‘own’ the designs that were developed, their design rationale formed the basis of the summary, in the sector chapters, of design issues and design response. The issue identified may be existing, or may be an issue arising from the project.
- To describe the urban and landscape design as fully as possible, the design moves that are not specific responses to identified effects or issues, but are effectively enhancements (or benefits) of the project are also included in the table.
- Each design response / design move was aligned with a sector-specific design principle to provide guidance going forward, as the design response is further developed or detailed.

- The design responses / moves and sector-specific principles were cross-checked against the corridor-wide urban design principles and against the Te Aranga principles.
- The urban and landscape design process and outcomes were checked against the relevant Auckland Council objectives and policies (checklist provided as an Appendix).
- At draft ULDF stage, mana whenua were consulted and provided additional input on cultural values and the application of Te Aranga principles to the project.

More detail on the steps in the methodology is provided below.

1.4.1. Audit report

An audit report was prepared at the beginning of the project to detail the research, design development, reporting and consultation to be undertaken to complete an ULDF for AMETI Stage 2a. The starting point for that report – and for the NoR urban design process – was to confirm the (then) over-arching AMETI project objective to: “promote good urban design – a sense of place, physical safety, and environmental sensitivity”. That objective was considered to be the foundation and urban design ‘litmus test’ for the consentability of the project (and in effect still is through embedding, rather than specifically referencing, urban design within the updated project objectives).

The audit report included a gap analysis via review of the suite of documents and designs for earlier stages of the AMETI project. These included:

- AMETI Project Overview Document (APOD), April 2008
- AMETI Package 01: Panmure Phase Scheme Assessment, July 2009
- AMETI: Panmure Pedestrian and Cycle Bridge, July 2009
- AMETI Package 01: Panmure Land Use and Transport Plan, July 2010
- AMETI Package 01: Panmure Phase 2 Preliminary Design Philosophy Statement, September 2011
- AMETI Package 01 Specimen Design Report Phase 2: Panmure Bridge, December 2011
- AMETI Package 01: Panmure Corridor, Phase 2, Lagoon Drive to Panmure Bridge – Landscape, Open Space & Visual Effects Assessment, July 2012
- AMETI Package 01: Panmure Corridor, Phase 2, Lagoon Drive to Panmure Bridge – Urban Design Effects Assessment (draft July 2012, final August 2012)
- AMETI Package 01: Phase 2 Final Design Report: Draft Issue 1, July 2012

- AMETI Package 04: Pakuranga Road, Ti Rakau Drive and Reeves Road including RTN – SAR Stage 2: Project Scoping Report, May 2011
- AMETI Package 04: Design Philosophy Statement, March 2012
- AMETI Package 04: Statutory Assessment and Assessment of Environmental Effects, December 2012
- AMETI Package 04: Scheme Assessment – Landscape and Visual Assessment, December 2012
- AMETI Package 04: Pakuranga Road, Ti Rakau Drive and Reeves Road Scheme Assessment Report and Appendices, June 2013
- Pakuranga Urban Design Framework (draft), July 2013; and the adopted Pakuranga Town Centre Masterplan, July 2015
- Auckland Plan, March 2012 and subsequent Proposed Auckland Unitary Plan, September 2013
- Auckland Design Manual, October 2013.

1.4.2. Preliminary issue definition

The key issues emerging from the audit in terms for this urban design process were:

Maori (Te Aranga) design principles, post-dating Packages 01 and 04, supersede Auckland Council’s previous urban design principles and are now a key consideration for integration with the project urban design principles.

Package 01 and Package 04 were organised differently: issues-based and sector-based respectively. Work was required in this project to extract and/or develop the appropriate level of information and to make it consistent under a single UDF ‘umbrella’. Package 01 was at detailed design and included an urban design assessment; Package 04 was at concept stage.

There was early consultation with AT and Auckland Council (on site visit and through workshops) around the design of local road, pedestrian and cycle connections; land use intensification and built form; Mana Whenua culture and history; and amenity for residents, pedestrians and cyclists, and users of the town centres. This enabled additional issues to be canvassed that would need to be addressed by the design teams, and would therefore be important to cover in the urban design principles.

1.4.3. Corridor-wide urban design principles

Over-arching urban design principles were developed, taking into account the project objectives, under four key headings: character, connectivity; sustainable land uses; and amenity. They were circulated to other NoR technical discipline leads and submitted in draft to Auckland Transport.

They provided a starting point for the sector urban designers, who were encouraged (by way of example) to both test and refine them by developing more detailed urban design principles specific to their own projects. The intention was to work collaboratively and iteratively with those external design teams to achieve 'bottom up' as well as 'top down' design principles that are relevant and targeted. This was achieved through receiving comment and amending the principles as appropriate.

In addition, both high level and more detailed design principles were developed for the Panmure Busway Bridge by that sector urban designer and are captured under the heading 'bridge design'.

1.4.4. Sector-specific design effects and design principles

The urban designers for the Panmure Roundabout and Lagoon Drive / Panmure Bridge and Pakuranga Road sectors were asked to draft supplementary urban design principles (equivalent to performance criteria) that related to and supported the corridor-wide design principles (which in turn support the project objectives). For each sector, the issues and opportunities were required to be linked to place-specific urban design principles. Design principles for Panmure Roundabout and Lagoon Drive were extrapolated from the existing Package 01 Urban Design and Landscape, Open Space and Visual Effects Assessments (2012) and checked for consistency with the project objectives, which had been updated since those reports were produced. The developing design was also tested against the sector-specific principles (and vice versa); this was key to a targeted and practical application of the ULDF in implementing the project.

1.4.5. Design responses

The level of detail of the design of the sectors differs (specimen design for elements of Panmure Bridge, and Pakuranga Road, and detailed design for Lagoon Drive). Notwithstanding, the urban and landscape design described and illustrated in the ULDF fulfils the same function: it shows how the design responds to the identified issues, opportunities and project effects, and contributes to desired outcomes for each sector and, collectively, to the overall corridor.

For Panmure Roundabout and Lagoon Drive, Panmure Bridge, and Pakuranga Road, the sector urban designers worked with their own design teams to design specific corridor components including bridges, retaining walls, interchanges, earthworks, shared paths, noise barriers, landscape planting and road furniture.

The NoR Design Interface Manager reviewed the developing design against the performance criteria and design principles (at 30%, 60% and 90%). For Panmure Roundabout and Lagoon Drive, the existing detailed design was largely 'inherited' from the 2012 work by Opus. While there was limited opportunity to take up recommendations to further enhance the project, the sector urban designer worked through and covered off these recommendations as the detailed design was finalised.

Landscape and urban design were integrally linked both in the project process and in the presentation of the design responses in this ULDF.

1.4.6. Consultation, collaboration and integration

Urban and landscape design has been integral to the design process for all sectors throughout, from input to options evaluation, participation in multi-disciplinary workshops, and liaison with other technical disciplines through design development, noise assessment, and risk and Safety in Design processes. The urban design teams for the Panmure Roundabout and Lagoon Drive / Panmure Bridge and Pakuranga Road sections of the corridor met regularly with each other and with the NoR Design Interface Manager (author of this document) at key stages of the Project, these being: confirmation of corridor-wide and place-specific principles; 30% and 60% completion of sector design reports; and to discuss the format and content of this ULDF insofar as it captures the work of those teams.

1.4.7. Preparation of the ULDF

The ULDF has been prepared taking the project objectives and all previous and current urban design work into account. As well as the interface with the sector urban designers through formal workshops, at key stages comment was provided on the draft design philosophy statements and design reports prepared by those urban designers for their sectors. The documents reviewed, and their analysis, summary of effects, and design rationale extracted for the ULDF, comprise:

- Lagoon Drive Urban Busway – Design Philosophy Statement (pp. 19 – 44)
- Mokoia Pa – Lagoon Drive Urban Busway Detailed Design Report
- Mokoia Pa Design Mitigation – Panmure Bridge Options Report
- Panmure Bridge – Design Philosophy Statement
- Panmure Bridge – Landscape and Urban Design Statement
- Pakuranga Busway Urban Design Report
- AMETI Phase 2 Landscape and Visual Assessment.

Before finalising, the ULDF was reviewed and updated through Mana Whenua forums. In particular, additional material relating to the cultural landscape context was provided, and the place-specific design principles added to, to demonstrate where and how the design supports the Te Aranga principles.

1.5. Structure of this document

The ULDF is arranged with over-arching material at the front and place-specific guidance divided into chapters representing project sectors. The intention is that, for future stages of AMETI, more urban design sectors can be developed and added to the back of the ULDF without having to duplicate corridor-wide objectives and principles. The 'upfront' section includes an outline of the design context, and the design intent, including:

- The policy context
- Summary of the key features of the existing environment drawn from the Landscape and Visual Assessment and the Heritage Impact Assessment / Archæological Assessment
- Features and opportunities across the NoR area, shown graphically
- Corridor-wide urban design principles
- Corridor-wide urban and landscape project effects.

Following the 'upfront' section, each 'sector' has its own chapter that includes, as a minimum:

- A table describing the design response to the identified issues and effects and how it supports the place-specific and corridor-wide design principles.
- A concept plan that shows the landscape design, the location of noise walls, retaining walls, lighting and signage, and the shared paths together with cross-corridor connections and linkages into the regional network
- Planting palette
- Sections that illustrate the spatial quality of the corridor at representative locations.

1.5.1. Assessment against Auckland Council objectives and policies

For consenting purposes, a table has been prepared setting out the objectives and policies that are relevant to the urban and landscape design, and where these are addressed in the relevant planning principles for this project. This table (Appendix A) is a checklist for the urban design process and key outcomes against the provisions of the:

- Auckland Regional Policy Statement (operative 1999);
- Proposed Auckland Unitary Plan – RPS provisions and regional/district provisions (notified 30 September 2002);
- Operative Isthmus District Plan (for land on the Panmure side of Tamaki River incl. Panmure Bridge) (1999); and
- Operative Manukau District Plan (for land on the Pakuranga side of Tamaki River) (2002).

2 DESIGN CONTEXT

2.1. Strategic and policy context

This chapter outlines the policies and principles that underpin the urban and landscape design process and outcomes, and that were heads of consideration for the sector urban designers as well as for the corridor-wide design principles.

2.1.1. AMETI Project objectives

Of the seven AMETI Panmure to Pakuranga project objectives, three are strongly linked to urban design. They are:

- Provide transport infrastructure that integrates with land uses and supports a quality, compact urban form in Panmure and Pakuranga;
- Contribute to place shaping in Panmure and Pakuranga town centres by providing better connections and accessibility between and within these centres for all transport users, including public transport users, pedestrians and cyclists; and
- Create a corridor that is safe for all road users, including public transport passengers, cyclists and pedestrians.

Implications

Integrating land uses and supporting quality, compact urban form is at the heart of sustainable communities, and relates not just to the town centres but also to residual land where the timeframe for future development to edge and activate the busway is uncertain. Place shaping, as implied by the objective, is about the role the movement network plays in connecting, and connecting well. One key focus is locating bus stops for optimum visibility and patronage. Another is the visibility of the busway and of the connections between centres, between neighbourhoods, and from neighbourhoods to centres, to encourage public transport use and to bring people close to community hubs and town centres. Accessibility, amenity and safety of shared paths, footpaths and cycleways are critical considerations.

2.1.2. The Auckland Plan

The Auckland Plan (2012) is a 30 year strategy for growth and development, exemplified in the vision for Auckland as the world's most liveable city. The vision will be achieved through meeting seven key outcomes for health, sustainability, productivity, accessibility, sense of community, culture and creativity, and Maori identity. The Proposed Auckland Unitary Plan (PAUP), including its Regional Policy Statement sets objectives and policies for centres and neighbourhoods, and for integrated land use and transport planning, that underpin appropriate urban growth. The PAUP is the mechanism that will shape the physical form of Auckland to support these outcomes.

Implications

The future development of land, for example on Lagoon Drive near the Panmure Roundabout and along Pakuranga Road, is outside the scope of this project. However, the potential to enable or support vibrant centres and neighbourhoods is a key urban design consideration, and each sector's urban designer was therefore challenged to work with their wider team so that residual land following construction of the project would not preclude these positive outcomes. This meant testing the size, shape, slope and any other constraints on land alongside the corridor so that the future urban form could be envisaged.

2.1.3. Pakuranga Town Centre Masterplan

This document (2015) was developed under the direction of the Howick Local Board and followed extensive community consultation. It was exhibited in draft form in 2014 with a vision for Pakuranga as "a vibrant Town Centre destination, well-connected to its coastal walkway and local communities, enhanced by the creation of new civic spaces, green links, live / work opportunities and by its celebration of cultural diversity". The spatial concept to enable the vision is for a triangle with three "striking urban landmark corners", three visitor gateways, and three distinctive activity edges. It assumes that the main busway station is located on the Ti Rakau edge, close to Pakuranga Road. The Masterplan was adopted in July 2015.

Implications

The urban design principles and desired outcomes for the town centre are relevant. The onus is on the detailed design of the Pakuranga Road busway to enable an "iconic corner" at the intersection with Ti Rakau Drive, a well connected and accessible open space network through and beyond the triangle, and a future mix of land uses and built form that can support a sustainable centre. Most relevant to the design for the busway itself is the vision for a signalised pedestrian connection across Pakuranga Road linking the future town square with the Rotary Walkway and coastal edge. This has guided the landscape concept for the median treatment.

2.1.4. Panmure Basin Master Plan

This Master Plan was prepared for the Maungakiekie-Tamaki Local Board and was adopted in July 2015. It describes and illustrates the following suggested improvements:

- addressing stormwater outflows to improve water quality
- a heritage trail including Māori and European history
- review of entrances to enhance amenity and provide wayfinding signage
- vegetation management including: the removal of weed species; management of the mangroves; crown lifting of trees to open up views into the basin; and strategic planting to provide succession planting for aging trees, further shade, bank stabilisation, stormwater treatment and enhance the basin's ecological values
- reconfiguration of Peterson Road carpark with planting and swales
- review of areas where sight lines on the McCullough Walkway could be improved and to provide safer and /or clearer connections
- prioritisation of areas where the walkway needs to be upgraded and / or widened
- renewal of the fitness stations and Jubilee Bridge
- more seating, picnic tables and drinking fountains.

Implications

The Lagoon Drive North Entrance area has a concept for an upgraded skate park including bike racks and wayfinding signage. This area is immediately adjacent to the AMETI corridor and notes retention of existing trees in the verge. A new South Entrance is proposed, to be developed in conjunction with Jubilee Bridge works and potentially carrying through its themes and materials (noting that the replacement of Jubilee Bridge is not a consideration of this project) The AMETI open space and landscape design is consistent with the intent of the Master Plan and does not preclude these future moves.

2.2. Maori design values and principles

2.2.1. Te Aranga principles

In the Auckland Design Manual (October 2013), Maori design principles – the Te Aranga principles – have replaced urban design principles. These were developed by Auckland Council in collaboration with Mana Whenua and constitute a Te Aranga Framework (below).

The Auckland Council website notes that “Auckland Transport’s Auckland Manukau Eastern Transport Initiative (AMETI) is the first significant post-Te Aranga development, providing opportunities to engage meaningfully with mana whenua and to test the principles on a real project.”

Mana whenua, that is –

- Ngāi Tai ki Tāmaki Tribal Trust
- Ngāti Maru Runanga
- Ngāti Pāoa Trust Board
- Ngāti Tamaoho Trust
- Ngāti Te Ata Waiohua
- Ngāti Whanaunga Inc Soc
- Ngāti Whātua Ōrākei
- Te Ākitai Waiohua

– have expressed that the project footprint is within their area of interest and continue to engage with Auckland Transport on this project.

The key purpose of the Te Aranga Framework is to ensure the protection, reinstatement and reaffirmation of Mana whenua connection and association to the cultural landscape through design. This will ensure all parties including community and matawaka have the opportunity to connect and to deepen their appreciation and knowledge of the history of the area.

The high level values of rangatiratanga, kotahitanga, kaitiakitanga, whanaungatanga, manaakitanga, matauranga and wairuatanga underpin outcome oriented principles. Principles such as mana, whakapapa, tohu, taiao, mauri tu and mahi toi when woven upon the tapestry of those values provide a sustainable, warm and enduring korowai / cloak upon which this rich history is foretold.

The Te Aranga Framework therefore ensures Mana whenua an opportunity to articulate their history and association of and to cultural landscapes, giving visibility and strength to their history. The reaffirmation and at times ‘making correct’ earlier stories shared over time and use of appropriate pepeha and whakatauki, for example:

“Paoa taringa rahirahi” – (Ngati) Paoa have sensitive ears

Implications

Given the significant Mana Whenua cultural values that exist through the Panmure Pakuranga area it is appropriate that preliminary and detailed design give regard to the Te Aranga design principles, to further enhance the social, cultural, economic and environmental wellbeing of both Maori and non-Maori. The principles have informed the urban design process and the ULDF’s corridor wide principles. They were drawn upon by the sector urban designers as part of the suite of principles guiding the updated detailed design for the Panmure / Lagoon Drive sector, the Principal’s Requirements going forward from the specimen design for Panmure Bridge, and the detailed design for the Pakuranga Road busway.

Of particular importance going forward is the need to work with iwi around design that touches the culturally sensitive Mōkoia Pa site.

This table reproduces in full the Te Aranga Principles set out in the Auckland Design Manual (http://www.aucklanddesignmanual.co.nz/design-thinking/maori-design/te_aranga_principles) for Auckland Council

NGA HUA / outcome	AHUATANGA / attributes	HE TAUIRA / application
MANA – Rangatiratanga authority		
The status of iwi and hapū as mana whenua is recognised and respected	<p>Recognise Te Tiriti o Waitangi / The Treaty of Waitangi and the Wai Ko Aotearoa Tēnei framework for Treaty Partnerships in 21st Century Aotearoa New Zealand as the basis for all relationships pertaining development</p> <hr/> <p>Provide a platform for working relationships where manawhenua values, world views, tikanga, cultural narratives and visual identity can be appropriately expressed in the design environment</p> <hr/> <p>High quality Treaty-based relationships are fundamental to the application of the other Te Aranga principles</p>	<ul style="list-style-type: none"> ➤ The development of high level Treaty based relationships with mana whenua is essential prior to finalising design approaches and will maximise the opportunities for design outcomes ➤ Important to identify any primary mana whenua groups as well as wider mana whenua interests in any given development
WHAKAPAPA – Names and naming		
Maori names are celebrated	<p>Recognise and celebrate the significance of mana whenua ancestral names</p> <hr/> <p>Recognise ancestral names as entry points for exploring and honouring tūpuna, historical narratives and customary practices associated with development sites and their ability to enhance sense of place connections</p>	<ul style="list-style-type: none"> ➤ Mana whenua consultation and research on the use of correct ancestral names, including macrons ➤ Recognition of traditional place names through signage and wayfinding ➤ Use of appropriate names to inform design processes

This table reproduces in full the Te Aranga Principles set out in the Auckland Design Manual (http://www.aucklanddesignmanual.co.nz/design-thinking/maori-design/te_aranga_principles) for Auckland Council

NGA HUA / outcome	AHUATANGA / attributes	HE TAUIRA / application
TAIAO – The natural environment		
The natural environment is protected, restored and/or enhanced	Sustain and enhance the natural environment <hr/> Local flora and fauna which are familiar and significant to mana whenua are key natural landscape elements within urban and / or modified areas <hr/> Natural environments are protected, restored or enhanced to levels where sustainable mana whenua harvesting is possible	<ul style="list-style-type: none"> ➤ Re-establishment of local biodiversity ➤ Creating and connecting ecological corridors ➤ Planting of appropriate indigenous flora in public places, strategies to encourage native planting in private spaces ➤ Selection of plant and tree species as seasonal markers and attractors of native bird life ➤ Establishment and management of traditional food and cultural resource areas allowing for active kaitiakitanga
MAURI TU – Environmental health		
Environmental health is protected, maintained and/or enhanced	The wider development area and all elements and developments within the site are considered on the basis of protecting, maintaining or enhancing mauri <hr/> The quality of wai, whenua, ngāhere and air are actively monitored <hr/> Water, energy and material resources are conserved <hr/> Community wellbeing is enhanced	<ul style="list-style-type: none"> ➤ Daylighting, restoration and planting of waterways ➤ Contaminated areas of soil are remediated ➤ Rainwater collection systems, grey-water recycling systems and passive solar design opportunities are explored in the design process ➤ Hard landscape and building materials which are locally sourced and of high cultural value to mana whenua are explored in the design process
MAHI TOI – Creative expression		
Iwi / hapū narratives are captured and expressed creatively and appropriately	Ancestral names, local tohu and iwi narratives are creatively reinscribed into the design environment including: landscape; architecture; interior design and public art <hr/> Iwi / hapu mandated design professionals and artists are appropriately engaged in such processes	<ul style="list-style-type: none"> ➤ Mana whenua assist in establishing design consortia which are equipped to translate iwi/hapū cultural narratives into the design environment ➤ Civic / shared landscapes are created to reflect local iwi/hapu identity and contribute to sense of place ➤ Iwi/hapū narratives are reinscribed in the environment through public art and design
TOHU – The wider cultural landscape		
Mana whenua significant sites and cultural landmarks are acknowledged	Acknowledge a Māori world view of the wider significance of tohu / landmarks and their ability to inform the design of specific development sites <hr/> Support a process whereby significant sites can be identified, managed, protected and enhanced <hr/> Celebrate local and wider unique cultural heritage and community characteristics that reinforce sense of place and identity	<ul style="list-style-type: none"> ➤ Recognition of tohu, including wāhi tapu, maunga, awa, puna, mahinga kai and ancestral kainga ➤ Allows visual connection to significant sites to be created, preserved and enhanced ➤ Wider cultural landmarks and associated narratives able to inform building / spatial orientation and general design responses ➤ Heritage trails, markers and interpretation boards
AHI KĀ – The living presence		
Iwi / hapū have a living and enduring presence and are secure and valued within their rohe	Mana whenua live, work and play within their own rohe <hr/> Acknowledge the post Treaty of Waitangi settlement environment where iwi living presences can include customary, cultural and commercial dimensions <hr/> Living iwi/hapu presences and associated kaitiaki roles are resumed within urban areas	<ul style="list-style-type: none"> ➤ Access to natural resources (weaving species, mahinga kai, waterways, etc) facilitates, maintains and /or enhances mana whenua ahi kā and kaitiakitanga ➤ Civic/iwi joint venture developments ensure ahi kā and sense of place relationships are enhanced ➤ Iwi/private sector joint venture developments enhance employment and ahi kā relationships

2.2.2. Cultural landscape context¹

Tuia ki te rangi,
 Tuia ki te whenua,
 Tuia ki te moana,
 E rongō te pō,
 E rongō te ao

The Tāmaki Isthmus, with its numerous and spiritually significant maunga (mountains) and craters, the Waitematā and Manukau harbours, the motu (islands), the Tāmaki River, Whau and other portages that connect the harbours, swamps, the multiple coastal bays, headlands, and gullies and streams, all which bear names commemorating important ancestors and past events, are part of a broader cultural landscape of Tāmaki Makaurau.

