

THREE KINGS RENEWAL MASTER PLAN REPORT 15H-2

Final 01.08.2014



1.0 EXECUTIVE SUMMARY

Study Area
Master plan Objectives
Background and Purpose
Master plan Structure
Process
Principles and Strategies

- Environment
- Water
- Recreation and Community Facilities
- Transport, Access and Circulation
- Culture and Heritage
- Character and Visual Amenity
- Building and Architecture

4.0 ANALYSIS

Environment
Water
Recreation and Community Facilities
Transport, Access and Circulation
Culture and Heritage
Character and Visual Amenity
Building and Architecture

4.1 Site Constraints

4.2 Site Opportunities

6.0 MASTER PLAN

Master plan Precincts
Master plan Sections
Master plan Shadow Analysis

6.1 The Park

6.2 Hilltop (Winstone Precinct)

6.3 The Bush Precinct

6.4 The Riu Precinct

2.0 INTRODUCTION

2.1 Context
The Auckland Plan
Puketapapa Local Board Plan
Draft Unitary Plan

2.2 Master plan Process

2.3 Previous Plans and Studies
Three Kings Precinct Plan

5.0 PRINCIPLES AND STRATEGIES

Introduction

5.1 Environment

5.2 Water

5.3 Recreation and Community Facilities

5.4 Transport, Access and Circulation

5.5 Culture and Heritage

5.6 Character and Visual Amenity

5.7 Building and Architecture

7.0 DESIGN ELEMENTS TO BE INCLUDED IN THE PLAN CHANGE

3.0 VISION

3.1 The Vision

CONTENTS



Aerial Photograph of Three Kings Quarry Site (Date: 1955)

to create a world class community that Aucklanders are proud of, want to live in and invest in.

The Three Kings Master plan Report presents the culmination of a 18 month public engagement process, and work between Auckland Council, local community representatives, local board representatives, Iwi representatives, Antipodean, HNZ and Fletcher over the future of the Three Kings town centre, the former Winstone quarry site and immediate surrounding areas. The proposal introduces new dwellings and open spaces whilst bringing together existing communities and park reserves.

STUDY AREA

The Three Kings Master plan study area is comprised of former quarry land owned by Fletcher Concrete and Infrastructure Ltd.

The Master plan forming this proposal presents a scenario where only Fletcher Concrete and Infrastructure Ltd owned former quarry land is developed. Former quarry land owned by the Crown and the town centre precinct are part of this study, but not included in the proposed development.

All the figures within this Master plan are indicative only.

MASTER PLAN OBJECTIVES

The essential goal of the Master plan is to produce a framework and strategy for the remediation and redevelopment of the former quarry site whilst being conscious of the opportunities and impacts such a development would introduce to the surrounding land parcels and local stakeholders.

New green linkages are proposed to provide a seamless connection to and through the site for the community.

The Master plan respects and celebrates existing topographical assets such as Te Tātua a Riukiuta (Big King), Maungawhau (Mt Eden) and Maungakiekie (One Tree Hill). Through careful references to these landmarks, the proposed development is firmly sited within the Auckland volcanic landscape. The aim is to create a world class community that Aucklanders are proud of, want to live in and invest in.

BACKGROUND AND PURPOSE

The Three Kings renewal project provides a unique opportunity for the residential redevelopment of a brownfield site located close to the CBD. It achieves the objectives of the Operative District Plan

(Isthmus Section), proposed Unitary Plan (Unitary Plan), particularly those relating to growth; high quality development; provision of infrastructure, and avoiding, remedying or mitigating environmental effects arising from development.

This Master plan provides a co-ordinated approach to redevelop the quarry. It creates a medium to high density residential precinct for local and regional users which respects and enhances the best aspects of the site. The plan uses the following planning and design themes:

- Environment
- Water
- Recreation and Community Facilities
- Traffic, Access and Circulation
- Culture and Heritage
- Character and Visual Amenity
- Building and architecture

MASTER PLAN STRUCTURE

This report outlines the study process, key findings and proposals. Following the introduction and vision, key findings of an analysis on opportunity and constraints, are outlined in Chapter 4.0.

The Principles and Strategies in Chapter 5.0 identify how the issues and opportunities from the analysis are developed into a strategic vision for the future.

The Master plan is presented as a comprehensive Master plan design that illustrates the function, activity and character precincts within the plan. Chapter 6.0 introduces the plan and describes the major precincts.