To Mana Whenua, the cultural sites and features within the landscape are imbued with the mana of the ancestors that binds the current generations through mana, tapu and whakapapa to those ancestors and ultimately to the whenua (land) itself and ngā atua. The landscape and cultural sites act as a repository for the whakapapa, mana, tikanga and traditions for the current and future generations. As an oral culture, the whenua, sites and features also act as the story book for mana whenua traditions and identity increasing their cultural and spiritual association to the Mana Whenua groups.

Mana Whenua do not view the landscape features solely for its current form, but view it with its cultural and spiritual values associated with its past, especially where it relates to important tribal ancestors and events that were significant to the mana and identity of the iwi / hapū. The bond with the whenua and tāonga connect iwi / hapū to their ancestors as the source of their mana.²

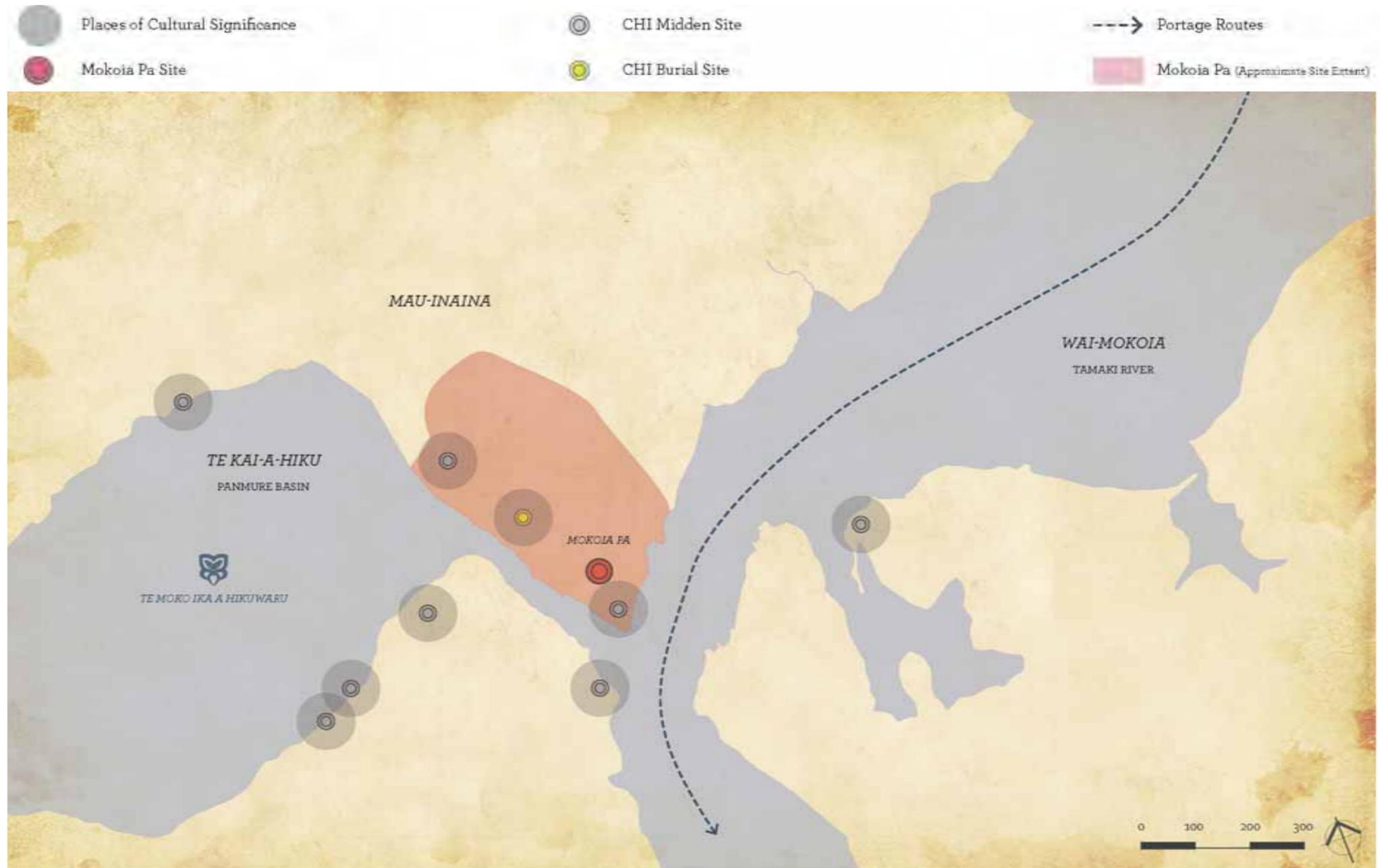


Figure 2. The cultural landscape

2.2.3. Points of the cultural landscape

AMETI Phase 2A is set within an important cultural landscape, commencing at the Panmure roundabout at the base of the tupuna maunga Maungarei (Mount Wellington), travelling along the rim of the Panmure Basin (Te Kaiahiku), encroaching into Mokoia Pā situated on the western bank of the Tāmaki River, crossing the Tāmaki River and then extending along Pakuranga Drive. Mokoia Pā in particular is of high cultural and spiritual significance to Mana Whenua and of wider significance as part of the New Zealand inter-tribal musket wars. Maungarei, the Tāmaki River, Panmure Basin are of major cultural significance as strategically and spiritually important features associated with Mana Whenua customs and practices and important ancestors (tūpuna).³

Te Kaiahiku (Panmure Basin)

The relationship of Mana Whenua with Panmure Basin is an ancestral one that extends back to the founding waka and ancestors that originally journeyed from Hawaiiki and were the founding ancestors for Mana Whenua iwi and hapū of today. It is associated with important water rituals and will have supported the customary and spiritual practices of Mana Whenua.

The Panmure Basin was named Te Kai a Hiku (the food bowl of Hiku) by Taikehu, a Tainui waka ancestor who was searching for the sea to the west (Manukau Harbour) when he discovered Moko ika hiku waru feasting on fish that were trapped within the basin. His den (rua) was the deep pool at the river entrance to the lagoon in the general area of the Jubilee Bridge. The great serpent fish Moko ika hiku waru was adopted by Ngāti Paoa when they built the nearby great citadels of Mauinaina and Mokoia.⁴



Figure 3. Historic map of Panmure area

Tāmaki River

Like the Panmure Basin, the relationship of Mana Whenua with the Tāmaki River is also an ancestral one that again extends back to the founding waka and ancestors. Not only is the river associated with Tainui Waka, but also Te Arawa waka. The Tāmaki River was an important customary resource having been the water way to support settlements along its coast, as well as to provide the strategically, cultural and spiritually important portage between the east and west coast harbours.

Mokoia Pā and Mauinaina

Mokoia and Mauinaina were the great bastions of Ngāti Paoa; and though they may have been physically removed from the landscape that now stands before us, the spirit of the people and the connection to those significant sites will remain and endure within the stories and hearts of our people. Ngāti Hura (a hapū of Ngāti Paoa) also has an intrinsic relationship to Mokoia that transcends normal social, cultural, economic, political and spiritual dimensions. It is a core element of their identity, a pillar of the past and an inspiration for our future. The invasion of Mokoia and Mauinaina had a devastating effect on the social, economic, spiritual and physical wellbeing of the Ngāti Paoa tribe and Ngāti Hura hapu.

Prior to the invasion we are cognisant of Ngāti Paoa as described by Messrs Marsden, Nicholas, and Butler, as a people much involved in trade and traditional customary practices; thriving as a community with successful social and organisational structures; and led by leaders with respect and compassion. Today, the effects of the massacre that occurred and the acts of bravery and defiance of those who were attacked still live and are felt deep within the hearts and minds of the Ngāti Paoa people.⁵



Figure 4. Mokoia, after the construction of the first Panmure bridge (source: Auckland War Memorial Museum, Percy Smith, 1840-1922)

Maungarei

Maungarei is the volcanic tupuna maunga and is a traditional defensive pā site and urupa of Mana Whenua. The significance of Maungarei has also been affirmed through the Collective Settlement. The area associated with Maungarei today is perhaps more limited to the volcanic cone feature, whereas in times of Mana Whenua occupation of the pā, customary activities and practices will have occurred on the lower slopes, including burials, māra kai (gardens), kāinga (among other activities).⁶

Footnotes

- 1 The text and associated illustrations in Sections 2.22 and 2.23 were provided by Ngāti Paoa
- 2,3,6 Hovell, T. (2015) Cultural Values Assessment in relation to the proposed AMETI Project Phase 2A, Tama Hovell, Atkins Holm Majury Ltd
- 4 Auckland Council (2015), Panmure Basin Master Plan
- 5 Ngāti Paoa Trust (2013), Maori Values Assessment – Auckland Manukau Transport Initiative

2.3. Heritage context

The history of the area is richly layered. The Heritage Assessment / Archæological Impact Assessment notes that the project area traverses "...an urban / suburban landscape that has a deep history of settlement... initially by Maori, and review of previous archaeological investigation results indicates increasing density of settlement from circa AD1425.

Succeeding eras of occupation and development have modified this landscape, partially destroying archaeological traces of earlier eras, and obscuring most remaining physical traces of such activities beneath fill and paving. It is known though, that there are significant archaeological remains of earlier eras present, and there is a high risk of substantial further discoveries during proposed works.

An unusual aspect of this project is the known historical importance of the Mokoia/Mauinaina pa complex... which was the scene of a siege by northern tribes of the population of the Tamaki River area during the musket wars... The Mokoia/Mauinaina complex is of uncertain extent and in a highly modified condition, but this does not negate historical importance or any cultural associations/values that may be attached to the site.

Intensive Pakeha settlement of the Panmure Area commenced in 1848 with the arrival of the Fencibles and establishment of Panmure. .."

Land sales on the Auckland isthmus began in 1841, and by the late 1840s a road network had been laid over most of the area, supported by portages and navigable waterways. As anxiety grew from both Maori and Europeans over land losses and Auckland's growth, the garrison was enlarged, construction of Great South Road began, and military redoubts established. The Royal New Zealand Fencibles, retired soldiers recruited in the British Isles as armed settlers for the defence of Auckland, came to New Zealand with their families between 1847 and 1852.

Upon arrival they were given land and settled in Howick, Panmure, Otahuhu, and Onehunga. Eighty families established the Panmure Fencible settlement in 1848 on the eastern shores of the Panmure Lagoon, between Maungarei and the Tamaki River.



Figure 5. Fencible enclosure, 1850s (NZ Fencible Society)

Panmure was an important town and port, located as it is near the narrowest part of the Auckland isthmus and on the route between Auckland's city 'core' and the Howick fencible settlement, first by way of a ferry (tolls were charged from 1866–1884) and then the first Panmure Bridge.



Figure 6. Toll keeper's house, Pakuranga side (Auckland War Memorial Museum C6118); from La Roche (2015)



Figure 7. The first Panmure Bridge showing its swivel span (Illustrated London News October 12 1867); from La Roche (2015)

"The swivel span of the first Panmure Bridge, erected in the 1860s and scheduled for protection in the PAUP (RPS) and MDP as a Category B item, will be affected, but can be retained and conserved under the current proposal."

Additional sources: A brief history of Auckland's urban form (Auckland Regional Council, 2010); NZ Fencible Society Inc website; The 1865 Tamaki River Bridge Panmure (John and Alan La Roche, 2015). All text in italics quotes from the Heritage Assessment / Archæological Impact Assessment for this project

2.4. The existing environment

Quoting from the Landscape and Visual Assessment (LVA):

“The AMETI corridor traverses a series of suburbs within the eastern parts of Auckland’s Isthmus connecting the town centres of Panmure and Pakuranga. The corridor sits adjacent to three significant landscape features: Mt Wellington; Panmure Basin; and the Tamaki River.

At the western end of the corridor, Mt Wellington rises well above a surrounding mix of residential, light industrial and commercial development. It is the largest of Auckland’s volcanic cones and a key landmark within the Mt Wellington / Panmure area being clearly etched on the local skyline and easily differentiated from the urban apron around it. This situation is reinforced by the cone’s prominence from a number of locations along the AMETI Stage 2a corridor, in particular from the Panmure Roundabout, Panmure Bridge and Pakuranga Town Centre approximately 3.3km away.

Immediately south of Mt Wellington lies Panmure Basin, a highly cohesive and distinctive landform feature that is characterised by a circular volcanic explosion crater and associated tuff ring (about 1400m diameter) and a flooded intertidal basin. The basin is surrounded by mainly residential properties and its eastern edge is demarcated by Lagoon Drive. Despite this surrounding modification the natural form of the basin remains intact as a distinctive feature, the legibility of which is enhanced by natural tidal movements of the Tamaki River flowing into the Basin.

Residential, industrial, and commercial development extends down to the river’s edge in many places with small segments of the river fringe covered in vegetation. The AMETI Stage 2a road corridor crosses the Tamaki River between Lagoon Drive and Pakuranga Road (Panmure Bridge). In addition, the Pakuranga Highway also crosses the Tamaki River to the south of the Panmure Bridge connecting Sylvia Park and Pakuranga Town Centres.

The Tamaki River extends between Bucklands Beach in the north to Otahuhu in the south and is characterised by a distinct intertidal harbour environment dominated by a central open water channel, expansive coastal and estuarine flats, and mangrove colonies. In the vicinity of the AMETI Stage 2a road corridor, the river fringe is characterised by low lying sedimentary cliffs rising between 5–10m above sea level and terminating in gently shelving, sandstone / mudstone reefs and outcrops.

The topography around Panmure and Pakuranga is relatively flat and low lying although there are areas around the Panmure Basin that are more undulating in nature. The built environment surrounding the corridor is dominated by traditional 1960s and 1970s low rise suburban development with additional pockets of extensive infill. Clusters of high density terraced housing sit adjacent to Panmure Town Centre.”

Finally, there are several small open space areas adjacent to the corridor including the coastal edge of Lagoon Drive/ Panmure Basin; grassed areas on either side of Kerswill Place/ Pakuranga Road intersection; and on the southwestern corner of the Pakuranga Road / Ti Rakau Drive intersection. The Panmure Recreational Walkway and the Pakuranga Rotary Walkway also provide for key linkages in the local landscape.

2.5. Urban and landscape character

This section summarises the findings of the Landscape and Visual Assessment (LVA), and extracts key points from the Heritage Impact Assessment / Archæological Assessment (both of which reference the Cultural Values Assessment). It sets the scene for the urban and landscape design principles and design moves for each sector. The LVA methodology included research, site visits and landscape character analysis; design integration workshops to support the design teams to avoid effects where possible; and an assessment of the residual effects.

The LVA identifies three landscape character areas which are based on landform, land cover and land use. These relate to the ULDF sectors as follows:

- LVA sectors 1 and 2 correspond to ULDF sector 1, except for Panmure Bridge and abutments which constitutes UDF sector 2. The LVA separates out the Panmure town centre, and includes the Panmure Bridge with Lagoon Drive / Panmure Basin .
- LVA sector 3 corresponds to ULDF sector 3.

For the purposes of the ULDF, the relevant LVA commentary is arranged to fit the ULDF sectors / chapters which reflect how the design was undertaken by the respective teams, and how the Project will be delivered. The landscape character sectors are still acknowledged, for ease of cross-referencing to the LVA.

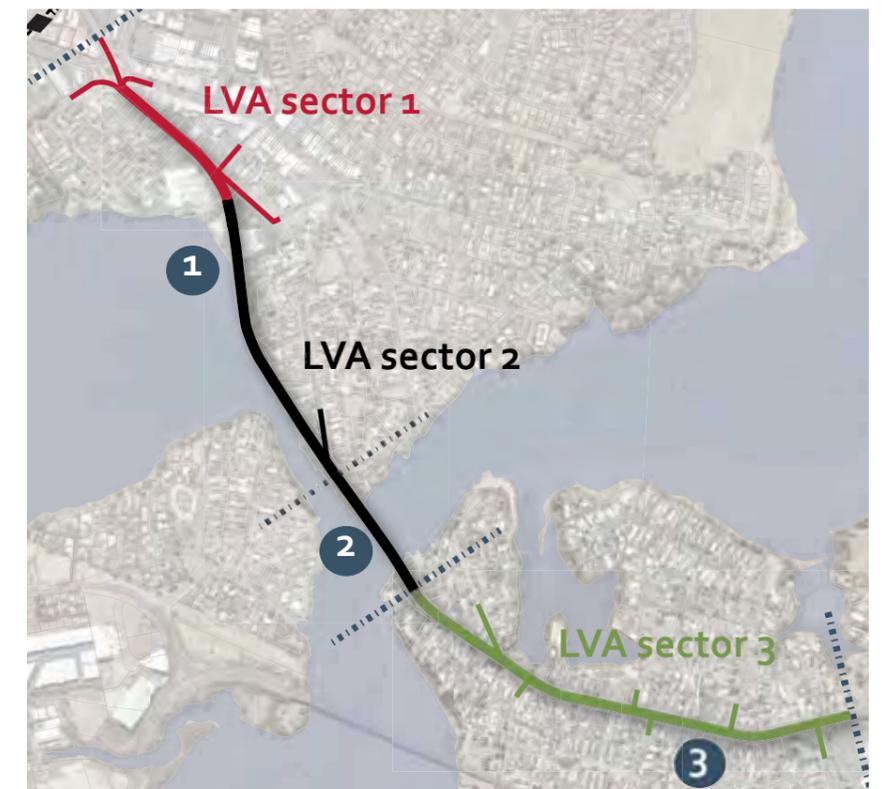


Figure 8. LVA sectors compared to ULDF sectors

Sector 1: Panmure (Lagoon Drive)

- The key attributes of this sector (which comprises LVA sector 1 and part of LVA sector 2) include:

(for Panmure town centre)

- Views of Mt Wellington / Maungarei from the north-western end of Lagoon Drive;
- Small scale commercial premises, terraced housing, and a series of open car parking areas flanked by the brick façade of the Panmure Town Centre retail strip to the north;
- Rising terrain from Panmure Basin up to Queens Road.

(for Lagoon Drive)

- Panmure Basin;
- Native vegetation, predominately pohutukawa, along the Basin’s embankment;
- Moderate to steeply rising terrain from the edge of Lagoon Drive including a 10m steep vegetated embankment topped by housing;
- Pedestrian walkway and bridge that connects with a wider path network around the perimeter of Panmure Basin;

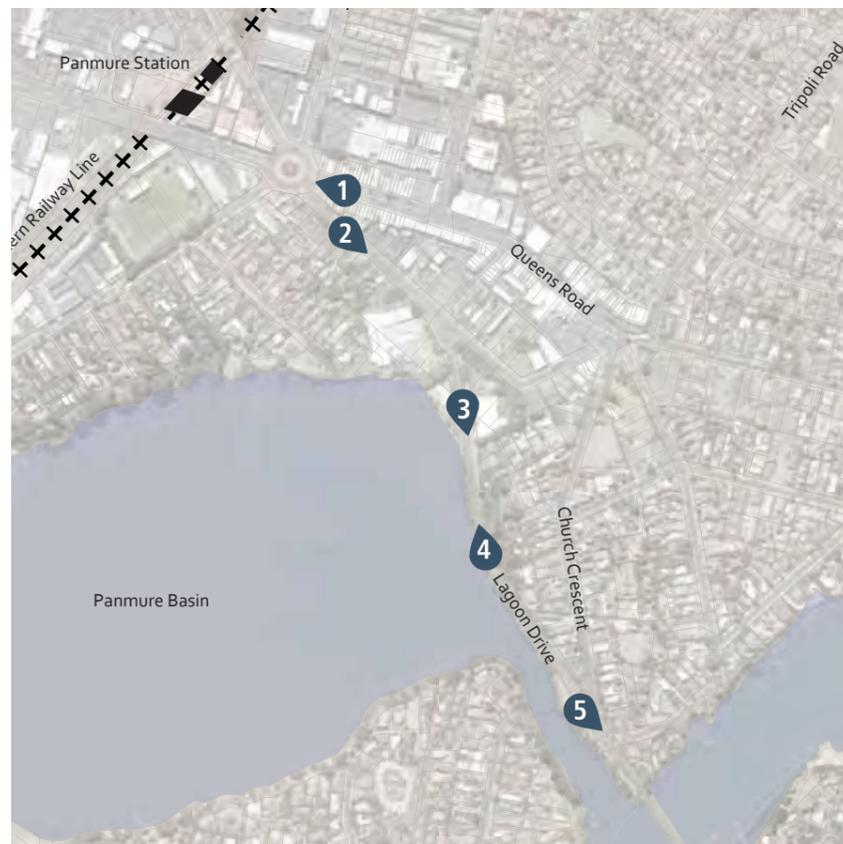


Figure 9. Sector 1 key views



Figure 10. View NW from Queens Road to Mt Wellington / Maungarei



Figure 11. The 'back of house' character of the Panmure town centre, and the grade separation, along Lagoon Drive



Figure 12. Recreation centres / community uses separated by Lagoon Drive



Figure 13. Pohutukawa and steep vegetated cliff framing views to Maungarei

Sector 2: Panmure Bridge

- The key attributes of this sector (which is part of LVA sector 2) include:
 - Panmure Bridge and its interface with the Tamaki River with extensive views towards Half Moon Bay
 - The historic Mōkoia Pa site, tapu to Ngati Paoa, on the north-western side of Tamaki River and at the elevated point at the confluence with the tidal channel to Panmure Basin. The site is now visually obscured because of the highly modified residential development around and encroaching on it. There is a commemorative plaque in Bridge Street
 - The jetty and berths of the Panmure Bridge Marina on the south-eastern side of the river
 - The heritage swivel span of the first Panmure Bridge, on the south-eastern side of the river.

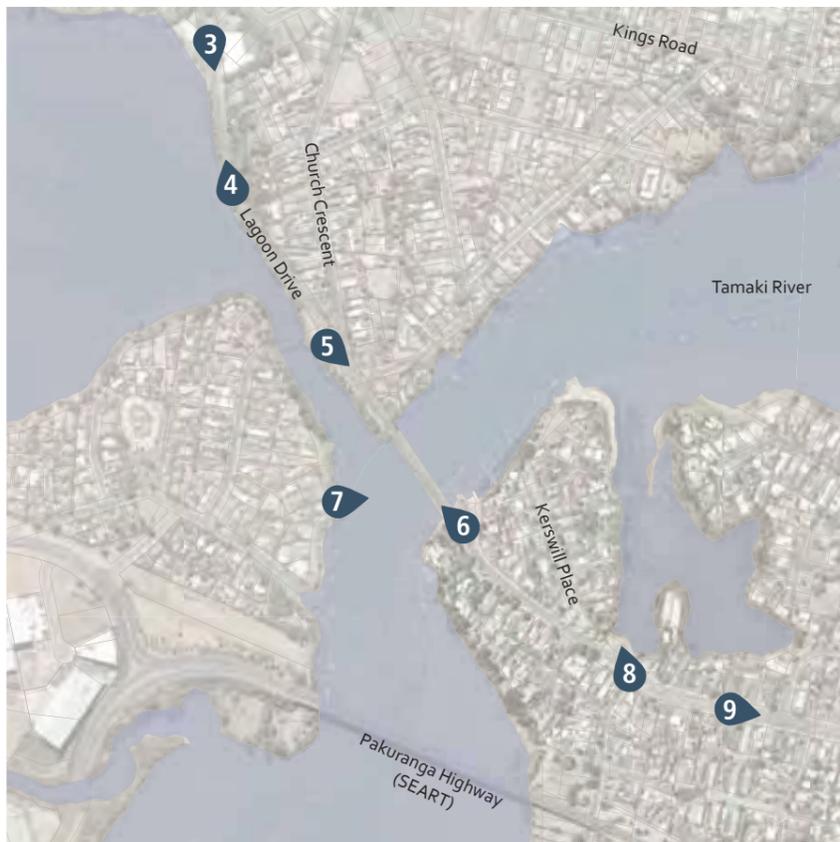


Figure 14. Sector 2 key views



Figure 15. View SE at the Lagoon Drive / Church Crescent intersection: mature planting mediates the apparent road width



Figure 16. View along the (narrow) footpath of the existing bridge towards Mokoia Pa and overlooking the Marina building and moorings:



Figure 17. Existing Panmure bridge in context: shallow bridge deck, haunched girders, and open abutments create a slender profile

Sector 3: Pakuranga Road

- The key attributes of this sector include:
 - Generally flat terrain that is elevated approximately 5 – 10m above the Tamaki River;
 - A highly modified environment, dominated by the wide, heavily trafficked five lane Pakuranga Road corridor (merging into four lanes between Millen Ave and Panmure Highway Bridge then into three lanes across the Bridge);
 - Traditional low rise suburban development, dominated by housing from the 1960s and 1970s on both sides of the road and relatively consistent in character;
 - Two small open spaces areas including Kerswill Corner Reserve directly abutting a large swathe of mangroves at the intersection of Pakuranga Road and Kerswill Place, and Ti Rakau Corner Reserve at the intersection of Pakuranga Road and Ti Rakau Drive.