1.0 EXECUTIVE SUMMARY

PROCESS

The Master plan is a result of a continued collaboration between Fletcher, Auckland Council, local community stakeholders, Housing New Zealand, Antipodean Properties, local board representatives, Iwi representatives and other local community stakeholders. Key community interests relate to access, open space, housing availability and affordability and the rehabilitation of the former quarry in a responsible and sensitive manner.

These community interests are supplemented with technical knowledge from specialist consultants and historical data from the quarry archives. Technical studies on key issues such as environment, water, transport, heritage and recreation have been carried out to identify core urban design strategies that would satisfy both community needs as well as technical requirements.

PRINCIPLES AND STRATEGIES

Seven key themes have been highlighted through preliminary investigations and community discussions. The Master plan recognises important principles and strategies that would be crucial to the successful manifestation of each theme.

Environment/Biodiversity

Rehabilitate and remediate former quarry land

The process of quarrying in the past has resulted in the subject site having a concave topography up to 40 metres below surrounding land. The Master plan will introduce initiative to rehabilitate and repair the former quarry in a sustainable, sensitive and responsible manner.

Consented filling operations are being carried out within the quarry to reduce the level differences from the base of the valley to adjacent communities. Architectural elements and vegetation that respect and take advantage of the quarry topography will be introduced to enable the site to be redeveloped into housing accommodation and parklands.

Maunga Apron

The steep slopes against the Maunga will be protected and stabilised by enhancement of existing and targeted revegetation. This strategy provides a green apron to the south-eastern edge of the Maunga, expanding its footprint, and bringing the Maunga further into the site.

Introduce local volcanic flora to quarry slopes

The proposal aims to reinstate much of the original flora that was found on the volcanic slopes. This will include a variety of trees and shrubs such as the pohutakawas and other native bush plantings. By doing this the biodiversity of the area will be improved and be consistent with the surrounding suburb.

Water

Through past quarry operations, the existing site has been excavated below the regional water table. Existing groundwater management infrastructure has been in continuous operation since 2001 to manage water flows and through connection to the aquifer. The Master plan seeks to manage water as a visible resource through the introduction of wetlands and other Water Sensitive Urban Design initiatives.

Improve water quality on site and the recharge of the aquifer

The proposal will utilise a network of wetlands and rain gardens integrated into the streetscapes to aid in the filtration of stormwater runoff. This combined with the filtration properties of the scoria layer already located on site will help ensure that water entering the aquifer below is clean.

Harvest water for use in the landscape

The precincts within the Three Kings site will each contain rainwater retention areas to enable reuse of rainwater through communal landscape areas. The unique existing access to a reticulated groundwater management system will allow for irrigation of the significant landscape amenity proposed for the development. This central controlled facility will enhance vegetation growth and provide for a rapid improvement in the biodiversity on the site

Manage stormwater overflow in active recreational spaces

The Master plan will utilise active recreational spaces to manage stormwater overflow. Stormwater will be directed to areas of open space to enable water retention then flow gradually towards the wetland holding zones around the periphery of the quarry.

The Master plan will also manage the collection and filtration of stormwater from off-site locations in the suburb of Three Kings.

Recreation and Community Facilities

Big King Reserve and Three Kings Oval are existing recreational spaces adjacent to the site that have been disconnected by the quarry. The Master plan proposes a series of open spaces within the subject site that would allow better accessibility to these existing recreational assets as well as offering new open spaces to the community.

Provide linkages to existing open space

The proposal recognises its place within an existing open space network and enhances connections between them. It achieves these by identifying existing links and reinforcing them within the site. This can be seen through the connection to the existing soccer fields to the west of the site and to the existing path to Te Tatua a Riukiuta.

Introduce a variety of spaces for active and passive recreation

The Local Park is centrally located within the site and provides both active and passive recreational functions. Passive recreation is also facilitated through informal landscape terracing and bush trails throughout the site.

Integrate communal and cultural activities with open spaces

In conjunction with these active and passive uses communal and cultural facilities are closely integrated into the proposal in the form of a Local Park and is connected by a combination of stairs and ramps. This Park will provide opportunities for communal and civic functions.

Ensure recreation spaces are safe and accessible

Areas of recreation are located adjacent to apartments and mixed use buildings with active frontages to provide passive surveillance. This helps to ensure that these areas maintain a sense of activity and use through the day.