Figure 18. Sector 3 key views



Figure 19. Oblique views from Pakuranga Road open up towards the mangrove inlet



Figure 20. Typically single-storey houses with clusters of planting in front gardens contributing to streetscape canopy: many front fences are high and solid



Figure 21. View towards the corner of Ti Rakua Drive and Pakuranga Plaza showing the grade separation, wide road and narrow footpaths

2.6. Existing features and opportunities

The accompanying diagrams illustrate the key features of the existing environment, impacts of AMETI Stage 2a, and the opportunities available through the project. This analysis was an important part of the work of the sector urban designers and informed design decisions including how the urban and landscape design responds to project effects identified through the work of technical teams.

2.6.1. Existing features

- The Auckland Eastern Railway Line and new Panmure Rail Station, with a terraced open space adjacent. The entry and bus stops on The Ellerslie Panmure Highway have created a new ‘front door’ for Panmure.
- The Panmure roundabout – part of the existing area character but also a feature that does not currently provide a human scale, welcoming ‘town centre’ environment, more a vehicle-dominated and somewhat confusing experience
- The Panmure roundabout sign – highly valued by the community and contributes to a sense of place. Other memorial signs are less visible but commemorate important aspects of the area history.
- Mature pohutukawas lining Lagoon Drive along Panure Basin, which provide canopy that spatially defines the road and helps focus views towards Maungarei / Mount Wellington. Locating views approaching Panmure Roundabout are also important.
- The Mokoia Pa cultural site, currently not very visible and its cultural associations consequently under-appreciated
- From the pedestrian bridge and Panmure bridge, views over the Panmure Basin and Tamaki River that contribute to a sense of place and connection to the waterway
- Along Lagoon Drive, ‘back of house’ service areas and a ‘sea of car parks’ combined with challenging topography behind the main retail street create a fragmented and uninviting character.
- Paths around the foreshore, including the Rotary Walkway and Panmure Basin walks, that are an important recreational resource
- Footpaths along Lagoon Drive are of varying condition and width, with some limited visibility, reducing the amenity of the pedestrian environment
- Desire lines (popular pedestrian routes between places) particularly across Lagoon Drive between the recreational facilities.
- The heritage-listed swivel span of the first Panmure bridge, located near the south-east abutment of the existing bridge, inside and obscured by the Marina building
- Paired open spaces around Kerswill Place that, because they visually open up the corridor, create a landscape gateway to Pakuranga after the bridge.

2.7. Project effects

The project has an impact on the immediate area of the corridor and also on the amenity, connectivity and functionality of surrounding areas. Effects identified through the work of the sector urban designers include:

- A new shared path / cycle and pedestrian paths run the length of the corridor, creating a higher amenity connection between Panmure and Pakuranga town centres.
- Widened carriageway increases the scale of the road, the sense of a vehicle-dominated environment, and the real and perceived separation of neighbourhoods; and results in the removal of trees and the loss of the Pakuranga ‘landscape gateway’.
- At Lagoon Drive behind the Panmure town centre, encroachment into the service / car park areas reduces the area of developable land and cuts off any access from Lagoon Drive itself
- Informal desire lines between the two parts of the Leisure and Fitness Centre, on opposite sides of Lagoon Drive, are severed
- Bus stops on the southern side of the road are lost resulting in people having to cross over the widened corridor, at signalised intersections only
- Widened Panmure Bridge (new busway bridge) is located to the north-east, in order to protect the coastal edge and pohutukawas along Lagoon Drive: this results in greater impact on the Mokoia Pa site and also necessitates removal of the jetty and marina building (including the housing of the heritage swivel span)
- Removal of houses along Pakuranga Road resulting in a ‘leftover’ strip of land that is a poor interface to the busway / cycle path / pedestrian path
- Increased noise impacts on some properties above Lagoon Drive, at Church Crescent and on the north side of Pakuranga Road
- Retaining walls are required including large, high walls along Lagoon Drive that will change the vegetated bank to a (partly) exposed face and thereby the character of this area
- There are some areas along Lagoon Drive where the path / building interface create areas that are not well overlooked, creating a sense of being unsafe.

2.7.1. Opportunities

The project provides opportunities to build on some of the important identifying features of the existing environment, to help strengthen a sense of place (character), improve connectivity for pedestrians and cyclists, support future urban development, and enhance the amenity, accessibility and quality of the public domain.

- Reconfiguration of the roundabout to create a stronger connection to the Panmure main street that reflects desire lines, and at the same time enables more and better pedestrian crossing points by way of signalised crossings
- Retention and relocation of the Panmure sign to celebrate the past, mark the town centre, and locate road, busway and path users along the corridor
- Retention and relocation of other memorial signs for better visibility
- Retention of the pohutukawas and protection of the coastal edge
- Interpretation of the Mokoia Pa site, through the design of the new public open space, terracing, signage, including reflecting the association with mana whenua and the cultural value of the area
- More, and enhanced, connections for pedestrians and cyclists along the corridor, including ‘joining the dots’ from the new shared path to link to the wider recreational network-
- Introduction of new open spaces, new landscaped areas, and new street trees to soften the corridor.
- Protection and enhancement of views that help locate road and path users in relation to the context
- Desire lines – routes that people like to take between nodes – particularly across Lagoon Drive between the recreational facilities.
- Protection and interpretation of the heritage-listed swivel span
- Interpretation signage and place names that reflect cultural and colonial heritage
- New local road connections and/or design of roads severed by the busway to become attractive public spaces
- Bus stops located close to desire line / crossing points, and where they benefit from passive surveillance.



- | | | | | | | | | | |
|---|-------------------------------|---|-------------------------------------|-----|-----------------------------|-----|-----------------------------------|-----|----------------------------|
| + | Auckland Eastern Railway Line | ☼ | Panmure sign / other memorial signs | ↗ | Views to Maungarei & beyond | ▬▬▬ | Vegetated bank / grade separation | — | Inadequate footpaths |
| ☼ | Mokoia Pa cultural site | ■ | Open space | ●●● | Recreational walkway | ■ | Car parks | ↔ | Pedestrian desire lines |
| ● | Heritage bridge base | ↔ | Views over water | ■ | Notable vegetation | ▬▬▬ | Back of retail | ▬▬▬ | Community / recreation hub |

Figure 23. Project effects



- | | | | | |
|---------------------------------------|--------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|
| Significantly widened carriageway | Local roads severed | Removal of houses / poor interface | Removal of marina building & jetty | 'Entrapment' spot / poor overlooking |
| Reduced viability for commercial uses | Barrier to recreational connectivity | Increase in noise impact | Loss of Panmure sign / other signs | Loss of 'gateway' open space |
| Severance of community hub | Loss of bus stops | Widened bridge impacts heritage item | Retaining walls | Vegetation / trees removed |

Figure 24. Area opportunities



-  Relocated Panmure sign / other signs
-  Potential bus stop locations
-  Elevated views from pocket parks
-  Interpretation of Mokoia Pa
-  'Placemaking' to new culs de sac
-  New shared path linking network
-  Retain Pohutukawas
-  'Pause' viewpoints from bridge
-  Connect streets / residential access
-  Street trees to soften and narrow appearance of corridor
-  Enhanced pedestrian crossings
-  New open space (pocket parks)
-  'Linear park' edge to corridor

3 DESIGN INTENT

The purpose of this chapter is to set the urban and landscape design direction for the whole corridor, by way of reinforcing a high level vision for AMETI as 'one place'. This is done by providing a set of design principles to be applied to the whole Project, to achieve consistency in the urban and landscape design responses.

It is important to note that in addition to this 'umbrella' guidance, the sector urban designers in collaboration with the NoR Design Interface Manager also developed place-specific design principles that provide more detail and a greater level of certainty about desired design outcomes. These were checked against the Te Aranga principles. The place-specific principles are captured in the following chapters. They reinforce – they do not replace – the corridor-wide principles which remain the foundation for design going forward.

Integral to all the principles is ongoing engagement with mana whenua to further the urban and landscape design, in accordance with Te Aranga design principles.

3.1. Corridor-wide design principles

Corridor-wide urban design principles were developed under four key headings that responded to the relevant project objectives: character, connectivity; sustainable land uses; and amenity. They provided a starting point for the sector urban designers, who were encouraged (by way of example) to both test and refine them by developing more detailed urban design principles specific to their own projects. The intention was to work collaboratively and iteratively with those external design teams to achieve 'bottom up' as well as 'top down' design principles that are relevant and targeted. This was achieved through receiving comment and amending the principles as appropriate. As part of that process, both high level and more detailed design principles were developed for the Panmure Bridge, making 'bridge design' the fifth key heading.

Urban design principles were developed in Phase 1 of the project for the Panmure Roundabout and Lagoon Drive sector. These were reviewed and assessed against the current policy context, including the AMETI project objectives, AT urban design principles and the Te Aranga design principles that post-date the earlier urban design work. The corridor-wide principles have been developed to be consistent with, and to support those key documents. These, and other relevant better practice urban design principles that apply in the project context, are:

The corridor-wide principles were drawn from the following background documents:

- Liveable Arterials ACC
- Te Aranga Māori Design principles
- Auckland Plan principle for Land Use and Transport
- AT Urban Design principles 2013 (draft ATCOP, section 2.6)
- AMETI Project Objectives 2014
- Bridging the Gap, NZ Transport Agency, 2013.

Character

- CH1 Design public spaces, new buildings and structures to acknowledge and celebrate the historic, cultural and environmental narratives of Panmure, the Tamaki estuary and Pakuranga
- CH2 Create a 'whole of journey' experience that combines consistent design of common elements along the corridor with variety in the treatment of special spaces along the route
- CH3 Create, maintain and enhance views and vistas to landmarks and significant sites, including from public spaces, at bus stops, and at waiting areas and exits to bus station(s)
- CH4 Enable any public art to be 'designed in' either as standalone work within public spaces, or integrated with the form and finish of structures that spatially define them
- CH5 'Green' the transport corridor and local streets created through the project/s to reinforce the well-established planted character, soften the interface with adjoining uses, reduce the apparent width of the corridor, and define and focus views towards landmarks and key nodes
- CH6 Design the landscape and select plant species to contribute to biodiversity, help restore the natural environment, and enhance environmental health
- CH7 Encourage ongoing use of the public transport corridor and provide an attractive setting for the environs and future development by creating a positive relationship between built form, open space, the transport corridor and the local networks that connect to it.

Connectivity

- CO1 Maintain and enhance legible, accessible and safe connections between residential neighbourhoods, town centres, recreational areas and transit stops for pedestrians, cyclists and local road users.
- CO2 Locate and design the approaches and entries to bus station(s) to be visible and easily accessed from existing and proposed pedestrian routes; and bus stops at or close to through connections and / or activity nodes
- CO3 Design for wayfinding by drawing on visual cues in the natural and built environment particularly at decision points for drivers and active modes
- CO4 Minimise the potential for conflicts between pedestrians and cyclists on shared paths and crossings of footpaths and separated cycle paths, and between cyclists and vehicles at intersections
- CO5 Design the road to be the minimum width and have the minimum number of lanes practicable, particularly at intersections, to reduce the visual and physical severance impacts of the corridor
- CO6 Make pedestrian and cycle routes, particularly through large complex intersections, as simple and direct as possible to reflect desire lines
- CO7 Integrate the location of new structures with the existing and proposed road and pedestrian / cycle network to support connectivity and enable wayfinding.

Sustainable land uses

- SU1 Enable the ongoing functionality and future viability of Pakuranga, Panmure and Botany town centres through the design of a supporting road layout
- SU2 Design bus stations and large structures associated with the public transport corridor to provide and / or enable active frontages to public spaces and a variety of uses in those spaces
- SU3 Support Auckland Council’s vision for sustainable growth through corridor design that optimises the potential for future development of residual land that is well connected to existing neighbourhoods through pedestrian, cycle, laneway and local road networks
- SU4 Reconfigure local street connections compromised or severed by the corridor to EITHER maintain current egress / access OR create a new secondary local network
- SU5 Minimise ongoing maintenance requirements for structures, landscaping and street furniture through selecting robust materials, finishes and plant species
- SU6 Provide for secure bicycle parking or storage at bus interchanges to encourage use of the public transport corridor
- SU7 Sleeve any new car parking buildings with active uses at ground level to activate the public domain, and design them as ‘long life loose fit’ buildings that can support future change in use
- SU8 Enable land and on-water activities associated with the Tamaki River

Amenity

- AM1 Contribute to a well patronised public transport corridor through providing a high quality, high amenity pedestrian and cycle network that feels safe, comfortable and inviting to use
- AM2 Optimise the width of pedestrian and cycle paths for safe passing
- AM3 Create a positive relationship between built form, open space and the transport corridor through providing a clear, direct, overlooked, well connected edge that serves the needs of multiple users and adjacent land uses
- AM4 Provide information and directional signage at decision points, public spaces, bus stops and stations including real-time bus arrival information [and walking distances and approximate timings to key destinations]
- AM5 Prioritise pedestrian and cycle movements at intersections with local and arterial roads and at road crossings adjacent to bus stops
- AM6 Provide weather shelter at bus stops, entries to bus stations, and any information points along the corridor
- AM7 Use street tree planting for shade as well as to soften the edges of the transport corridor, creating a pleasant walking and waiting environment
- AM8 Design the edges and undersides of structures visible at close range to be visually interesting, contribute to a safe walking environment and assist (rather than obscure) wayfinding

Bridge design

- BR1 Design the form of the bridge in relation to the surrounding and wider context, including the cultural environment
- BR2 Locate and detail services so they are integrated into the design of the bridge and are consistent with surrounding services details
- BR3 Achieve a slender bridge form and balance of structural elements
- BR4 Design the bridge to capture opportunities to create new views to and from structures
- BR5 Consider the experience of travelling across the bridge.

4 PANMURE ROUNDABOUT & LAGOON DRIVE DESIGN

The urban and landscape design approach to Panmure Roundabout and Lagoon Drive was to improve public amenity (including aesthetics and safety) and contribute to an overall positive road user experience (including pedestrians and cyclists). The key design aspects that support these outcomes are:

- Acknowledging key view shafts by providing visual connections and cues to key landscape features such as Mt Wellington / Maungarei, Panmure Basin Lagoon and Tamaki River.
- Avoidance of impacts on the existing coastal edge, where possible through the retention of existing trees and limited landform modification.
- An overall high quality aesthetic through the introduction of addition median, street tree and car park planting as well as design and treatment of 'hard features' like retaining walls and fences.
- An overall high quality experience for pedestrians and cyclists through the design and treatment of public open spaces located at the corner of Lagoon Drive/ Queens Road and Jellicoe Road/ Mountain Road.
- Introduction of screen planting along key residential property boundaries to reduce negative visual and general amenity impacts.
- A reduction in the visual effect of potential noise barriers through design, location, material selection and planting.
- Improving public safety through integrated CPTED principles.
- Addressing the need for universal access along the corridor

This chapter contains:

- Plans, sections and sketches showing the proposed urban and landscape design for the Panmure Roundabout / Lagoon Drive sector.
- A planting palette that is included to further illustrate the proposed landscape character.
- A table that sets out the key urban and landscape design moves and the rationale for them.
 - Some design moves are responses to identified issues (which may be either existing issues or issues arising from the project) while others take up opportunities that the project provides, and are effectively enhancements.

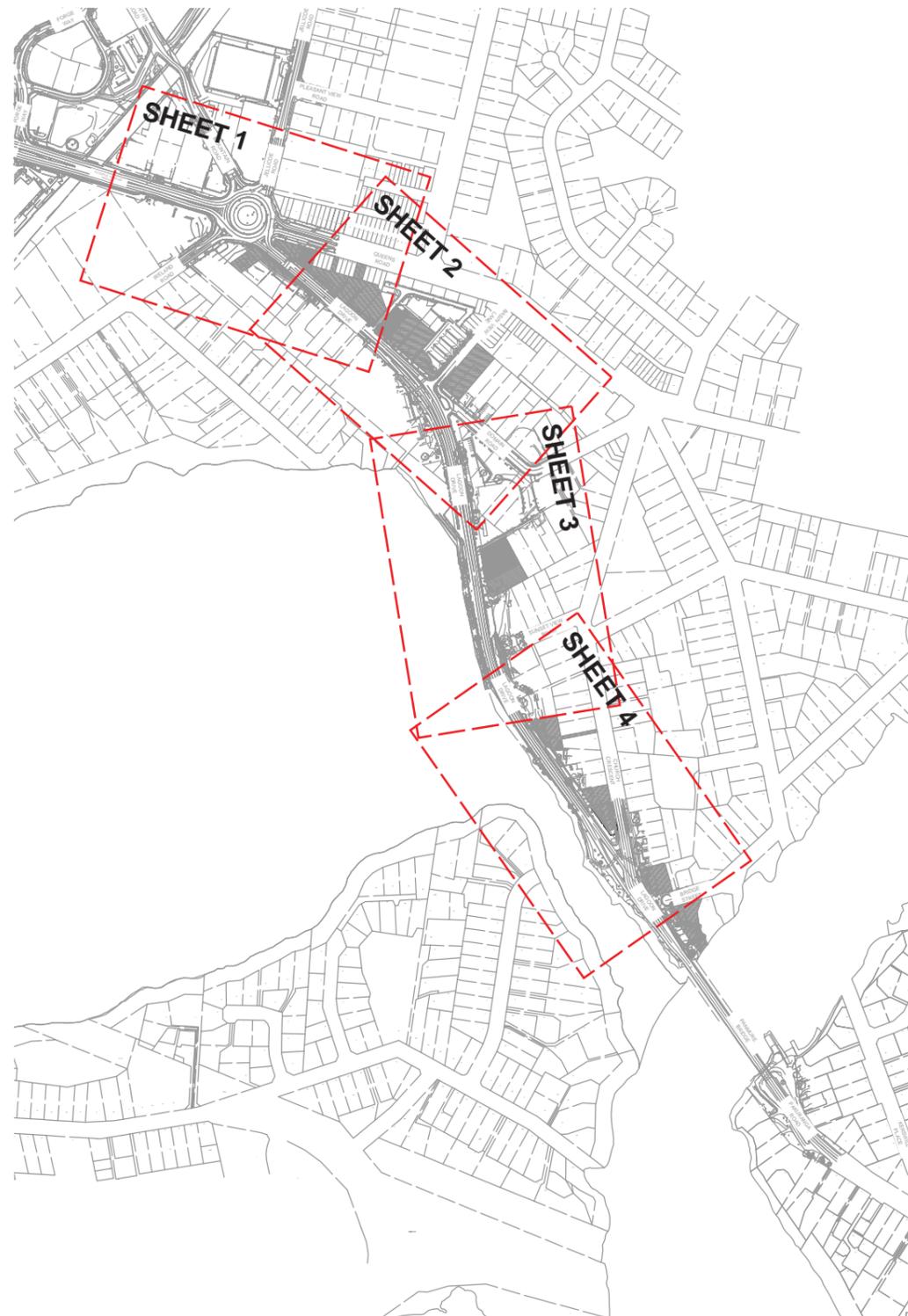
The summary table is intended as an important tool for guiding urban and landscape principles going forward, as the design is further developed or detailed. In this, the sector-specific principles, and the corridor-wide principles they support, should be read together as the key guidance for further design development, detail, and implementation.



Figure 25. Lagoon Drive: photomontage / impression of general arrangement

4.1. Design drawings

Plans, sections and sketches showing the proposed urban and landscape design for the Panmure Roundabout / Lagoon Drive sector.



LEGEND - GENERAL

	GR	GRASS
		FOOTPATH & SHARED PATH
		STORMWATER RAIN GARDEN
		DESIGNATION BOUNDARY
		NOISE WALL - 1.8M HIGH
		RETAINING WALL
		PEDESTRIAN HANDRAIL
		EXISTING TREES TO BE REMOVED
		LIGHTING (INDICATIVE LOCATIONS)

LEGEND - SHEETS 1-5

	AS	APODASMA SIMILIS (OIOI)
	MC	MUEHLENBECKIA COMPLEXA (POHUEHUE)
	B1	BUSH MIX 1 - CORDYLINE AUSTRALIS (TI KOUKA, CABBAGE TREE), CYATHEA MEDULLARIS (FERN), DODONAEA VISCOSA (AKEAKE), DOODIA COMPLEXA (FERN), PITTOSPORUM CRASSIFOLIUM (KARO), PHORMIUM COOKIANUM (MOUNTAIN FLAX)
	B2	BUSH MIX 2 - CORDYLINE AUSTRALIS (TI KOUKA, CABBAGE TREE), COROKIA COTENEASTER (KOROKIO), CYATHEA MEDULLARIS (FERN), DODONAEA VISCOSA (AKEAKE), DOODIA COMPLEXA (FERN), METROSIDEROS PERFORATA (RATA), MUEHLENBECKIA COMPLEXA (POHUEHUE), PITTOSPORUM CRASSIFOLIUM (KARO), PHORMIUM COOKIANUM (MOUNTAIN FLAX)
	LG	LIBERTIA GRANDIFLORA (MIKOIKOI)
	DN	DIANELLA NIGRA (TURUTU)
	DL	DIANELLA NIGRA (TURUTU) & LIBERTIA GRANDIFLORA (MIKOIKOI)
	DLP	DIANELLA NIGRA (TURUTU), LIBERTIA GRANDIFLORA (MIKOIKOI) & PHORMIUM COOKIANUM (WHARARIKI, MOUNTAIN FLAX)
	GR	GRASS
	MP	MUEHLENBECKIA COMPLEXA (POHUEHUE) & METROSIDEROS PERFORATA (RATA) - 2M WIDE PLANTING STRIP FROM TOP OF SOIL NAIL WALL
		METROSIDEROS EXCELSA (POHUTUKAWA)
		DYSOXLUM SPECTABILE (KOHEKOHE)
		METROSIDEROS 'MAORI PRINCESS'
		ALECTRYON EXCELSUS (TITOKI)
		RHOPALOSTYLIS SAPIDA (NIKAU)
		AGATHIS AUSTRALIS (KAURI)
		EXISTING VEGETATION TO BE RETAINED
		EXISTING TREES TO BE PRUNED / TRIMMED
		TREE GRATE

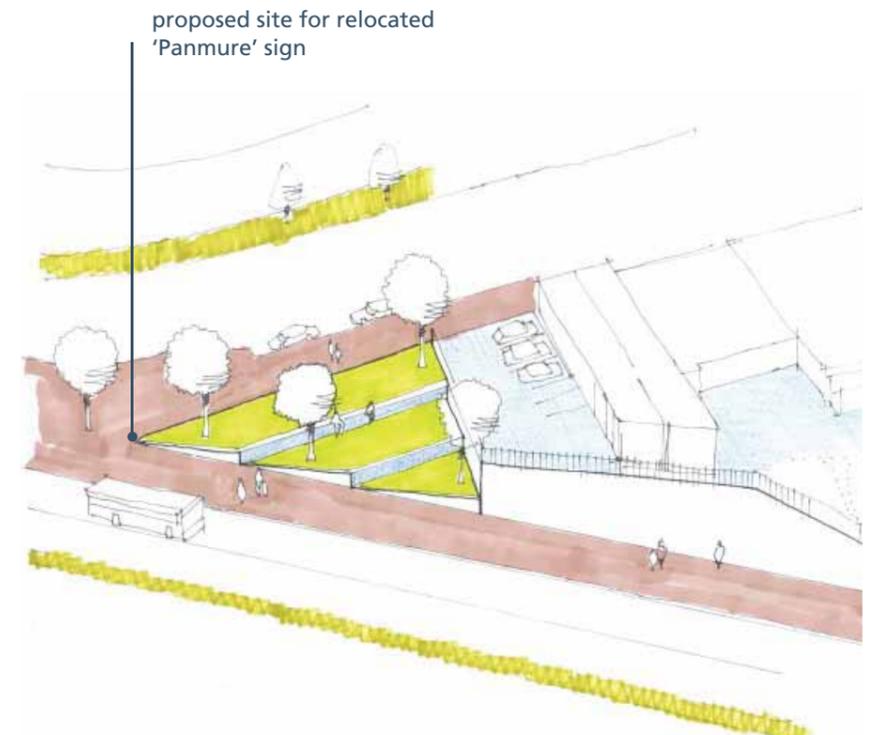


Figure 26. Panmure Roundabout & Lagoon Drive: key to landscape plans

Figure 27. Artist's impression of new space at Queens Road / Lagoon Drive



Figure 28. Panmure Roundabout (sheet 1)



Figure 29. Section A-A, Lagoon Drive near Panmure Roundabout

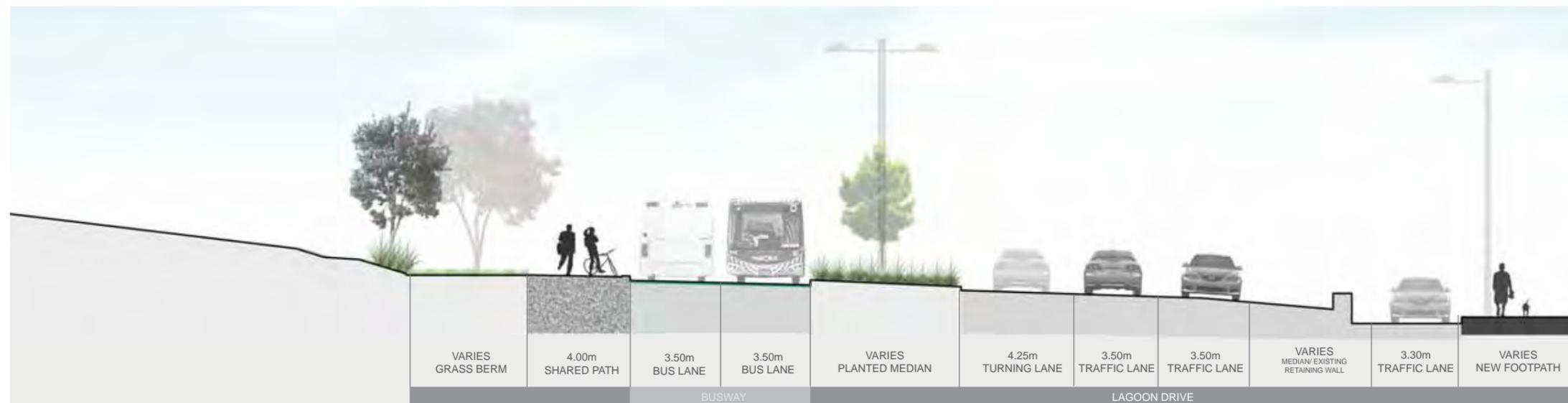


Figure 30. Section B-B, Lagoon Drive near Basin View Lane

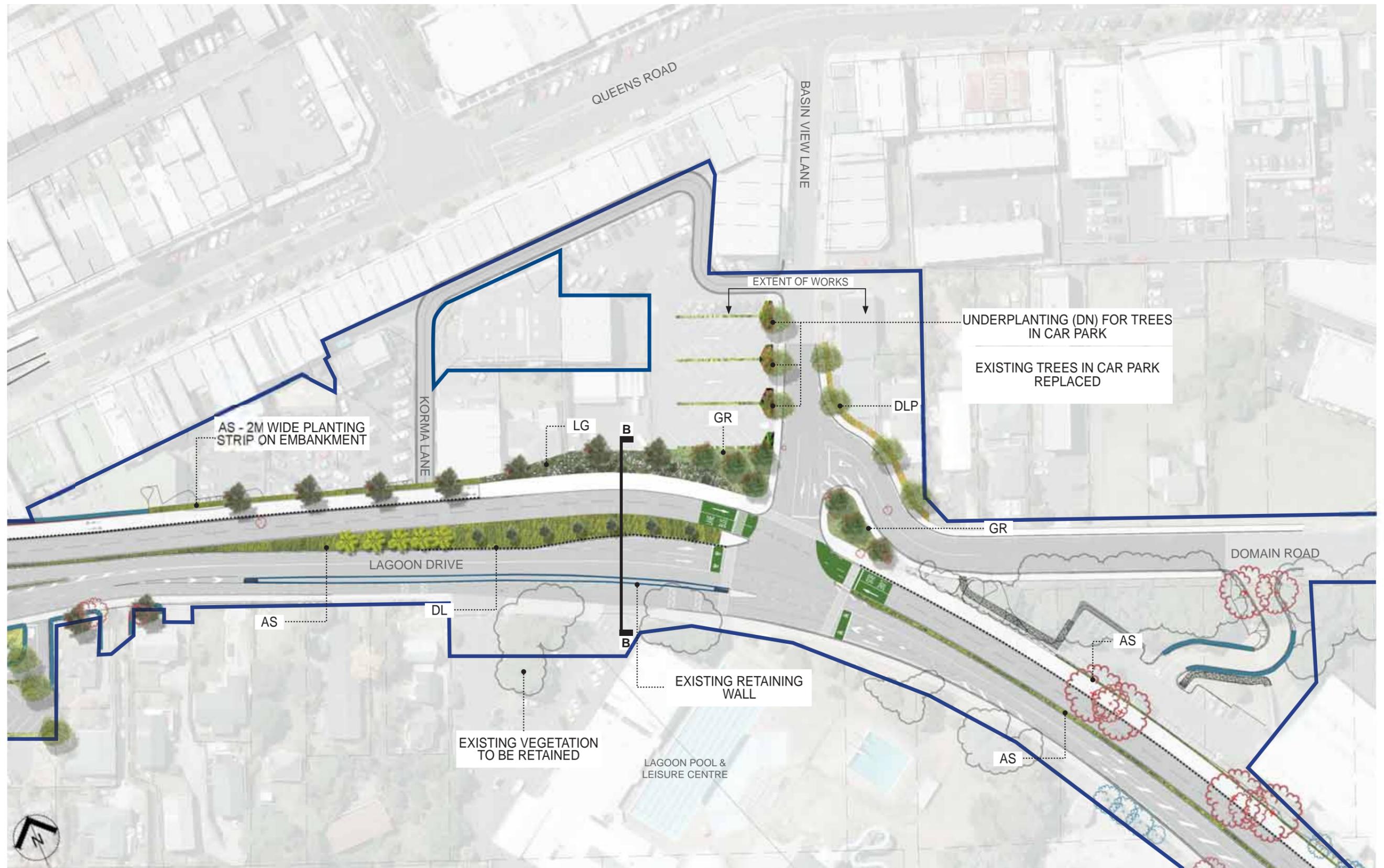


Figure 31. Lagoon Drive (sheet 2)

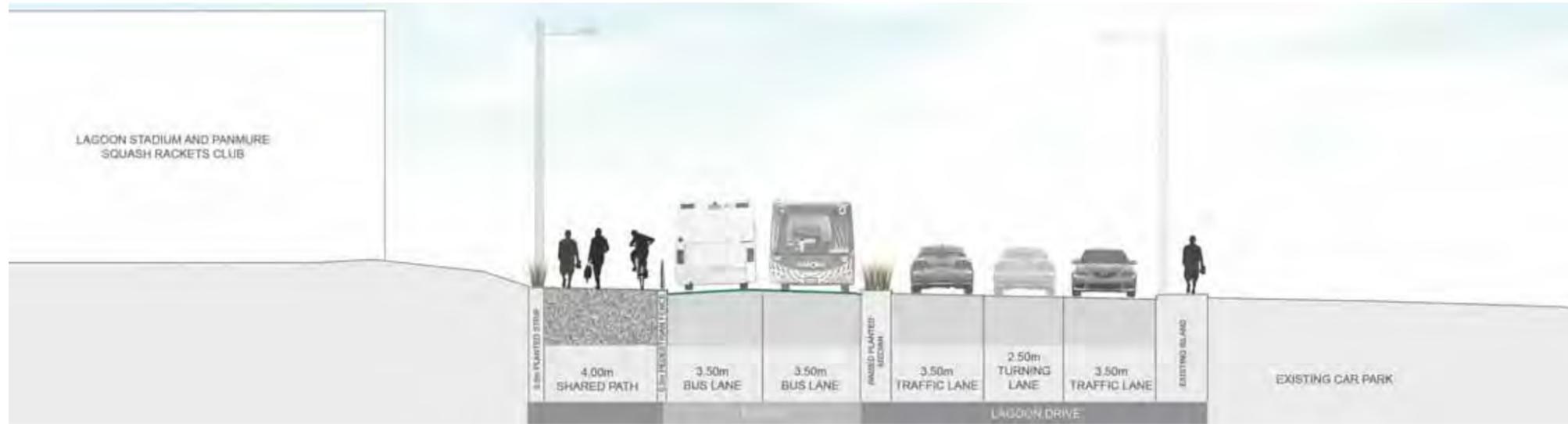


Figure 32. Section C-C, Lagoon Drive



Figure 33. Section D-D, Lagoon Drive through the rock bolt wall

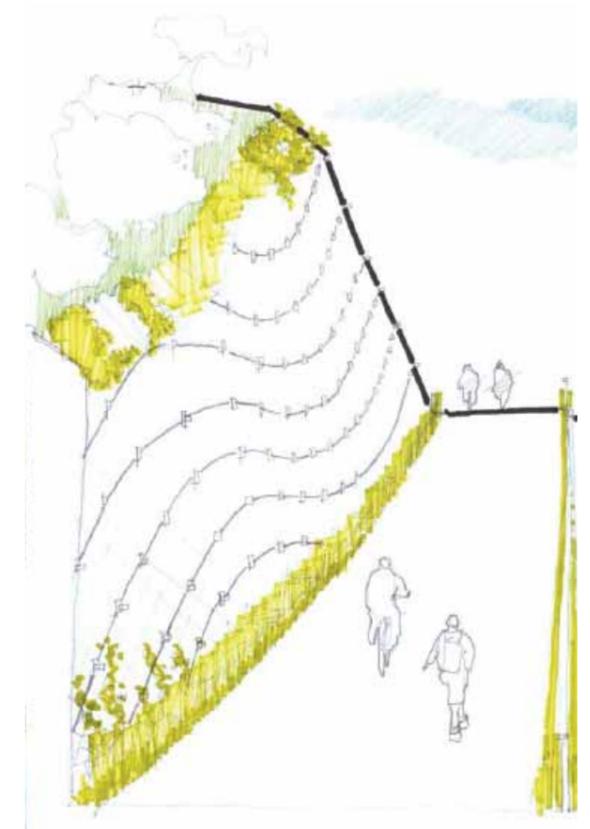


Figure 34. Artist's impression of rock bolt wall

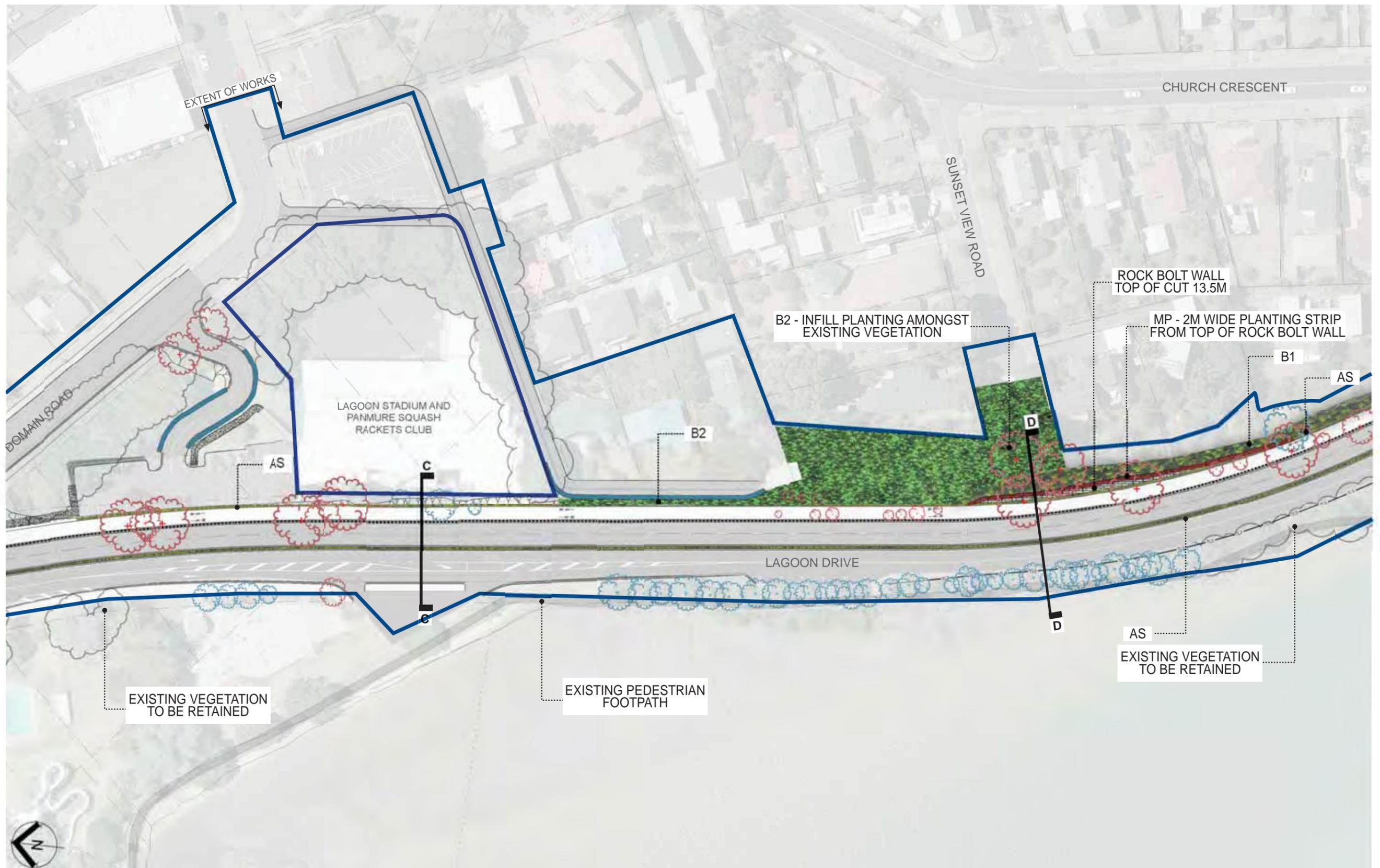


Figure 35. Lagoon Drive (sheet 3)

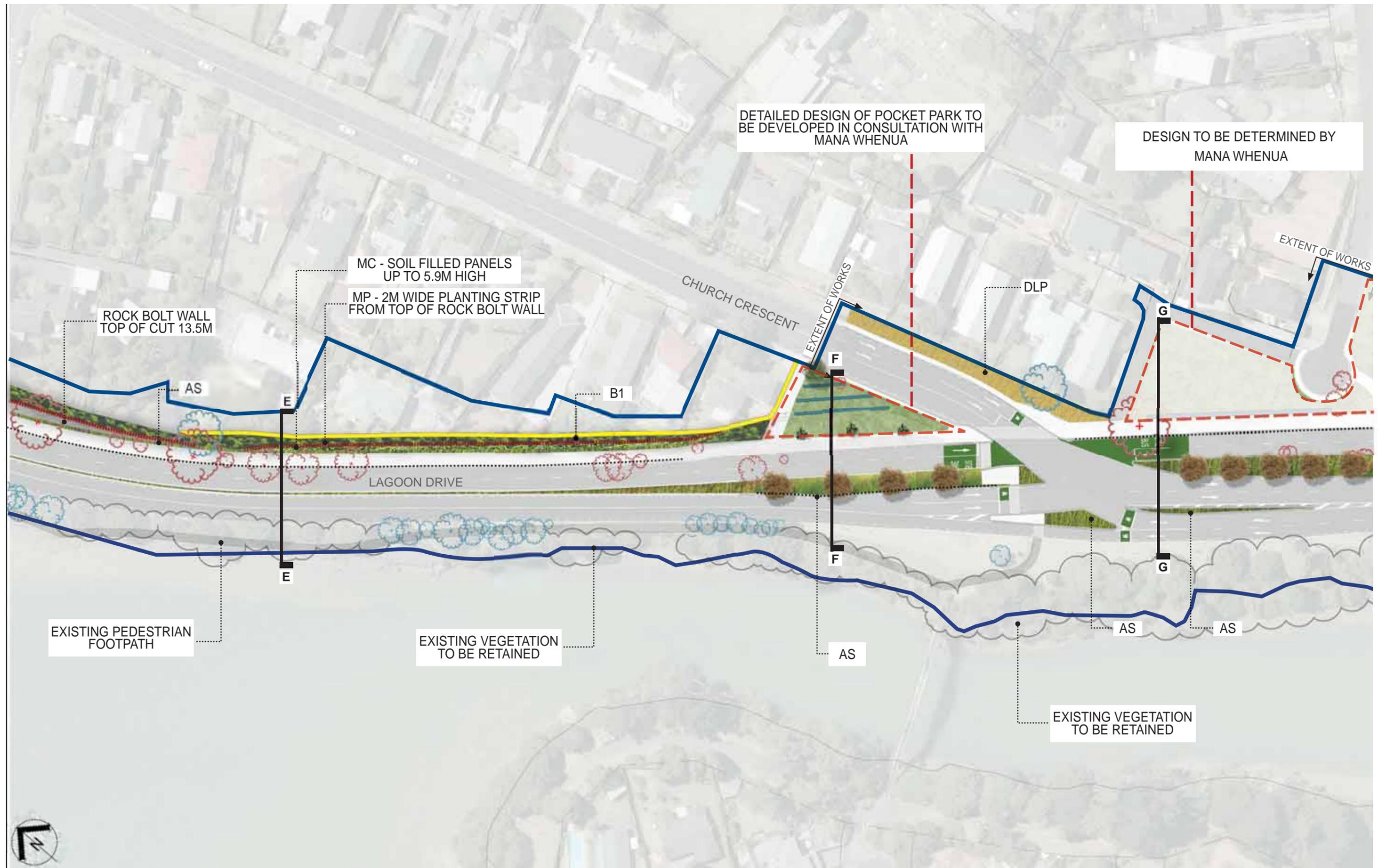


Figure 36. Lagoon Drive near Church Crescent (sheet 4)



Figure 37. Section E-E, Lagoon Drive through the vegetated soil nail wall



Figure 38. Open space and steps at Panmure Station – precedent for Church Crescent terracing

4.2. Planting palette

Type	Image	Botanic Name/ Common Name	Grade *	Spacing (m) **
NATIVE TREE SPECIES		<i>Alextrylon excelsus</i> Titoki	160L	AS SHOWN ON PLANS
		<i>Dysoxylum spectabile</i> Kohekohe	160L	AS SHOWN ON PLANS
		<i>Metrosideros excelsa</i> Pohutakawa	160L	AS SHOWN ON PLANS
		<i>Metrosideros excelsa 'Maori Princess'</i> Pohutakawa	160L	AS SHOWN ON PLANS
		<i>Rhopalostylis sapida</i> Nikau	160L	AS SHOWN ON PLANS

Type	Image	Botanic Name	Grade *	Spacing (m) **
PLANTING MIX - B1 (BUSH MIX 1)		<i>Cordyline australis</i> Ti Kouka , Cabbage Tree	2L	1.5
		<i>Cyathea medullaris</i> Fern	2L	2.0
		<i>Dodonaea viscosa</i> Akeake	2L	1.0
		<i>Doodia complexa</i> Fern	2L	0.50
		<i>Pittosporum crassifolium</i> Karo	2L	2.0
		<i>Phormium cookianum</i> Mountain Flax	2L	1.0

Type	Image	Botanic Name	Grade *	Spacing (m) **
PLANTING MIX - B2 (BUSH MIX 2)		<i>Cordyline australis</i> Ti Kouka , Cabbage Tree	2L	1.5
		<i>Corokia cotoneaster</i> Korokio	2L	1.0
		<i>Cyathea medullaris</i> Fern	2L	2.0
		<i>Dodonea viscosa</i> Akeake	2L	1.0
		<i>Doodia complexa</i> Fern	2L	0.5
		<i>Metrosideros perforata</i> Rata	2L	1.0
		<i>Muehlenbeckia complexa</i> Pohuehue	2L	0.5

Type	Image	Botanic Name	Grade *	Spacing (m) **
		<i>Pittosporum crassifolium</i> Karo	2L	2.0
		<i>Phormium cookianum</i> Mountain Flax	2L	1.0
		<i>Apodasmia similis</i> Oioi	2L	0.6
PLANTING MIX - AS				
PLANTING MIX - MC		<i>Muehlenbeckia complexa</i> Pohuehue	2L	0.5

NOTES:
 * PB Size
 Minimum size of planter bag to be used at time of planting
 ** Spacing
 Plants centred at this spacing