Transport, Access and Circulation

Ensure safe and convenient pedestrian access to and through the site

Many areas of pedestrian movement are faced by apartments and terraces with active frontages. This helps to provide passive surveillance of these areas. Pathways which are not actively fronted will feature adequate street lighting to ensure safety and convenience. This includes walkways connecting the variety of open spaces.

Provide universal access

Universal access is achieved by recognising the sites unique topography and ensures that acceptable gradients are achieved throughout the site where possible.

Encourage links to public transport

Public Bus routes currently service the area along Mt Eden Road and Mt Albert Road. To ensure that the residents have access to this transport, key links have been provided between the site and Mt Eden Road.

Provide adequate visitor parking

Visitor parking will be accommodated by the provision of on street car parking.

Establish a hierarchy of streets around and within the development

Due to the level difference between the site and the surrounding area, a clear network of streets needs to be established to ensure that legibility and wayfinding is maintained. This is achieved by using a ring road and a permeable inner street network.

Culture and Heritage

Show the layered history of the site

The original eruption that formed Three Kings, which were actually 5 scoria cones, took place approximately 28,500 years ago. Following the eruption, Three Kings became the site of a Maori settlement, where traditional Pa sites shaped the scoria face to create defensible terraces. The surrounding area that makes up the Three Kings site is comprised of a unique variety of layers that embody Auckland's regional character.

Views to Te Tatua a Riukiuta are reinforced through site sensitive planning, architecture and landscape as a reminder of the prehistoric volcanic landforms that once existed in the area before the quarry. The history of Maori occupation is told by references to the Pa built form and earthworks. The industrial heritage of the site will be recalled through the use of installations and follies. In addition, a series of stairs and platforms will be designed to have a gritty, industrial character, which will link the site to Mt Eden road and Te Tatua a Riukiuta.

Provide visual and physical links to Te Tatua a Riukiuta and surrounding volcanic peaks

The Master plan recognises the cultural significance of Te Tatua a Riukiuta as a spiritual and physical landmark. The Master plan opens up multiple vistas from Mt Eden Road and within the site to the Maunga - giving the development, and the surrounding community a greater sense of place.

On a regional scale, the Master plan makes reference to Maungakiekie (One Tree Hill) to the east and Maungawhau (Mt Eden) to the north. Visual lookout points are proposed in key public open spaces within the development towards these regional topographical landmarks. Paths and platforms will connect the development with these surrounding volcanic landforms.

Physical links will be provided in the form of bush trails and pedestrian connections between Three Kings, prominent areas of open space surrounding the site and Te Tatua a Riukiuta.

Retain and enhance cultural overlays based on the principles of Te Aranga

The site offers a wealth of opportunity to interpret the gradual development of the site from prehistoric volcanic formation, to its industrial history as a stone quarry and a future town centre. Identification, interpretation and protection of heritage values are key requirements of the Master plan. Both the cultural history of Three Kings along with its industrial history of occupying and using the Maunga will inform the Master plan.

Character and Visual Amenity

Utilise views to Te Tatua a Riukiuta as a backdrop to the development and the wider community

The principle of Tohu* is applied and respected through the view opportunities towards Te Tatua a Riukiuta. The proposal aims to maintain and encourage views to Te Tatua a Riukiuta with a series of strategies. Buildings and blocks are orientated to protect and frame view corridors and building bulk and heights are carefully controlled so that views to Te Tatua a Riukiuta are maximised where possible. The separation of the built forms provides permeability and glimpses towards Te Tatua a Riukiuta throughout the development. The public domain in the development are sited to have a strong visual connection to Te Tatua a Riukiuta.

Ensure visual links to the Maunga are protected and enhanced

View lines to the Maunga will be created by careful orientation of built form and blocks. Visual permeability through the site and to the Maunga will be achieved through consideration of building height, building height, bulk as well as separation. Key roads and access points will be aligned to protect and enhance view corridors.

Building and Architecture

Create high quality homes for the 21st Century

The proposed dwellings will be contemporary in nature, yet reference the historical maori vernacular types. The design of each home and apartments will be carefully considered to maximise amenities and a sense of space. They will be sustainable homes, minimising water and energy usage through passive design strategies. All the dwellings will be designed with solar access, cross ventilation and views and outlook in mind to maximise comfort.

Introduce typologies that respect and relate to the landform

The proposal will utilise a range of built forms to negotiate the varying topography found on the site. In particular, terraces and cascading typologies will be used to negotiate the difficult sloping terrains in combination with more standard building types elsewhere, creating an interesting and varied architectural language across the site.