Type	Image	Botanic Name	Grade *	Spacing (m) **
PLANTING MIX - LG		<i>Libertia grandifolia</i>	2L	0.6
		Mikoikoi		
PLANTING MIX - DN		<i>Dianella nigra</i>	2L	0.6
		Turutu		
PLANTING MIX - DL		<i>Dianella nigra</i>	2L	0.6
		Turutu		
		<i>Libertia grandifolia</i>	2L	0.6
Mikoikoi				
PLANTING MIX - DLP		<i>Dianella nigra</i>	2L	0.6
		Turutu		

Type	Image	Botanic Name	Grade *	Spacing (m) **
PLANTING MIX - DLP cont.		<i>Libertia grandifolia</i>	2L	0.6
		Mikoikoi		
PLANTING MIX - DLP cont.		<i>Phormium cookianum</i>	2L	1.0
		Mountain Flax		
PLANTING MIX - MP		<i>Muehlenbeckia complexa</i>	2L	0.5
		Pohuehue		
		<i>Metrosideros perforata</i>	2L	1.0
Rata				

4.3. Design rationale and principles

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CHARACTER	<p>Reconfiguration to a signalised intersection, and removal of the Panmure sign from its prominent position in the centre of the roundabout as a consequence, changes the character of the town centre approaches.</p> <p>While this may have short term impacts on area legibility, the new intersection arrangement in fact provides a clearer urban structure and an additional ‘moment of pause’ for drivers to view Mt Wellington / Maungarei, strengthening a sense of place</p>	<p>Retain and relocate the Panmure sign currently located in the centre of the roundabout to the open space area at the intersection at the corner of Queens Road and Lagoon Drive.</p>	<p>Recognise the importance of the Panmure Roundabout in creating a sense of identity, and of the historic sign as an important landmark within the urban fabric</p>	<p>CH1 CH3</p>	
	<p>Widened carriageway on Lagoon Drive increases the scale of the road, particularly when viewed by pedestrians / cyclists</p>	<p>The central medians, new small pocket parks and residual land areas are planted with a mix of native grasses, shrubs and trees to offset the additional road area with additional vegetation.</p>	<p>Minimise the area of asphalt / impervious surface along the corridor and ‘green’ it to contribute to environmental health</p> <p>Engage with Mana Whenua in species selection through the kaitiaki forum, in support of restoring and enhancing the mauri of the natural environment</p>	<p>CH5 CH6</p>	<p>TAIAO MAURI TU AHI KĀ</p>
	<p>The project requires retaining walls along Lagoon Drive and at the open spaces at Queens Road and Church Crescent.</p> <p>The retaining walls on Lagoon Drive will be visually intrusive, as the currently heavily vegetated cliff line will be modified to an exposed face (a 6m high central rock bolt wall flanked by two soil nail walls) and vegetation will be lost. Planting will partially cover the wall over time but a notable section will remain ‘untreated’, as the requirement for drainage from the top of the soil nail walls influences the location of planting at the top and on the wall face, makes it difficult to screen all of the exposed face.</p>	<p>On Lagoon Drive:</p> <ul style="list-style-type: none"> Stormwater devices are integrated with the face of the soil nail walls – water drains behind the wall, and the surfaces will be planted Muehlenbeckia is proposed to be planted at the top and on the wall face where possible of the rock bolt wall, and the rock bolts are arranged in a wavy pattern <p>At Queens Road and Church Crescent:</p> <ul style="list-style-type: none"> Retaining walls have been incorporated into the landscape treatment of the pocket park to create terraces, which breaks down the scale of retaining walls, while providing level areas for sitting and viewing. 	<p>Contribute to the revitalisation of cultural identity by making use of opportunities to incorporate Maori artistic measures into retaining walls associated with the project</p> <p>Design retaining wall structures to make a positive contribution to the corridor, treating them as landscape elements and/or a canvas for public art</p> <p>Soften the interface between the corridor and structures</p>	<p>CH2 CH3 CH4 CH5</p>	<p>MAHI TOI</p>

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CHARACTER	<p>There are noise impacts on parts of the corridor that require consideration of noise mitigation.</p> <p>High noise walls atop the Lagoon Drive retaining would block residential views over the Tamaki River and Panmure Basin as well as adding to the visual impact of the new 'hard' structure of the retaining wall where there is now a vegetated cliff.</p> <p>Those near the Church Crescent intersection would create solid and high fences relative to the existing lower and more open garden fences, which would cut them off from the public domain and remove any possibility for passive surveillance.</p> <p>Such fences could also overshadow private outdoor space as well as prevent sun access to indoor living areas. Views from houses to the street and vice versa will be constrained.</p>	<p>For Lagoon Drive:</p> <ul style="list-style-type: none"> The Opus design was for 1.8m high ply panels, located atop the embankment on Lagoon Drive. This has been carried through into the current project, with a minor change to 2m high fences that will define the rear boundary of the properties and will also provide noise attenuation to private open spaces. <p>For Church Crescent:</p> <ul style="list-style-type: none"> The proposal is for no noise walls in this location; while acknowledging there are increases in noise for some properties, the impact of noise walls on the public domain and on the outlook and amenity of residents is a strong consideration 	<p>Retain significant views to the Panmure Basin.</p> <p>Balance noise mitigation requirements (as identified in the acoustic report) against residential amenity and the amenity and desired character of the public realm</p>	<p>CH3</p> <p>AM3</p>	
	<p>There are six pocket parks within this section of the project.</p>	<p>Pocket parks have been located and designed as follows:</p> <ul style="list-style-type: none"> Approximately 450 m² of open space located beside Potaka Lane where it meets Jellicoe Road and containing mounded grass, specimen trees and a footpath connection from Ellerslie-Panmure Highway to Potaka Lane; Terraced open space measuring approximately 230m² between Queens Road and Lagoon Drive containing grass and specimen trees; Open space measuring approximately 220m² located on the corner of Basin View Lane and Lagoon Drive and containing grass and specimen trees; Open space measuring approximately 170m² located on the corner of Domain Road and Lagoon Drive containing grass and specimen trees; Terraced open space measuring approximately 270m² located on the corner of Church Crescent and Lagoon Drive containing grass, specimen trees and a pedestrian connection between Church Road and Lagoon Drive. <p>The open spaces at the intersections of Lagoon Drive with Queens Road and with Church Crescent are terraced to reinforce the existing Panmure Station landscape treatment.</p>	<p>Create an identifiable 'family' of pocket parks that also allows for variety in the treatment of particular elements</p> <p>Develop pocket parks in consultation with Mana Whenua so that an overarching cultural thematic approach is consistent across the project</p>	<p>CH2</p> <p>AM3</p>	<p>MANA</p> <p>MAHI TOI</p> <p>AHI KĀ</p>

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CHARACTER	Retaining of the landscape is required in some pocket parks	Orient terrace seating to provide elevated views towards Maungarei and the Panmure Basin / Tamaki River. At Queens Road widen the viewshed through replacing a retaining wall with terracing.	Provide new viewing platforms within the open spaces to enhance and focus views and vistas to significant cultural landmarks	CH3	TOHU MAURI TU AHI KĀ
	Landscape design needs to accommodate retaining / terracing of open spaces	There are defined areas where a relief pattern may be incorporated in the terrace walls that is relevant to the cultural theme.	Enable cultural expression to be integrated with the form and finish of structures in the open spaces	CH4	MAHI TOI
	Mana Whenua have identified potential threat to the culturally significant Kawau (black shag) from traffic noise / encroachment on habitat.	The alignment preserves the mature Pohutukawa along the edge. Planting palette is drawn from local species found in coastal forest environments on the Auckland isthmus.	Preserve the mana of the Kawau as a culturally significant taonga, by protecting and reinforcing the coastal edge alongside Panmure Basin, and supplementing the well-established planted character with eco-sourced native species that contribute to biodiversity and enhance the quality of the natural environment	CH5 CH6 CH7	TAIAO MAURI TU WHAKAPAPA
	The project creates areas for planting within and alongside the corridor.	Planting palette comprises 100% native species local to the area.	Use a planting palette that draws on the natural and cultural history of Panmure, reflects a sense of place and provides continuity across the project footprint Select robust, low-maintenance native species that are also local to the area and eco-sourced	CH6	TAIAO
CONNECTIVITY	Reconfiguration of the existing Panmure roundabout to a signalised intersection creates clearer and more direct through routes, with shorter distances to some destinations; town centre and bus station more accessible.	The Ellerslie-Panmure transition to Lagoon Drive will read clearly as a primary route, while Queens Road is designed and treated to slow traffic into the town centre. The signalised intersection creates a more self-explaining road environment that prioritises strategic pedestrian routes and includes pedestrian and cycle-activated signalised crossings.	Create a clearer road hierarchy and improved connections for all modes Create a clear roading hierarchy through the Panmure intersection with improved pedestrian / cyclist / vehicle connections that are safe, legible and simple.	CO1 CO3 CO5	
	Longer crossing distances result from widening the carriageway on Lagoon Drive to incorporate the proposed busway and the barriers between the busway and the shared footpath / cycleway: <ul style="list-style-type: none"> At the Basin View crossing: Pedestrians will not be able to cross Lagoon Drive in one cycle of the traffic lights – they will have to wait. This puts pressure on the mid-way refuges if there are a lot of people. Concerns have been raised about whether children crossing will observe the signals – a management / enforcement issue. At the Church Crescent crossing: There are three separate movements to cross north and east. Consideration should be given to combining two legs in one cycle to prevent excessive waiting times. 	Pedestrian crossings are staggered, with mid-way refuges across Lagoon Drive, at: <ul style="list-style-type: none"> re-configured Panmure intersection Basin View Lane intersection Church Crescent intersection. 	Reduce crossing lengths and minimise potential conflict between pedestrians / cyclists and vehicles at intersections	CO4	

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CONNECTIVITY	There are existing limitations to crossing over Lagoon Drive to the Panmure Basin edge for recreational walking and cycling due to a fence on the north-east side and roadside barriers on the south-west. The busway will create an additional barrier that limits pedestrian movement, but the project provides structured crossing points that are likely safer than the existing informal desire lines.	<p>The design includes new pedestrian crossings:</p> <ul style="list-style-type: none"> connecting the southern side of Basin View Lane across Lagoon Drive across the western end of Basin View Lane at Panmure intersection, across Ellerslie Panmure Highway and Ireland Road, creating more direct access to/from Panmure Station and Bill McKinlay Park Mt Wellington AFC, and to/from Queens Road and Lagoon Drive. 	Create simple and direct pedestrian routes reflective of underlying desire lines across Lagoon Drive	CO5	
	<p>There is currently limited potential for connectivity between the proposed shared path and the existing Panmure Basin recreational loop, particularly along the mid-section of Lagoon Drive.</p> <p>Existing connections are maintained, while the shared path is an improvement on the extent and amenity of the current network.</p> <p>A future replacement for the Jubilee Bridge is provided for, noting that this is outside the scope of this project</p>	<p>The new shared path links these destinations.</p> <p>A new pedestrian crossing connects across Lagoon Drive to the Lagoon Pool and Leisure Centre</p> <p>Connections are enabled at the Basin View Lane intersection across Lagoon Drive to a pedestrian path on the western side of Lagoon Drive that feeds into the Panmure Basin recreational loop.</p> <p>Connection of Church Crescent to the recreational loop and the Watene Road pedestrian bridge is maintained.</p>	Maintain and enhance connections for active modes to and between community recreational facilities: the Lagoon Stadium and Panmure Squash Rackets Club on the north side and the Lagoon Pool & Leisure Centre on the south side of Lagoon Drive, Panmure Basin recreational loop, and the potential future Tamaki River Greenway (which connects Otara to Point England using the left bank of the Tamaki Estuary)	CO1 CO2 CO5	
	The Panmure Roundabout is a vehicle-dominated, 'pedestrian-unfriendly' environment.	Reconfigured intersection prioritises strategic routes and includes pedestrian and cycle-activated signalised crossings.	Create a clear roading hierarchy through the Panmure intersection with improved pedestrian / cyclist / vehicle connections that are safe, legible and simple.	CO1 CO5 CO6	

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
SUSTAINABLE LAND USES	<p>The project contributes to the future place shaping of Panmure by providing better transport/land use integration by improving connections between the town centre and the station and by improving active modes, including increased connectivity for pedestrians and cyclists on the new shared path along Lagoon Drive and at the intersection.</p>	<p>The new major intersection is signalised with more movements allowed (across the Ellerslie Panmure Highway and Ireland Road) which translates to reduced crossing distances to reach destinations such as the town centre and the bus station.</p> <p>The shared path provides dedicated opportunities for pedestrians and cyclists to access the town centre including from surrounding neighbourhoods.</p>	<p>Improve the legibility and amenity of the pedestrian network and access to the town centre to support its ongoing functionality and future viability</p>	SU1	
	<p>The location of the busway on the northern side of Lagoon Drive, together with limited vehicular access, makes it difficult to encourage the creation of an active edge to Lagoon Drive between the intersection and Basin View Lane at the back of Panmure Town Centre.</p> <p>The current presentation to Lagoon Drive is of car parking and service areas. There is no spatial definition of the road and few visual cues for the Panmure town centre. Combined with challenging topography behind the main retail street, this creates a fragmented and somewhat uninviting character – a barrier to be overcome if Panmure is to develop as a compact, high amenity town centre.</p> <p>Completing the block – ie. extending active uses from the existing retail – would benefit the sense of place and better draw people to the centre, but it is important to note that development to date has reinforced the linear ‘main street’ form of the town centre, and that there has not yet been demand to extend very far outwards</p>	<p>The design leaves a developable parcel of land, able to be accessed from Korma Lane.</p> <p>While outside the scope of this Project to define or design the future use of this land, we note that the Proposed Auckland Unitary Plan includes it within the Town Centre zone which allows for a mix of uses including residential. The draft zone description notes that development fronting general commercial streets is expected to reinforce commercial functions.</p> <p>Because of the constraints imposed by the busway, consideration should be given to enabling residential uses over part-basement parking in this location rather than requiring activity at street level. Apartments, for example, could take up a relatively small footprint, thus achieving horizontal as well as vertical separation, and benefit from views across the Panmure Basin, without impacting on the amenity of adjacent commercial and retail uses. The residual land is able to support such a use.</p>	<p>Maintain and reinforce functional land uses, and provide for future uses on land affected by the project that will support a sustainable, vibrant, and appealing Panmure Town Centre</p>	SU1 SU3	
	<p>Planted medians will require ongoing maintenance.</p>	<p>Oi oi and mikoikoi are proposed for medians as they are low-maintenance, long-life species, and would be found in coastal forests on and around the Auckland isthmus.</p>	<p>Select robust, low-maintenance native species that are also local to the area and eco-sourced</p>	SU5	TAIAO

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
AMENITY	An increase in pedestrian and cycle activity along Lagoon Drive is likely, contributing to more 'eyes on the street' that will support the perception of safety for pedestrians and cyclists.	The shared path is located along the northern side of Lagoon Drive at the same level as the busway / existing Lagoon Drive (ie. with level sightlines across to road users from shared path users). At 4 metres wide the path is generous, enabling better sightlines and more 'breathing room' when passing other path users. The path will be lit at night.	Adopt a design that integrates with the design principles of the Panmure Basin Masterplan, Mt Wellington War Memorial Park Concept Plan, and Jubilee Bridge renewal	AM1 AM2 AM3	TOHU MAHI TOI
	The shared path alongside Lagoon Drive is a movement predictor and an actual and perceived entrapment risk, through its design as a continuous path with no opportunities to enter or exit the route for over a kilometre (between Basin View Lane and Church Crescent). The fence between the shared path and bus lanes constitutes a visual as well as physical barrier. The constrained corridor in this location does not allow sufficient space for a 'softer' interface between the shared path and the bus lanes. Together with traffic safety requirements, this means that the fence needs to be continuous.	A fence is required for safety reasons, and is designed to keep as much of a sense of openness as possible, being visually permeable fence and no higher than 1.4m. The path will be lit at night. The incorporation of information signage along this portion of the route (distance and time to next bus stop / key destinations), and CCTV, would also assist to mitigate this issue and address AM4.	Design a shared path that maximises natural surveillance, is easily navigable, barrier free and promotes universal access along the project corridor Locate and design the bus shelters to feel safe and inviting to use	AM1 AM3 [AM4]	
	Natural surveillance including redevelopment of land adjacent to bus stops is important to increase the number of 'eyes on the street'.	The area around the new bus stops is landscaped (retaining clear views to and from shared path approaches) and is lit.	Create a high amenity environment around bus stops to encourage use of the RTN, including allowing enough area for groups of passengers to wait; designing bus stops with weather shelter, with seats or places to lean, and providing lighting and signage. Provide for Mana Whenua input to design outcomes, including the opportunity to include interpretation elements	AM1 AM5 AM6	AHIKAA
	The widened carriageway, in changing the scale of the corridor and extending the area trafficked vehicles, creates an environment which is 'harder' and less 'pedestrian-friendly'.	The planting palette of signature trees, shrubs, grasses and ground covers provides variety, interest and shade, while also visually narrowing the corridor.	Landscaping the corridor to provide a human scale, soften its appearance, and richness to the pedestrian domain and public open spaces. Enable and provide for Mana Whenua kaitiaki engagement by identifying planting opportunities and working with the community to encourage community ownership and cohesion	AM1 AM7	MAHI TOI TOHU

5 PANMURE BRIDGE DESIGN

The urban and landscape design approach to Panmure Bridge was to go beyond basic functional and structural requirements and address amenity, contextual and architectural considerations. How the bridge meets the ground on each side of the river is as important as its presentation as an element in the landscape. A vision statement was developed for the bridge, as the major new structure in the landscape: “a simple, elegant structure that fits unassertively within the landforms and waterway, and that suits the low level suburban context of the area”.



Figure 39. Panmure Bridge: photomontage of general arrangement

The bridge has been designed to:

- Respect the best features of the existing Panmure Bridge but is a modern structure that is designed to outlast the 1959 road bridge which is due for replacement in 20 years’ time.
- Respond to the context in terms of scale, form and materiality and minimise the visual impact on and conflict with the Tamaki River environment
- Consider the landscape, cultural and heritage values at both abutments where the bridge connects to the land. The design approach is to minimise the impacts and reflect the cultural value of Mauinaina/Mokoia Pa and the heritage turning bridge base on the Pakuranga side of the River.
- Enhance the pedestrian and cyclist experience of crossing the Tamaki River and create journey experience specific to the Pakuranga to Panmure crossing, using the opportunity to take advantage of views and vistas and areas of cultural and historical heritage
- Provide for enhanced navigation clearances on the Tamaki River.

Key aspects of the urban and landscape design in support of the vision are:

- The horizontal and vertical alignment of the bridge, north of the existing bridge and elevated above it, to minimise impacts on the coastal edge and on the Mauinaina/Mokoia Pa site. This enables:
- The creation of an open space on the Mokoia Pa headland that can be designed to express and interpret the history of the site, through landscape, a visual marker, and views across the Tamaki River

- Planting of indigenous coastal species at the north-west abutments, mirroring planting on the western side of the existing Panmure bridge to reinforce the landscape character
- Optimising pedestrian and cycle amenity on the bridge by means of an oversized shared path, viewing platforms, and clear and inviting connections to existing and proposed open spaces and the regional path network.

This chapter contains:

- Plans, sections and sketches showing the proposed urban and landscape design for the Panure Bridge sector.
- A planting palette that is included to further illustrate the proposed landscape character.
- A table that sets out the key urban and landscape design moves and the rationale for them.
 - Some design moves are responses to identified issues (which may be either existing issues or issues arising from the project) while others take up opportunities that the project provides, and are effectively enhancements.

The summary table is intended as an important tool for guiding urban and landscape principles going forward, as the design is further developed or detailed. In this, the sector-specific principles, and the corridor-wide principles they support, should be read together as the key guidance for further design development, detail, and implementation.



Figure 40. Panmure Bridge: photomontage showing the relationship of the new bridge to the existing bridge behind

5.1. Design drawings

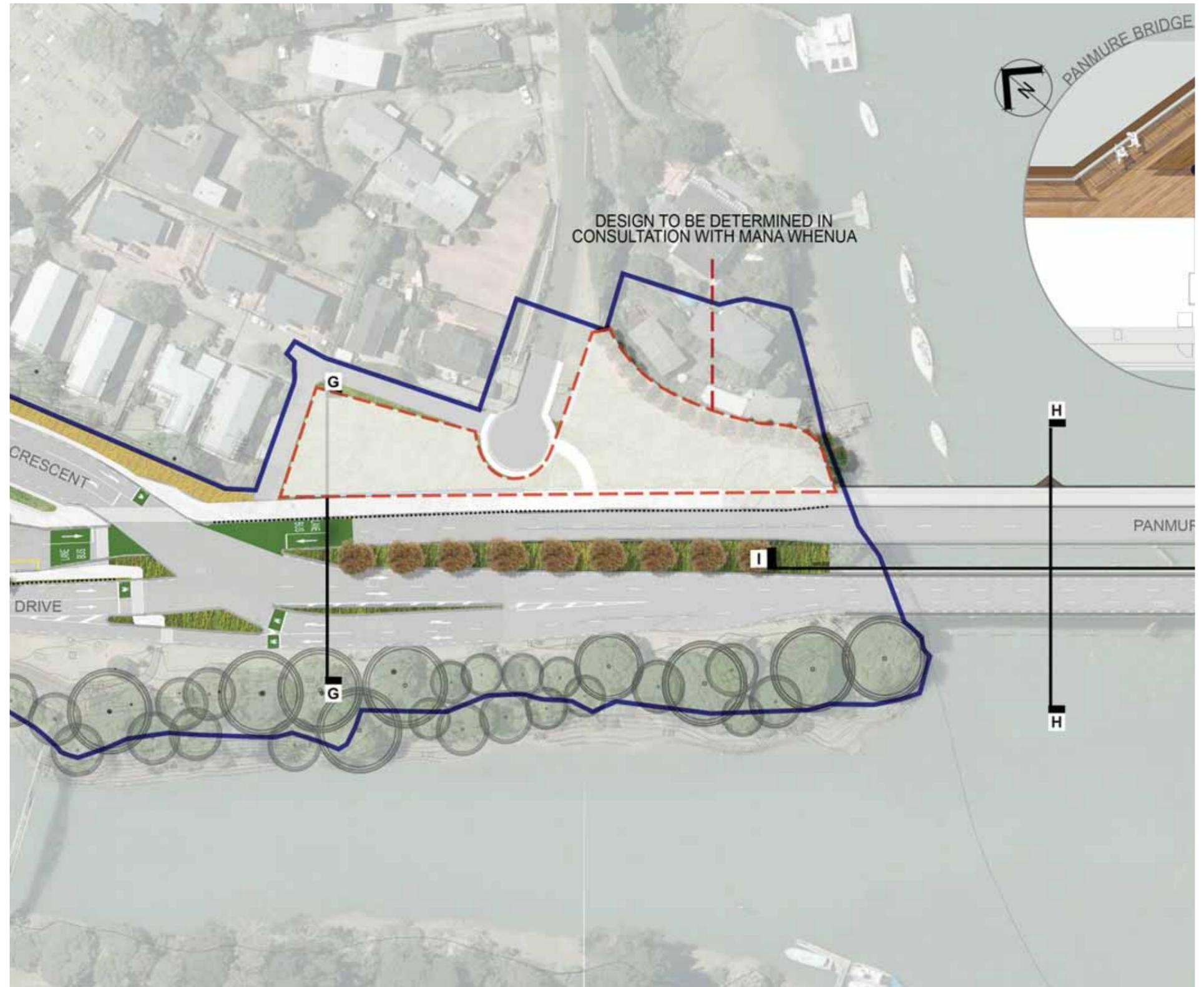


Figure 41. North-west bridge abutment and approach

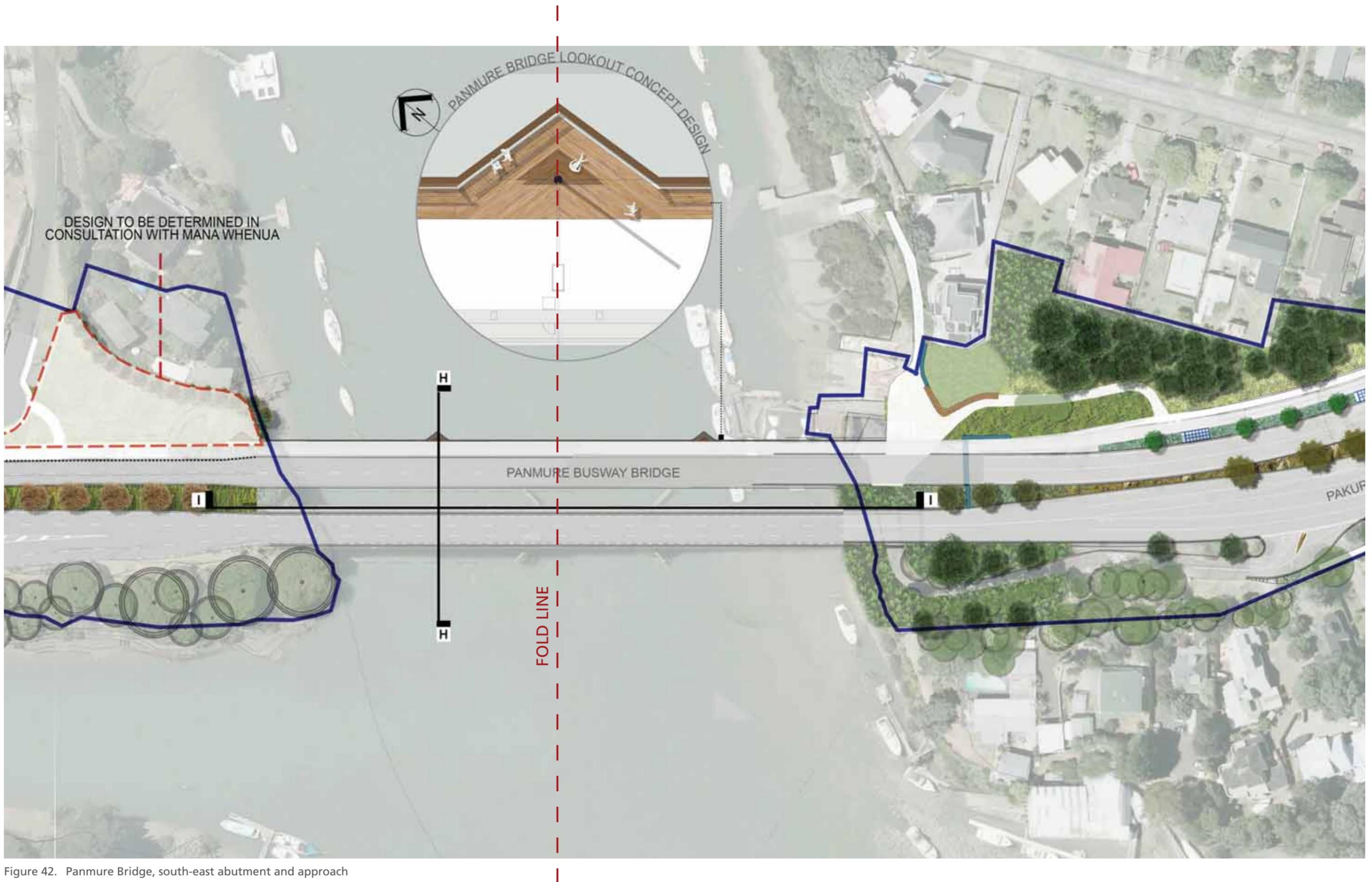


Figure 42. Panmure Bridge, south-east abutment and approach

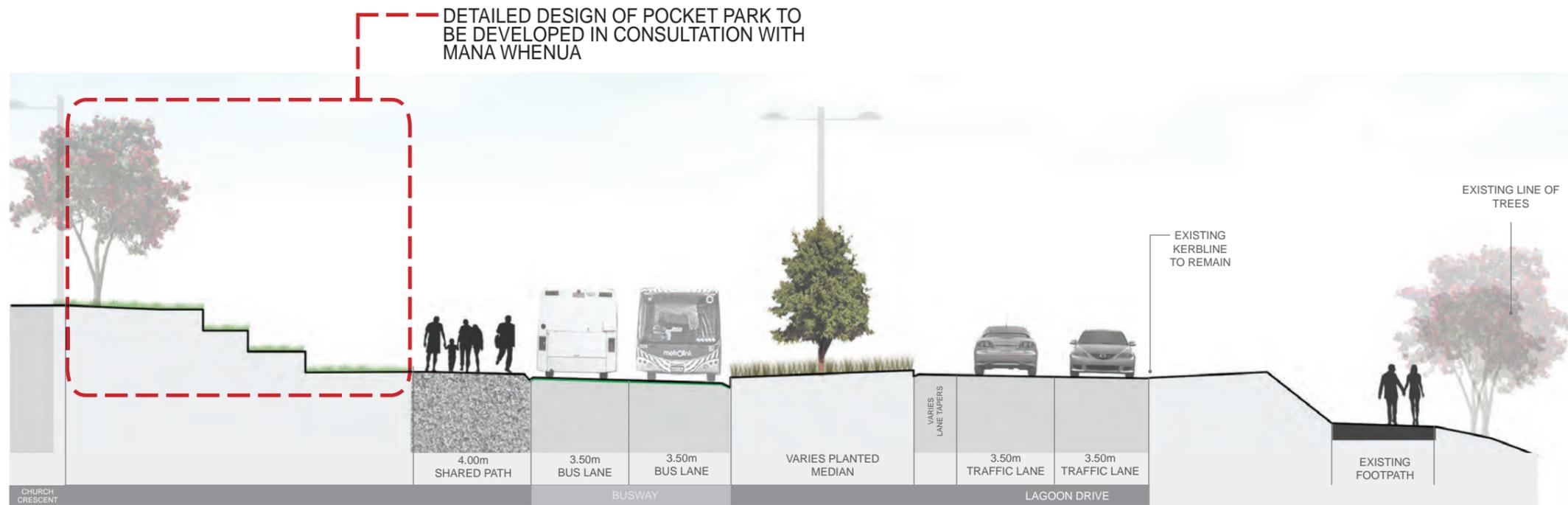


Figure 43. Section F-F through the new terraced pocket park at the intersection of Church Crescent and Lagoon Drive

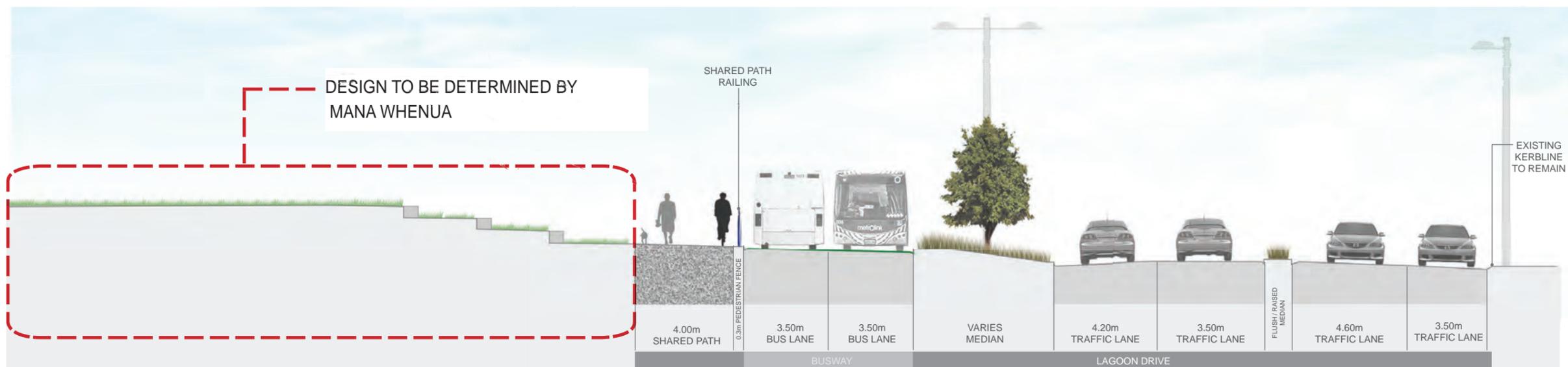


Figure 44. Section G-G through the new terraced park at the Mokoia Pa headland, north-western bridge abutment



Figure 45. 3D render showing the bridge carriageway arrangement and the viewing platforms for the shared path



Figure 46. 3D render showing the underside of the bridge including the haunched girders and viewing platforms

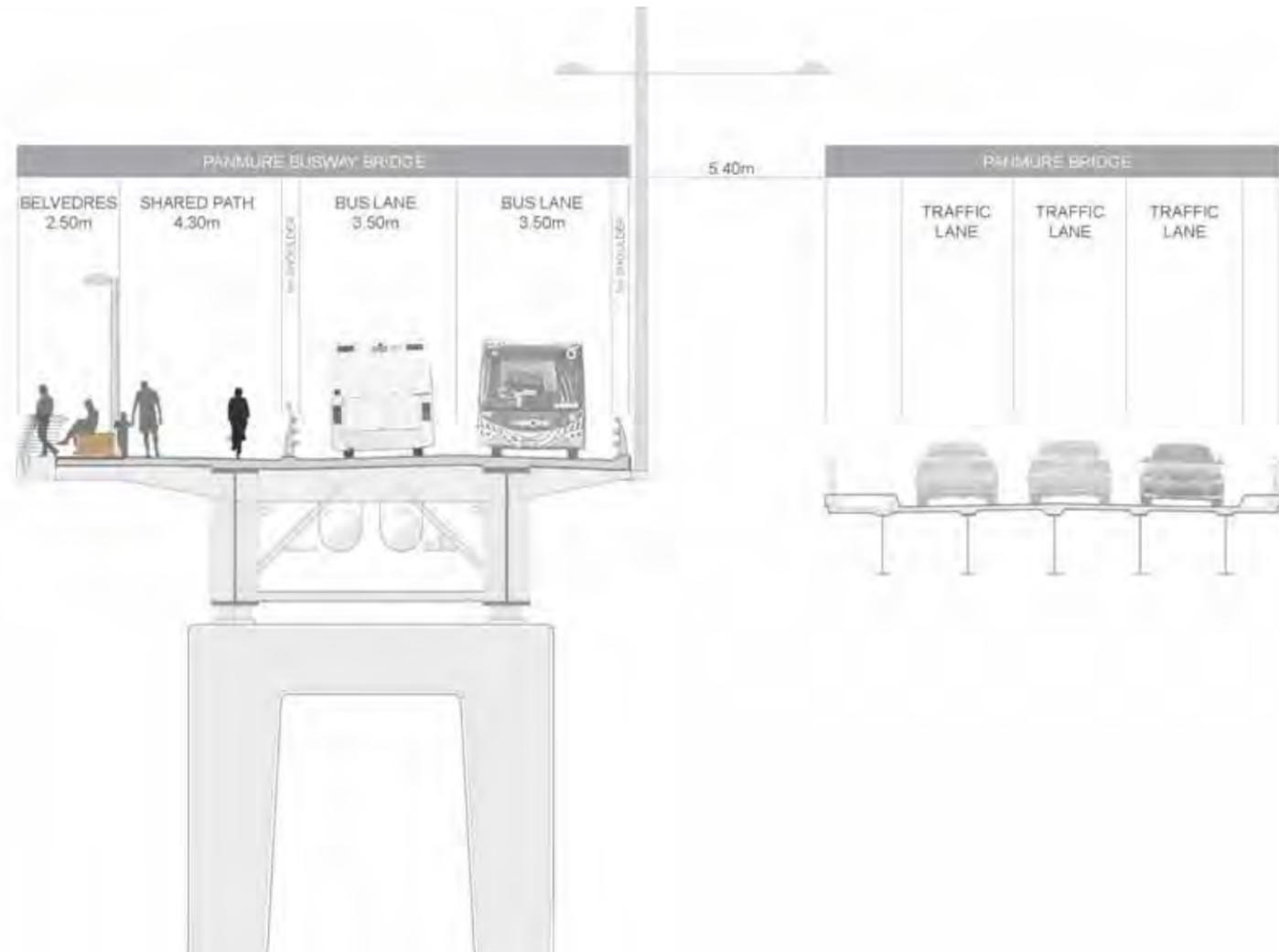


Figure 47. Section H-H through the new busway bridge (left) showing the viewing platforms / belvederes and relationship to the existing Panmure bridge

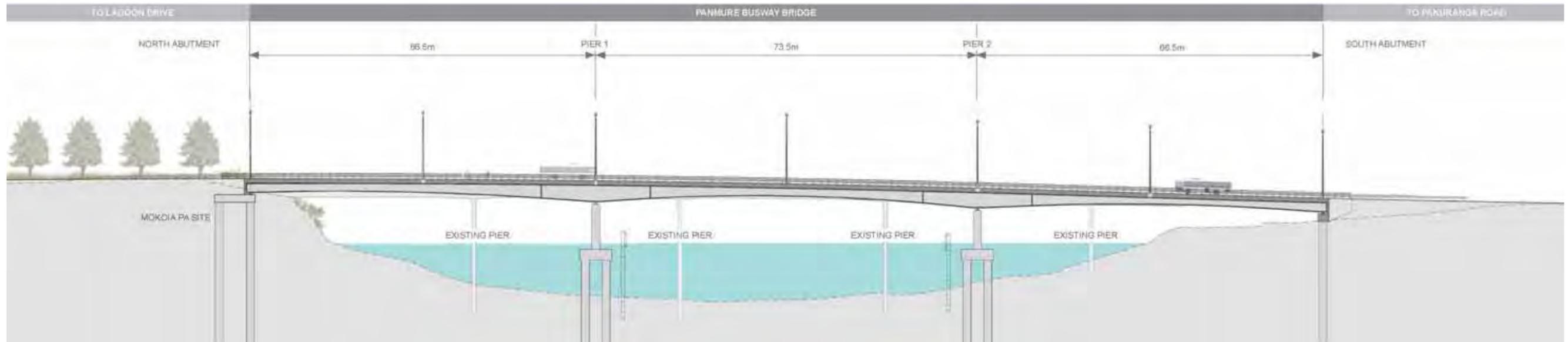


Figure 48. Long elevation looking north-east to show pier positions in the river. The existing bridge is in front of the new bridge and will screen it from view.



Figure 49. Birds' eye 3D render looking south-west, showing the relationship of the two bridges. Note that on the new bridge, piers, viewing platforms and light poles align

5.2. Planting palette

Type	Image	Botanic Name/ Common Name	Grade	Spacing (m) **
NATIVE TREE SPECIES		<i>Dysoxylum spectabile</i> Kohekohe	160L	AS SHOWN ON PLANS
		<i>Metrosideros excelsa</i> Pohutakawa	160L	AS SHOWN ON PLANS
		<i>Agathis Australis</i> Kauri	160L	AS SHOWN ON PLANS
PLANTING MIX - AS		<i>Apodasmia similis</i> Oioi	1L	0.5

Type	Image	Botanic Name	Grade	Spacing (m) **
PLANTING MIX - B1 (BUSH MIX 1)		<i>Cordyline australis</i> Ti Kouka , Cabbage Tree	2L	1
		<i>Cyathea medullaris</i> Fern	2L	1
		<i>Dodonaea viscosa</i> Akeake	2L	1
		<i>Doodia media</i> Fern	2L	0.25
		<i>Metrosideros perforata</i> Rata	2L	1
		<i>Muehlenbeckia complexa</i> Pohuehue	2L	1
		<i>Pittosporum crassifolium</i> Karo	2L	1
		<i>Phormium cookianum</i> Mountain Flax	2L	1

NOTES:
** Spacing
Plants centred at this
spacing

Type	Image	Botanic Name	Grade	Spacing (m) **
PLANTING MIX - DLP		<i>Dianella nigra</i> Turutu	1L	0.4
		<i>Libertia grandifolia</i> Mikoikoi	1L	0.3
		<i>Phormium cookianum</i> Mountain Flax	2L	1

5.3. Design rationale and principles

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CHARACTER	<p>The Tamaki River is a strategic, cultural and spiritual portage for Mana Whenua and is a feature of cultural significance. Mana Whenua have identified that:</p> <ul style="list-style-type: none"> the addition of the new bridge across the Tamaki River, together with the construction and associated effects on the Tamaki River, introduces additional works which potentially affect the mauri and thereby the relationship that exists between Mana Whenua with this culturally important site the repatriation of Ngāti Paoa cultural identity and history within the ancestral footprint of Mokoia, Maunaina and surrounding cultural landscape is imperative. 		<p>Embed a partnership approach between Auckland Transport and Ngāti Paoa into the design process, that fosters strong working relationships and accommodates the integration of Ngāti Paoa tikanga and mātauranga into the design of the built environment and open space</p> <p>Support and empower Mana Whenua to input to the design process on their sites of significance</p> <p>Creatively re-inscribe iwi narratives into the design environment, for example through artistic and interpretive material that reflects the ancestral connections and associations of Ngāti Paoa and celebrates the significance of Maunaina/Mokoia Pa</p> <p>Develop the bridge design in consultation with Mana Whenua to include cultural interpretation via artwork and narratives wherever possible. This could include gateway features or references to this significant ancestral waka portage route</p>	<p>CH1 CH4 BR1</p>	<p>MANA MAHI TOI</p>
	<p>There are two pocket parks in this section.</p>	<p>Pocket parks have been located and designed as follows:</p> <ul style="list-style-type: none"> The Mokoia Pa headland park of approximately 1800m² that includes seating terraces, open grass areas, coastal restoration planting, specimen trees, conserves the historic defensive ditch, and has a pedestrian connection from Bridge Street to Lagoon Drive. An 850m² park located adjacent to the south-eastern bridge abutment enables viewing of the existing historic turning bridge feature on three sides, a grass picnic area, seating, and a pedestrian connection to Pakuranga Road pedestrian and cycle ways as well as connection to the existing Rotary Walkway. 	<p>Create an identifiable ‘family’ of pocket parks that also allows for variety in the treatment of particular elements</p> <p>Develop pocket parks in consultation with Mana Whenua so that an overarching cultural thematic approach is consistent across the project</p> <p>In particular, design the Mokoia Pa headland park to reinscribe and redefine the ‘Mokoia Pa’ and ‘Tamaki Bridge’ whether re-using the current memorial plaques or by new element/s such as a fully carved pou/waka maumahara</p>	<p>CH1 CH2 CH4 AM3</p>	<p>MAHI TOI TOHU</p>
	<p>Mana Whenua seek the use of traditional Māori names for features and elements associated with the project.</p>		<p>Afford Mana Whenua the opportunity to provide an appropriate name for the Busway Bridge and for public spaces at its abutments</p>	<p>CH1</p>	<p>WHAKAPAPA</p>

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CHARACTER	<p>Excavation is required at the bridge approach and north-western abutment, resulting in:</p> <ul style="list-style-type: none"> modification of the landform (which is an area of high cultural value) and requirement for retaining walls removal of houses at the bridge landing location. 	<p>The bridge is 5m north of the existing bridge and 1.5m higher. Its footprint extends into the NE part of the pa site but in doing so it avoids the need for stability works on the SW side.</p> <p>The new bridge is located to the east of the existing Panmure Bridge, responding to the identified need (including by Mana Whenua) to protect and retain the coastal vegetation to the west. A balance has been sought between lifting the horizontal alignment to minimise the amount of excavation, and keeping the bridge low to minimise its visual impact.</p> <p>This bridge design ‘touches the earth most lightly’ of all options explored. Because it avoids excavation SW of the kerbline it also avoids effects (including future effects) on the Pohutukawa and potential kawau roosting sites).</p> <p>A new public open space / pocket park is provided, accessed from the shared path. The design of this will aim to reveal the remnants of Mokoia Pā, and provide viewing spaces of contemplation and connection.</p> <p>The LVA notes that the overall prominence of the existing green vegetation/ open space framework will be increased through the addition of the pocket parks (including at the Mokoia Pa site) and the retention of the existing coastal vegetation.</p>	<p>Reduce the extent of retaining walls and earthworks within the Mauinaina/Mokoia Pa site as far as possible, to “tread lightly on the whenua”.</p> <p>Retain excavation material on the site where possible and agree with Mana Whenua the new location of any material that is removed</p> <p>Create a public space at the Mokoia Pa headland to allow the history of the area to be expressed through landscape design</p>	<p>CH1</p> <p>CH3</p> <p>CH4</p> <p>CH5</p> <p>CH6</p>	<p>MAHI TOI</p> <p>TOHU</p> <p>AHI KA</p>
	<p>Landform modification and earthworks are required at and around the south-eastern abutment, resulting in:</p> <ul style="list-style-type: none"> the removal of the Panmure Bridge marine building and associated moorings impact on the setting of the heritage swivel span. <p>While the removal of these ‘human’ elements impacts on the recreational/ nautical character of the location, the LVA also notes that it has a positive aspect in reducing visual clutter and increasing the physical prominence of the Tamaki River.</p> <p>Interpretation of the heritage swivel span would enhance the recreational Panmure Basin and Rotary networks. Current access is via the car park.</p>	<p>Removal of the building means that the heritage swivel span will be open to view.</p> <p>The project makes a new connection from the shared path on the bridge to the foreshore via a new dedicated pedestrian / cycle path.</p> <p>Pause points on the bridge will provide for open views of the southern abutment and surrounds. Interpretive signage both on the bridge at pause points and at the location of the turning wheel would be further a benefit to people’s appreciation of its value.</p>	<p>Enhance access to and appreciation of the heritage swivel span for users of the Rotary Walkway and associated foreshore path network</p> <p>Support a process whereby significant sites and cultural landscape features are recognised and reflected in the detailed design of the bridge structure</p>	<p>CH1</p> <p>CH3</p> <p>BR4</p>	<p>MANA</p> <p>MAHI TOI</p>