Provide housing choice through the introduction of suitable dwelling typologies, sizes and finish

A range of products will be made available to suit different market demands. Products will range from apartments to terrace housing.

Design architecture that work seamlessly with the proposed landscape and the environment

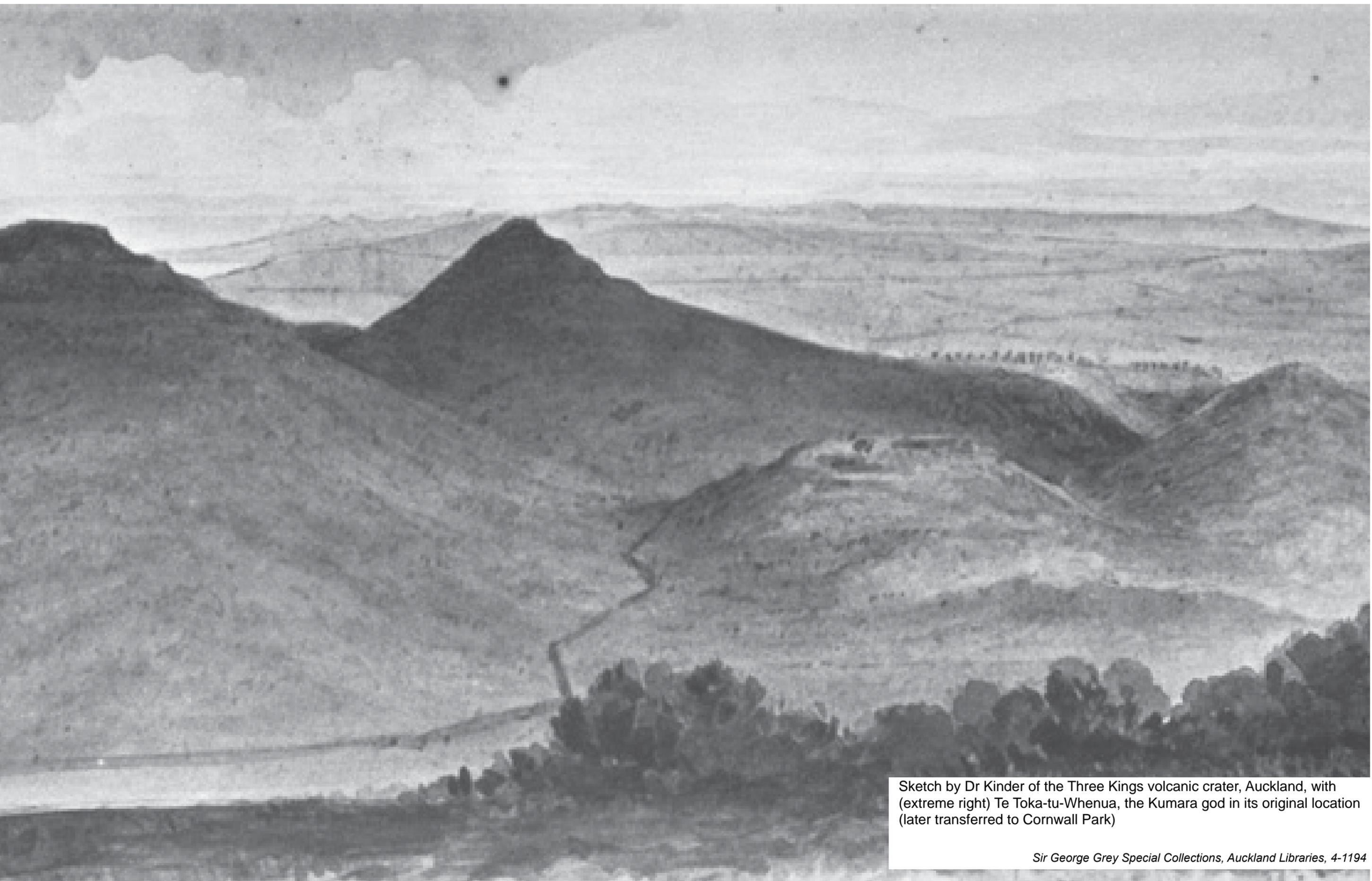
The architecture within the development will be designed to be sensitive to the context by taking into consideration the landscape and environment.

A range of architectural and landscape forms will be designed to transition between the drop in level to the quarry floor. Terraced landscape elements, earth forms, rain gardens and wetland treatment ponds can be employed to introduce usable green open space that doubles as access routes and water treatment zones.