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CHARACTER	The new bridge introduces another structure into what the LVA calls a “sensitive and visually complex setting”.	The new bridge has a slender profile given by the haunched girders, and open rail barriers. The cantilevered deck contributes to its ‘light’ appearance. It is 1.5m higher than the existing bridge, which is considered an appropriate balance to minimising excavation on the Mokoia Pa site.	<p>Develop the bridge design in consultation with Mana Whenua to incorporate cultural recognition elements and appropriate environmental standards for water catchment and treatment</p> <p>Design the Busway Bridge to fit as unassertively as possible and to be sympathetic with the existing Panmure Bridge</p> <p>Consider how the bridge form relates to the Waipuna and Panmure bridges</p> <p>Design for slender structures and to align the new bridge decks with the existing as far as possible</p> <p>Align the bridge to provide a visual connection to points of cultural and historical interest</p>	CH1 BR1	MAHI TOI TOHU MAURI TU
	The new bridge will affect the outlook and views from residential neighbours, for recreational walkers and people on the river, and for road users.	The structural depth is minimised at the midspan, and low vertical elements are used at the abutments, with space around them to create a more slender elevation.	<p>Create a slender profile and reduce visual clutter by:</p> <ul style="list-style-type: none"> • aligning piers and bridge decks • avoiding structure above the existing bridge deck • minimising the height of walls at abutments and providing as much space around them as possible • locating lighting to match vertical structural elements including piers and gantry structure/s to respect the appearance and cultural design elements of the bridge including from the water and foreshores • concealing drainage pipes within the bridge structure 	BR1 BR2 BR3	MAHI TOI
	There is a mix of existing road furniture through the AMETI project area.	<p>Shared path and bridge lighting is consistent with the wider luminaire and pole selection between Panmure and Pakuranga. The road lighting pole is a Circular Tamaki black column to match the poles at Panmure Station.</p> <p>Poles and lighting at the belvederes / viewing platforms along the bridge are a smaller version of the street light pole and luminaire.</p>	<p>Contribute to the ‘whole of journey’ experience through designing bridge elements that are consistent with others along the corridor</p> <p>Seek to integrate poles and lighting with visual elements and, in consultation with Mana Whenua, any cultural recognition markers</p>	CH2 BR2	AHI KA MAHI TOI
	A new road alignment and structural elements will change the road user experience in relation to key landmarks.	New trees frame views to Mt Wellington / Maungarei. Other planting is selected from local coastal species and for mature heights that keep important views open while softening the appearance of the bridge abutment structures.	<p>Enable and provide for the kaitiaki role of Mana Whenua in restoring and enhancing the mauri of the natural environment, for example in species selection</p> <p>Maintain the unfolding sequence of views towards Mt Wellington / Maungarei as a key part of the travel experience</p>	CH3 CH6 BR4 BR5	AHI KA MAURI TU TAIAO

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CONNECTIVITY	The shared path is located adjacent to bus lanes on the proposed Busway Bridge (separate from vehicle lanes) and is a positive contribution to connectivity. Current provision for pedestrians and cyclists is poor – narrow footpath and on-road cycling in vehicle lanes.	The Busway Bridge incorporates a 4.3m wide shared path and dedicated bus lanes. Barriers between the bus lanes and the shared path are highly transparent, as they are to the outside edge of the bridge, to optimise views between modes and out into the Tamaki River environment. The shared path is further enhanced with ‘pause points’ to enjoy the outlook.	Consider opportunities to create a positive crossing experience for pedestrians and cyclists, and for people in vehicles Provide for safe, wide multi-directional connections for pedestrians and cyclists across the waterway	CO1 CO5 BR4 BR5	
	Linkages between open spaces and path networks are incomplete.	The shared path connects to a new open space at the north abutment, the Lagoon Drive shared path, the Pakuranga Road cycle and pedestrian paths, and to the wider recreational network.	Create safe and clear connections from the Bridge shared path to existing and proposed pedestrian and cycle routes Promote wayfinding through careful siting and design of signage and engineering devices	CO2 CO6	
	The Rotary Walkway is an important asset for the Pakuranga community, with potential for strengthened connections to Pakuranga Road at the bridge abutment west of Kerswill Place.	There is a safe, accessible and convenient link between the Rotary Walkway and the separated cycle facility on the north side of the south-eastern bridge abutment.	Provide a high quality walking and cycling environment to link the Rotary Walkway to surrounding town centre, community and residential uses Create safe and clear connections from the shared path to the Rotary Walkway that tie in any cultural theming of the bridge and the south-eastern abutment pocket park Promote wayfinding through careful siting and design of signage and engineering devices	CO3 CH1	MAHI TOI
SUSTAINABLE LAND USES	The proposed Busway Bridge results in the removal of houses on the west side, to the north of Lagoon Drive, and the Marine Building and associated moorings to the east. A new public space on the Mokoia Pa headland replaces the houses.	The new pocket park includes seating terraces, open grass areas, coastal restoration planting and trees and increases the accessibility of the wider recreation network.	Use the residual land on the northern embankment to acknowledge and celebrate the historic, cultural and environmental narratives of Panmure, the Tamaki estuary and Pakuranga	SU3 CH1	MANA WHAKAPAPA
	Mana Whenua have identified that wai maori and wai tai are likely to be adversely affected due to the increase in traffic numbers and associated threats to the environment.	The bridge design captures stormwater and run-off from the surface, and directs it off the bridge at either end to be treated.	The principles of taiao and mauri tu require the enhancement of mauri, providing an improvement of current practices, such as reduced sedimentation	SU5	MAURI TU TAIAO MAHI TOI
	The new Busway Bridge spans the Tamaki River north of the existing Panmure Bridge, requiring structure in the waterway.	The Busway Bridge has been designed to remove existing navigation issues along the Tamaki River in the future when the existing vehicular bridge is replaced. The central navigation span of 75m is wider by 30m than the existing vehicle bridge, and a haunched girder design means there is an additional 1.2m clearance for boats passing underneath, in the navigation channel	Minimise the number of piers in the Coastal Marine Area Optimise the span arrangement to future proof for navigability	BR1 SU8	
	The project itself results in an enhanced multi-modal transport corridor.	The crossing experience for all modes is enhanced, and walking, cycling and use of public transport encouraged, by the provision of a generous shared path and the busway on the new bridge.	Provide greater transportation choice and more sustainable transportation options for residents of this and surrounding areas	SU3	
	The quality of the existing bridge environment is mixed; the appearance is generally run down.	The pedestrian railings are unpainted galvanised metal. Open pier areas are enclosed with vertical walls to minimise maintenance.	Select high quality, durable and long lasting materials	SH5	

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
	The LVA notes that the overall prominence of the existing green vegetation / open space framework will be increased through the addition of the pocket parks and the retention of the existing coastal vegetation.	Plant species are 100% natives for the areas surrounding the bridge landings and with the new open space at the northern abutment.	Select low-maintenance plants that are robust and endemic to the coastal environment, and familiar and significant to Mana Whenua; and engage with Mana Whenua in species selection through the kaitiaki forum	SU5 CH1 CH6	TAIAO MAURI TU AHIKAA
AMENITY	Natural surveillance of the new open space at the northern abutment of the proposed Busway Bridge is limited.	The space is near-level with the shared path and a connection is provided to Bridge Street. Planting is predominantly ground cover to maintain good sightlines and views towards and over the river. The pedestrian light on the Busway Bridge viewing platform is located to provide lighting spill to the open space.	Connect new open spaces to the shared path, to maximise interconnection and passive surveillance between them	AM1 AM3	
	Natural surveillance of the areas beneath the existing bridge and the proposed Busway Bridge is limited.	The shared path is wide, has clear forward views, the maximum number of connections possible into the local road and pedestrian network, and new open space. Final span undercroft areas are enclosed on both sides, to support the existing shared path on the Pakuranga side and future-proof for a path on the Panmure side	Design a shared path that maximises natural surveillance, is easily navigable, barrier free and promotes universal access along the project corridor Reduce areas where there is not a clear sense of ownership or concealed openings could be hiding / entrapment spaces and create a CPTED issue	AM1 AM2 AM8	
	The existing footpath over the river is narrow and of poor quality.	The shared path is 4.3m wide to offer enhanced accessibility.	Provide for universal access (ie. access is possible for all, including wheelchair users)	AM2	
	Pedestrians and cyclists are re-routed to a shared path on the Busway Bridge. This enables an improved connection between the Rotary Walkway and the Panmure Basin Recreation Loop. The existing connection underneath the bridge from the road / service access is also maintained.	Towards Pakuranga Road the shared path drops down from the bridge to the start of the Rotary Walkway as a dedicated pedestrian / cycle path with a clear view to the river and to the heritage swivel span.	Enhance the shared path and recreational path network and the connections between them, to enrich the quality of people's experience of the place	AM1	
	While the new bridge will affect the outlook of those looking towards it, it offers an opportunity for new views and vistas along and from it.	Triangular belvederes or pause points are spaced at four points along the length of the bridge, and are lit at night. Signage will be incorporated at these points including interpretative signage at viewpoints towards the first Panmure bridge swivel span. An open rail to the busway and to the outside edge railing provide clear views of the river and oblique views of the north and south abutments.	Enable pedestrians and cyclists to pause and admire views from the bridge towards cultural landmarks <ul style="list-style-type: none"> • out over the water to connect strongly to the Tamaki River • obliquely (and looking down) towards the heritage swivel span and the Mauinaina / Mokoia Pa site • towards Mt Wellington / Maungarei in the middle distance 	AM2 AM3 AM4 BR4	MAHI TOI TOHU
	The bridge will be highly visible in its setting, including obliquely and from below.	Services (sewer and stormwater pipes) are contained within the bridge structure. The height of the pedestrian railings is consistent across the bridge to tie into the land.	Design the bridge 'in the round' including considering the underside which will be viewed by pedestrians, cyclists and river users: locate lights to align with pier locations; integrate drainage pipes so they are not intrusive; align transitions between bridge junctions and abutments	AM8	

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6 PAKURANGA ROAD DESIGN

The urban and landscape design approach to Pakuranga Road was to improve public amenity (including aesthetics and safety) and contribute to an overall positive road user experience (including pedestrians and cyclists). The design has also taken into account the Te Aranga principles, particularly in considering the landscape, cultural and heritage values at the south abutment, where the bridge connects to the land and water. The approach is to enable ongoing engagement with iwi to both reflect the cultural value of the river, and to seek opportunities to create spaces that can re-connect people with the river in a meaningful and ongoing way.

The key design aspects that support these outcomes are:

- Providing a separated cycle and pedestrian path along the length of the sector, connecting into the local road network
- Providing walking and cycling crossing opportunities reasonably spaced along Pakuranga Road
- Using landscape planting to visually narrow and soften the corridor, as a buffer for 'harder' elements, and to provide canopy and shade
- Creating 'breathing space' for pedestrians and cyclists in the form of pocket parks
- Reconnecting or reconfiguring local roads severed by the busway
- Creating clear and accessible connections into regional recreational walking networks.

This chapter contains:

- Plans, sections and sketches showing the proposed urban and landscape design for the Pakuranga Road sector.
- A planting palette that is included to further illustrate the proposed landscape character.
- A table that sets out the key urban and landscape design moves and the rationale for them.
 - Some design moves are responses to identified issues (which may be either existing issues or issues arising from the project) while others take up opportunities that the project provides, and are effectively enhancements.

The summary table is intended as an important tool for guiding urban and landscape principles going forward, as the design is further developed or detailed. In this, the sector-specific principles, and the corridor-wide principles they support, should be read together as the key guidance for further design development, detail, and implementation.



Figure 50. Pakuranga Road: photomontage showing general arrangement

6.1. Design drawings

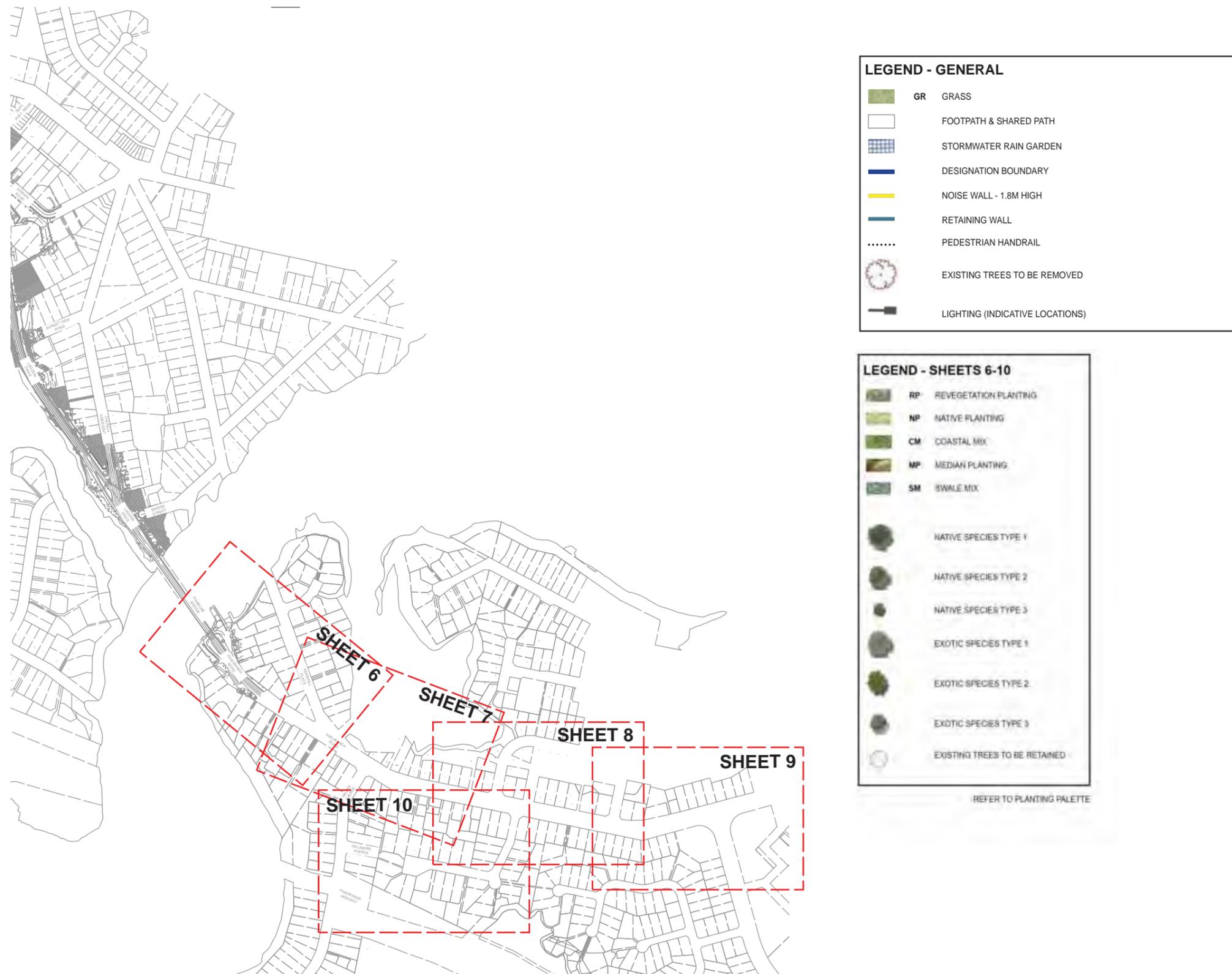


Figure 51. Pakuranga Road: key to landscape plans



Figure 52. Pakuranga Road, immediately south-east of Panmure Bridge (sheet 6)

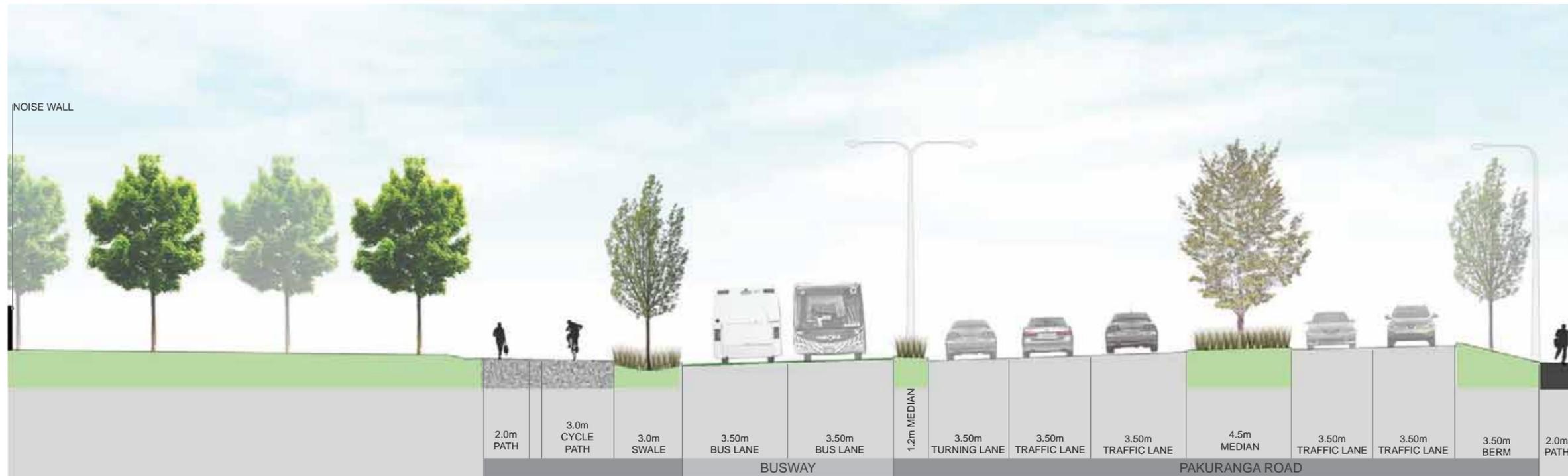


Figure 53. Section J-J, near new open space at Kerswill Place



Figure 54. Section K-K, through bus stop between Williams and Millen Avenues

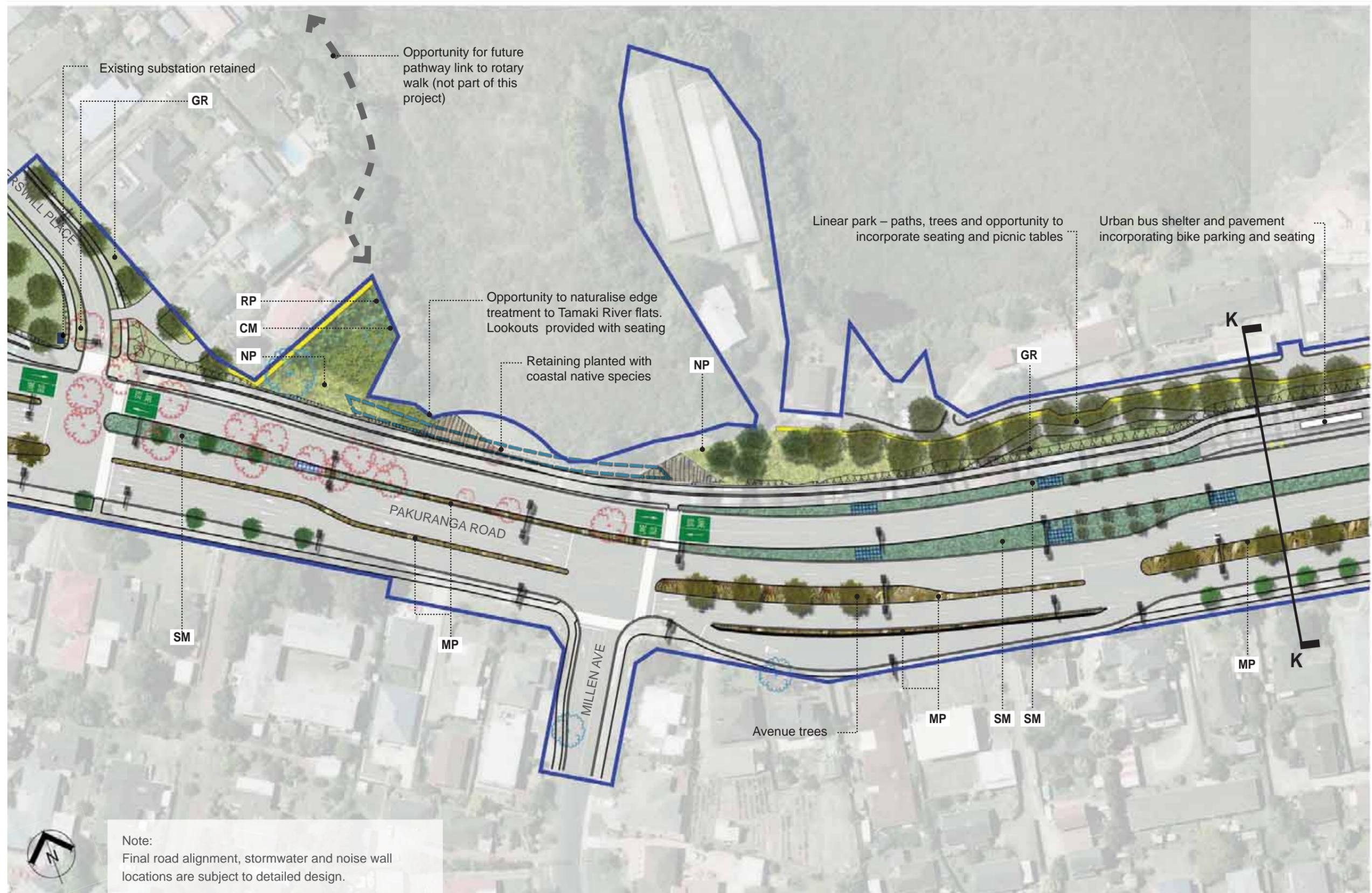


Figure 55. Pakuranga Road (sheet 7)

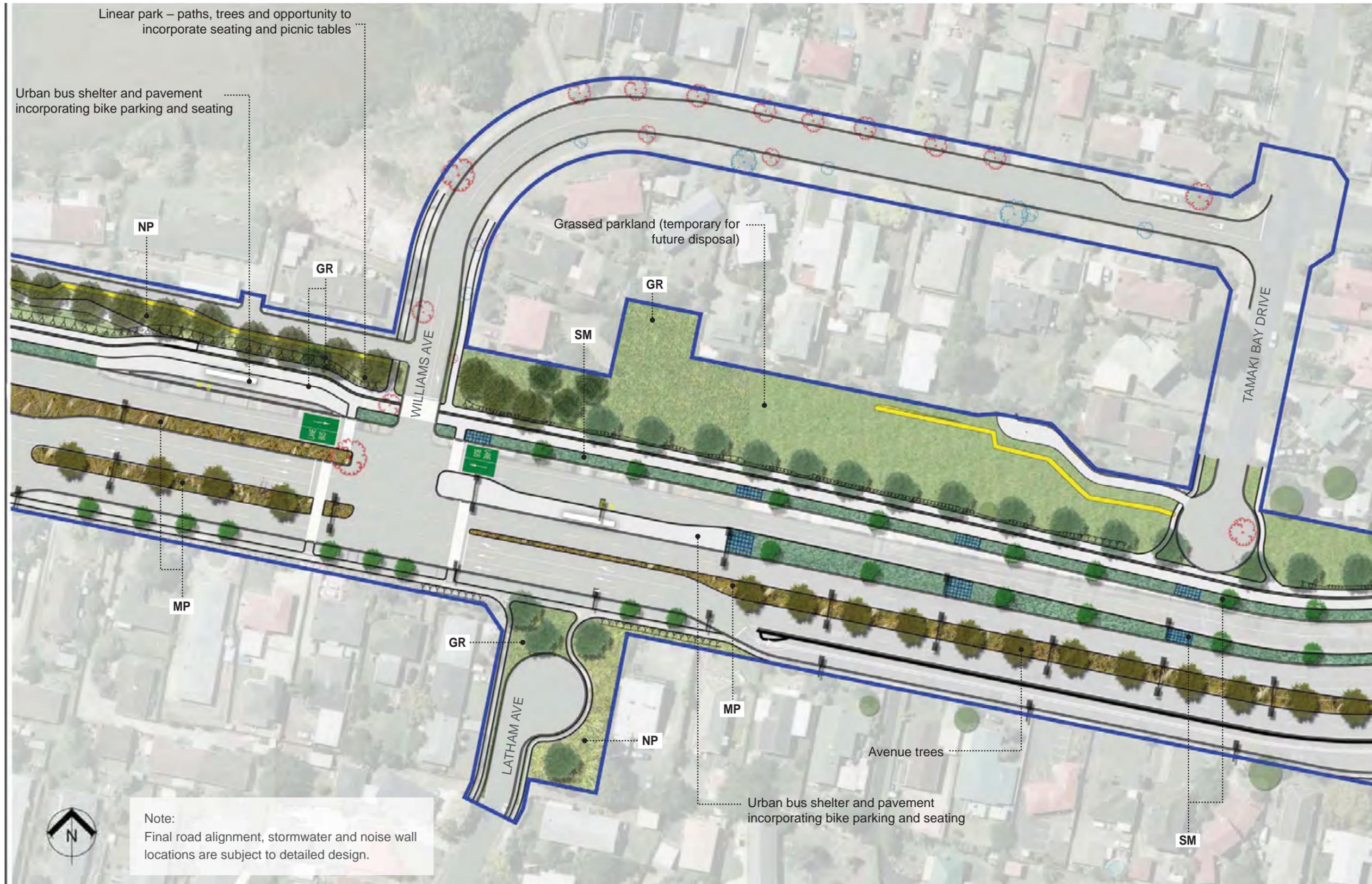


Figure 56. Pakuranga Road (sheet 8)



Figure 51. Pakuranga Road, approach to Ti Rakau Drive and Pakuranga town centre (sheet 9)



Figure 52. Latham Ave (sheet 10)

6.2. Planting palette

Type	Image	Botanic Name/ Common Name	PB Size *	Mature height / width (m)
TYPE 1 OPTIONS		Cordyline australis Titoki	PB 95	10 / 6
		Corynocarpus laevigatus Karaka	PB 95	8 / 5
		Dacrydium cupressinum Rimu	PB 95	30 / 10
		Sophora chathamica Kowhai	PB 95	6 / 4
TYPE 2 OPTIONS		Metrosideros excelsa Pohutakawa	PB 95	12 / 8
		Vitex lucens Puriri	PB95	10 / 6
		Alextryon excelsus Titoki	PB 95	10 / 6
TYPE 3 OPTIONS		Dysoxylum spectabile Kohekohe	PB 95	15 / 12
		Alextryon excelsus Titoki	PB 95	10 / 6

Type	Image	Botanic Name	PB Size *	Mature height / width (m)
TYPE 1 OPTIONS		Aesculus hippocastanum Horse chestnut	PB 95	15 / 10
		Quercus robur Red Oak	PB 95	20 / 10
		Liriodendron tulipifera Tulip Tree	PB 95	30 / 10
		Platanus acerfolia London Plane	PB 95	30 / 15
TYPE 2 OPTIONS		Prunus yeondosis Flowering cherry	PB 95	10 / 8
		Quercus robur 'Fastigiata' Upright English Oak	PB 95	13 / 4
		Ginkgo biloba Ginkgo	PB 95	30 / 8
TYPE 3 OPTIONS		Nyssa sylvatica Tupelo	PB 95	20 / 7
		Betula utilis 'jacquemontii'	PB 95	15 / 5

NOTES:
* PB Size
Minimum size of planter bag to be used at time of planting

- plant list to be further developed in next stage

REVEGETATION PLANTING (RP)	
Botanical Name	Common Name
<i>COPROSMA GRANDIFOLIA</i>	KANONO
<i>COPROSMA RHAMNOIDES</i>	MINGIMINGI
<i>CORDYLINE AUSTRALIS</i>	CABBAGE TREE / TE KOUKA
<i>COROKIA COTONEASTER</i>	KOROKIO
<i>HEBE SPECIOSA</i>	NAPUKA
<i>HEBE STRICTA</i>	KOROMIKO
<i>LEPTOSPERMUM SCOPARIUM</i>	MANUKA
<i>MELICYTUS RAMIFLORUS</i>	MAHOE
<i>MUEHLENBECKIA ASTONII</i>	SHRUBBY TORORARO
<i>PHORMIUM COOKIANUM</i>	MOUNTAIN FLAX
<i>PHORMIUM TENAX</i>	HARAKEKE
<i>PITTIOSPORUM TENUIFOLIUM</i>	KOHUHU
<i>PSEUDOPANAX CRASSIFOLIUS</i>	LANCEWOOD
<i>PSEUDOPANAX LESSONII</i>	FIVE FINGER

SWALE MIX (SM)	
Botanical Name	Common Name
<i>APODASMIA SIMILIS</i>	OIOI
<i>BLECHNUM NOVAE-ZELANDIAE</i>	COMMON FERN
<i>CAREX VIRGATA</i>	PUREI
<i>CYPERUS USTULATUS</i>	GIANT UMBRELLA SEDGE
<i>DIANELLA HAEMATICA</i>	TURUTU
<i>FICINIA NODOSA</i>	KNOBBY CLUB RUSH
<i>JUNCUS EDGARIAE</i>	WIWI

COASTAL MIX (CM)	
Botanical Name	Common Name
<i>APODASMIA SIMILIS</i>	OIOI
<i>COPROSMA REPENS</i>	TAUPATA
<i>CORDYLINE AUSTRALIS</i>	CABBAGE TREE
<i>CYPERUS USTULATUS</i>	GIANT UMBRELLA SEDGE
<i>FICINIA NODOSA</i>	KNOBBY CLUB RUSH
<i>JUNCUS KRAUSSII</i>	SEA RUSH
<i>LEPTOSPERMUM SCOPARIUM</i>	MANUKA
<i>OLEARIA SOLANDRI</i>	COASTAL TREE DAISY
<i>PHORMIUM TENAX</i>	HARAKEKE

NATIVE PLANTING (NP)	
Botanical Name	Common Name
<i>CAREX TESTACEA</i>	ORANGE SEDGE
<i>CAREX VIRGATA</i>	PUKIO
<i>COPROSMA GRANDIFOLIA</i>	KANONO
<i>COPROSMA RHAMNOIDES</i>	MINGIMINGI
<i>CORDYLINE AUSTRALIS</i>	CABBAGE TREE / TE KOUKA
<i>COROKIA COTONEASTER</i>	KOROKIO
<i>DIANELLA NIGRA</i>	BLUEBERRY
<i>HEBE SPECIOSA</i>	NAPUKA
<i>HEBE STRICTA</i>	KOROMIKO
<i>LEPTOSPERMUM SCOPARIUM</i>	MANUKA
<i>MELICYTUS RAMIFLORUS</i>	MAHOE
<i>MUEHLENBECKIA AXILLARIS</i>	CREEPING POHUEHUE
<i>PHORMIUM COOKIANUM</i>	MOUNTAIN FLAX
<i>PHORMIUM TENAX</i>	HARAKEKE

MEDIAN PLANTING (MP)	
Botanical Name	Common Name
<i>APODASMIA SIMILIS</i>	OIOI
<i>MUEHLENBECKIA AXILLARIS</i>	CREEPING POHUEHUE
<i>PHORMIUM COOKIANUM</i>	MOUNTAIN FLAX

NOTES:
Indicative plant list only. Final list to be further developed in future design stages.

6.3. Design rationale and principles

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CHARACTER	<p>The busway requires the closures of Tamaki Bay Drive and Latham Avenue at Pakuranga Road, which severs local traffic access and results in cul de sac at the existing intersections.</p> <p>These closures create opportunities for 'nodes of amenity' along the corridor that continue the theme and sequence of 'pause points' through the Panmure Roundabout / Lagoon Drive and Panmure Bridge sectors, as well as providing opportunities for creating or enhancing visual and physical connections to culturally significant landmarks.</p>	<p>The spaces resulting from road closures are designed as small pocket parks with landscaping elements including street trees and street furniture.</p> <p>Spaces at Kerswill Place, opposite Millen Avenue looking out over the mudflats of the Tamaki River, around the bus stop and shelter in this location, also provide local amenity for pedestrians and cyclists, as well as 'breathing space' for the corridor.</p>	<p>Capitalise on placemaking opportunities at severed local roads to make a positive contribution to the area character and public amenity, and to strengthen recognition and connection points of focal points on the cultural landscape</p>	<p>CH1</p> <p>CH2</p>	<p>TOHU</p> <p>MAHI TOI</p>
	<p>Road widening to accommodate the busway increases both the real and apparent scale of the road corridor.</p>	<p>Retain established trees where possible and landscape with new street trees and landscaping elements to create a high amenity boulevard effect along Pakuranga Road.</p>	<p>Create a more 'human' scale by narrowing the apparent width of the corridor with strong vertical elements</p>	<p>CH5</p>	
	<p>The southern bridge abutment and retaining walls will affect the outlook and views of neighbours, road users, pedestrians and cyclists, and people on the river.</p> <p>There is the potential to turn these negatives to a positive by emphasising the natural threshold (or gateway) to Pakuranga that the river represents.</p>	<p>Exposed bridge abutments and retaining walls will be planted to screen them.</p> <p>Spaces to enjoy views are provided where the walking and cycling infrastructure intersects with the Panmure River and Tamaki Basin and the existing and proposed Rotary Walkway. Spaces for future water-based activities are allowed for.</p> <p>Regenerating native vegetation is used to frame the carriageway and emphasise the arrival into Pakuranga.</p>	<p>Pursue public art opportunities at exposed retaining walls and other structures, including stories and themes that are meaningful to iwi</p> <p>Afford Mana Whenua the opportunity to provide an appropriate name for the open space</p> <p>Screen and soften the visual effects of public private interface, bridge abutments and retaining walls.</p> <p>Maintain and/or enhance views and possibilities for interpretation of the natural environment</p>	<p>CH3</p> <p>CH4</p>	<p>MAHI TOI</p> <p>WHAKAPAPA</p>
	<p>Houses fronting Pakuranga Road will be removed. Together with the noise walls required along the boundary of the residential properties behind them this will result in a detracting 'back of house' appearance, of solid, usually high back fences. This edge, which varies from roughly 20–30m distant from the shared path, results in little opportunity for interaction with the street. The property lines are also irregular ('in and out') making it difficult to achieve a positive edge to the new linear park / residual land.</p>	<p>Noise and boundary fences will be designed to have a degree of continuity in type and colour. There are opportunities to vary heights and steps in elevation to break up the mass and add visual interest – this is already provided for to some extent by the irregular arrangement of the property lines.</p> <p>A landscaped buffer zone will further screen the visual effects of the noise and boundary fences and is proposed to be at least as wide as the height of the boundary treatment.</p>	<p>Contribute to the revitalisation of cultural identity by making use of opportunities to incorporate Maori artistic measures into the public face of noise fences associated with the project where appropriate</p> <p>Screen and soften the visual effects of the public / private interface</p>	<p>CH3</p> <p>CH5</p>	<p>MAHI TOI</p> <p>TAIAO</p>

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CHARACTER	<p>At Kerswill Place there is loss of an open space that currently serves as the Pakuranga gateway treatment.</p> <p>Trees on the northern side of Pakuranga Road, including mature trees that contribute canopy to the streetscape, will be removed to accommodate the busway. The removal of these trees, and areas of grass, will have a negative impact on the streetscape character.</p>	<p>The vegetation treatment of the corridor restores the landscape character lost, by 'greening' the corridor in a way that reflects the transition from a predominantly 'native' environment near the river to the 'urban parkland' of the areas around the Pakuranga town centre. Treatments include:</p> <ul style="list-style-type: none"> • Trees planted along footpath edge, at bus stop areas and close to pedestrian crossing facilities • Wide, planted stormwater swales along most of the corridor • Rain gardens • Landscaping of residual road areas to create the sense of a linear park • Wide areas of buffer planting along residential boundaries: this has a dual function of greening the spaces and also helps to signal that they are 'no go' areas • revegetation of native species at the river. <p>There is an ntegrated landscape and stormwater approach.</p>	<p>'Green' the corridor as far as possible to reinforce the 'urban boulevard' effect by:</p> <ul style="list-style-type: none"> • Retaining trees and vegetation of merit, and integrating new street trees • Planting residual road areas including medians • Integrating landscape design and stormwater design <p>Enhance Mauri through the reintroduction of natural landscape elements into the urban streetscape (for example native flora), promoting bird and insect life to create meaningful urban ecosystems which connect with former habitats, food gathering areas and living sites</p>	<p>CH5</p> <p>CH6</p>	<p>TAIAO</p> <p>MAHI TOI</p> <p>MAURI TU</p>
	<p>The project has a mix of existing, new and relocated bus stops.</p>	<p>The standard AT bus shelter template is used, with space available around the structure and in the waiting area to accommodate cultural art. The linear park, particularly at 'amenity nodes' where there is outlook to the river, also offers such opportunities.</p>	<p>Enable cultural art opportunities at bus stops and other nodes to reflect the character and significance of the area</p>	<p>CH1</p> <p>CH4</p> <p>CH7</p>	
	<p>There are four pocket parks within this section.</p>	<p>Pocket parks are located and designed as follows:</p> <ul style="list-style-type: none"> • Grassed open space measuring 2100m² at the intersection between Kerswill Place and Pakuranga Road with a structured arrangement of specimen trees to provide a sense of transition between the motorway environment and the existing residential environment • An area of approximately 1300m² of coastal margin and re-vegetation planting as well as two viewing platforms located adjacent to the Tamaki River Flats • A 270m long x 20m wide linear park is located on the northern side of Pakuranga Road between the Tamaki River flats and 54 Pakuranga Road, featuring native amenity planting, specimen trees, and grass • Open space measuring approximately 270m² located at the end of Latham Avenue featuring grassed open space and a specimen tree. 	<p>Create an identifiable 'family' of pocket parks that also allows for variety in the treatment of particular elements</p> <p>Develop pocket parks in consultation with Mana Whenua so that an overarching cultural thematic approach is consistent across the project</p>	<p>CH2</p> <p>AM3</p>	<p>TOHU</p> <p>MAHI TOI</p> <p>TAIAO</p>

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
CONNECTIVITY	The project results in severance of local roads – Tamaki Bay Drive and Latham Avenue.	Access is provided by new local road connections linking Dilimore Avenue and Latham Avenue. Pedestrian and cycle connections are maintained at Tamaki Bay Drive, Latham Avenue and under the bridge to the former Marine Building site.	Provide new local road connections to ensure access is maintained to residential communities and existing transport networks	CO1 CO5	
	The introduction of the busway results in: <ul style="list-style-type: none"> • The loss of bus stops on the southern side of Pakuranga Road, with additional distances needing to be travelled to access new bus stops • A widened road corridor that creates long crossing distances for pedestrians and cyclists. 	The design is for: <ul style="list-style-type: none"> • 3m separated two way cycle path parallel with the busway, along the north side • 2m landscape buffer zone between cycle path and busway • 600mm demarcation strip between cycleway and footpath • 1.8 – 2m wide footpath parallel to bus and cycle facility • Minimum 2m pedestrian pram crossings with tactile pavers • Buffer between cycle facilities • Priority phasing at intersections for pedestrians and cyclists, with tactile pavers • Signalised 3m wide crossing for cyclists parallel next to pedestrian crossing and bus waiting area. 	Provide a high quality walking and cycling environment with optimal and prioritised crossing opportunities to link desire lines and local network destinations: <ul style="list-style-type: none"> • Pakuranga Town Centre and other local businesses, • Riverina School • the new bus stops • the Rotary Walkway • adjoining open spaces and the residual surrounding residential area 	CO1 CO6	
	The busway limits the number of safe walking and cycling crossing opportunities. However, high quality crossings are provided including at key desire lines, to an environment that is currently difficult to navigate.	There are signalised crossings at Millen Avenue, Williams Avenue and Ti Rakau Road.	Provide a minimum of 3 crossing opportunities, reasonably spaced along the road corridor, to facilitate walking and cycling	CO1	
	Corridor constraints result in different path types: shared path from Panmure and over the new busway bridge, becoming a separated cycle and pedestrian path at Pakuranga. Because there is potential that dedicated cycle paths will see faster cycling speeds, it will be important to manage any potential conflict with pedestrians when the two modes come together.	The design provides : <ul style="list-style-type: none"> • signage to ensure pedestrians use the outside edge along the bridge and cyclists use the inside next to the bus lanes • safe 'pedestrian zones' for waiting at intersections • safe pedestrian crossing facilities across cycle lanes and bus lanes to access bus stops. 	Provide a minimum of 3 crossing opportunities, reasonably spaced along the road corridor, to facilitate walking and cycling	CO1	
	The Rotary Walkway is an important asset for the Pakuranga community, with potential for strengthened connections to Pakuranga Road (at the bridge abutment, west of Kerswill Place and east of Ti Rakau Drive).	The median and landscape design enables a future signalised pedestrian crossing linking the town centre with the Rotary Walkway to support the 'Rotary Gateway' envisaged in the Pakuranga Town Centre Masterplan.	Create a safe transition of cycle facilities to avoid potential conflicts with pedestrians, particularly from separated to shared path infrastructure at the bridge interface	CO4	

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
SUSTAINABLE LAND USES	Over 30 residential properties along Pakuranga Road are removed with the corridor widening, leaving a wide strip of empty land adjacent to the northern edge.	<p>Lot depths of minimum 25m are provided to at least 60% of the lots, to allow for desirable future development / urban form.</p> <p>Low cost, low maintenance plants are proposed in the interim for residual areas that may be developed in the future, to improve the appearance of these areas and help 'green' the corridor, and to avoid replacing costly landscape treatments in the future if and when development happens.</p>	<p>Ensure future development of residual land is not precluded and can positively relate to and address the public street where possible</p> <p>Provide interim solutions that make a positive contribution to the area and support surrounding land uses, whether residential, commercial or recreational</p> <p>Select plants to encourage and provide for the needs of native fauna</p>	SH3 SU1	
	Local access roads will be severed – Tamaki Bay Drive and Latham Avenue – and alternative access needs to be provided. In the turning circle areas that result from closing the roads, there is an opportunity to treat them as shared spaces, with a surface that signals pedestrian / cycle priority and links visually to the linear park that they interrupt.	<p>The local road network is reconfigured with a new connection linking Dilimore Avenue and Latham Avenue; and a new access road to properties between Kerswill Place and Millen Avenue.</p> <p>Tamaki Bay Drive and Latham Avenue which are severed for vehicles remain accessible for pedestrians and cyclists.</p>	<p>Provide new local road connections to ensure access is maintained to residential communities and existing transport networks</p>	SU1 SU3 SU4 CO1 CO5	
	The Pakuranga Town Centre Masterplan envisages gateway nodes and connections, including a future bus station, which are not part of the current project.	The design maintains existing footpath alignments at the Pakuranga Road / Ti Rakau corner, to optimize available land within the town centre triangle for future development of the corner and supporting internal road layouts.	Enable future development of a functional, viable Pakuranga Town Centre	SU1	
	Planted medians and landscaping of residual land will increase the landscaping maintenance requirements.	Oi oi and mikoikoi are proposed for medians as they are local, low-maintenance, robust species with low water requirements.	<p>Seek Mana Whenua input into integrated stormwater and landscape design solutions</p> <p>Select robust, low-maintenance native species that are also local to the area</p>	SU5	TAIAO MAURI TU
	Currently the corridor is dominated by car travel, and the quality of experience for pedestrians and cyclists is generally compromised by lack of space and lack of facilities.	The design allows for a dedicated cycleway and secure cycle storage facilities at safe and convenient locations at bus stop waiting areas (not precluded).	<p>Provide high quality, accessible infrastructure to:</p> <ul style="list-style-type: none"> ■ encourage active modes ■ encourage multi modal trip movements 	SU6	

	DESIGN ISSUES	DESIGN MOVES	SECTOR SPECIFIC DESIGN PRINCIPLES	CORRIDOR WIDE PRINCIPLES SUPPORTED	TE ARANGA PRINCIPLES SUPPORTED
AMENITY	Safety and legibility will be potentially affected when users transition from different types of cycle (separate cycle path to shared path).	The design provides : <ul style="list-style-type: none"> signage and engineering devices to ensure pedestrians use the outside edge along the bridge and cyclist use the inside next to the bus lanes, with physical separation in the form of a barrier. safe 'pedestrian zones' for waiting at intersections, to avoid potential cycle conflicts. 	Create a safe transition of cycle facilities to avoid potential conflicts with pedestrians, particularly from separated to shared path infrastructure at the bridge interface	AM1 AM2 AM4 AM5 AM6	
	Residential amenity currently enjoyed may be adversely affected by increase in noise and disturbance from traffic. There is potential for noise fences to impact on people's outlook, and on the quality of the public domain, especially if high solid fences divide the footpath from front gardens and prohibit visual connection – that is, remove any possibility for passive surveillance. Such fences, if on the northern boundary, could also overshadow people's outdoor space as well as prevent sun access to indoor living areas.	North side of Pakuranga Road: 1.8m high noise fences on property boundaries, at the back of the area of residual land, are proposed. South side of Pakuranga Road: no noise fences are proposed because modelling shows no perceptible noise level change from the "do nothing" project in 2026 (i.e. no AMETI project) and the "do minimum" (i.e. the AMETI stage 2a project but with no noise mitigation measures). From a public realm perspective, the better outcome is to have no noise fences rather than creating a high, solid edge to the footpath where currently this is relatively open, and softened by vegetation in front gardens.	Mitigate material increase in noise effects through a combination of carefully sited and designed noise fences and noise attenuation of individual buildings in the form of insulation and double glazing	AM3 CH1	
	Removal of houses and vegetation, rear fences and open space edging the corridor, results in a public domain with less passive surveillance along Pakuranga Road and also at the bus stop and bridge underpass.	The design provides: <ul style="list-style-type: none"> Bus stops sited and designed for good levels of visibility Clear trunk trees and low shrubs planted near pedestrian paths to keep sightlines open Lighting of walking and cycling routes including the bus stop environs and the bridge underpass; lights and trees are alternated so that trees do not block light and compromise a sense of safety Where there is planting next to pedestrian and cycle paths, it is set back at least 1 metre from the path to prevent entrapment spots, and to maintain good sightlines. 	Maximise passive surveillance and sightlines from adjoining residential development, particularly at bus stops, through the siting and design of new structures, landscape treatment and lighting Design new open spaces to be accessible, attractive and inviting, to encourage their use and through that to increase the level of passive surveillance and a sense of 'eyes on the street' Design spaces that may in the future support new development so that they can optimise access, overlooking and 'activation' of the busway Ensure high quality and consistent levels of lighting to ensure users feel safe	AM1 AM3	
	The existing street environment is mixed in quality, with few street trees. Consolidated planting is localised to the Kerswill Place open space, and in the front gardens of some houses. These areas will be lost as a result of the project.	New street trees at regular intervals will provide shade and separation between pedestrians and vehicles, as well as visually narrow and 'scale down' the corridor.	Create a high quality, pleasant walking environment	AM7	

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