Building typologies such as terraces and cascading apartments will be selected for their ability to traverse steep site conditions, and will be used along the periphery of the quarry. These tiered apartment buildings can be orientated accordingly to maximise daylight as well as views towards Te Tatua a Riukiuta.

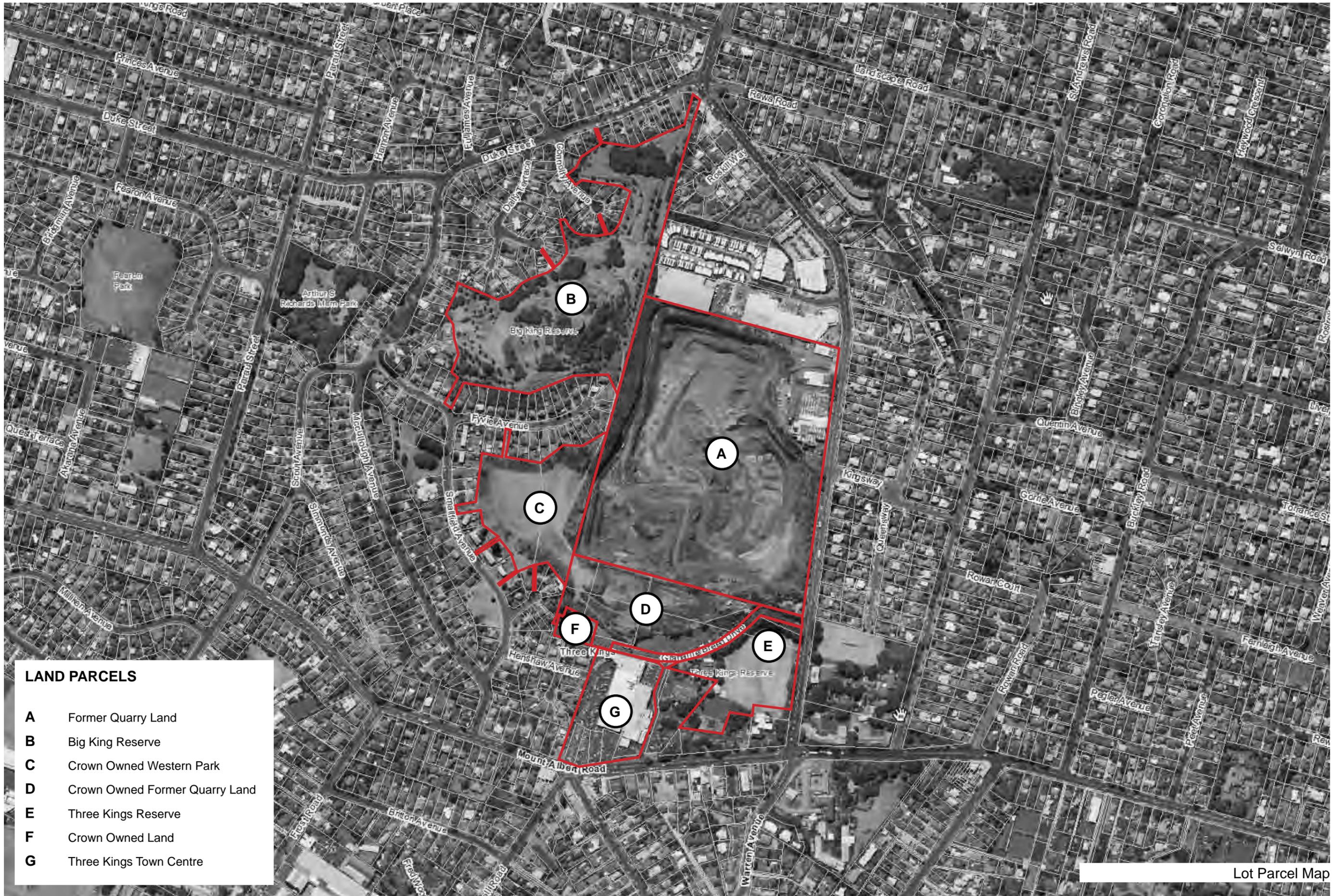
Tohu - a sign, mark, landmark or distinguishing feature





Sketch by Dr Kinder of the Three Kings volcanic crater, Auckland, with (extreme right) Te Toka-tu-Whenua, the Kumara god in its original location (later transferred to Cornwall Park)

Sir George Grey Special Collections, Auckland Libraries, 4-1194



Lot Parcel Map

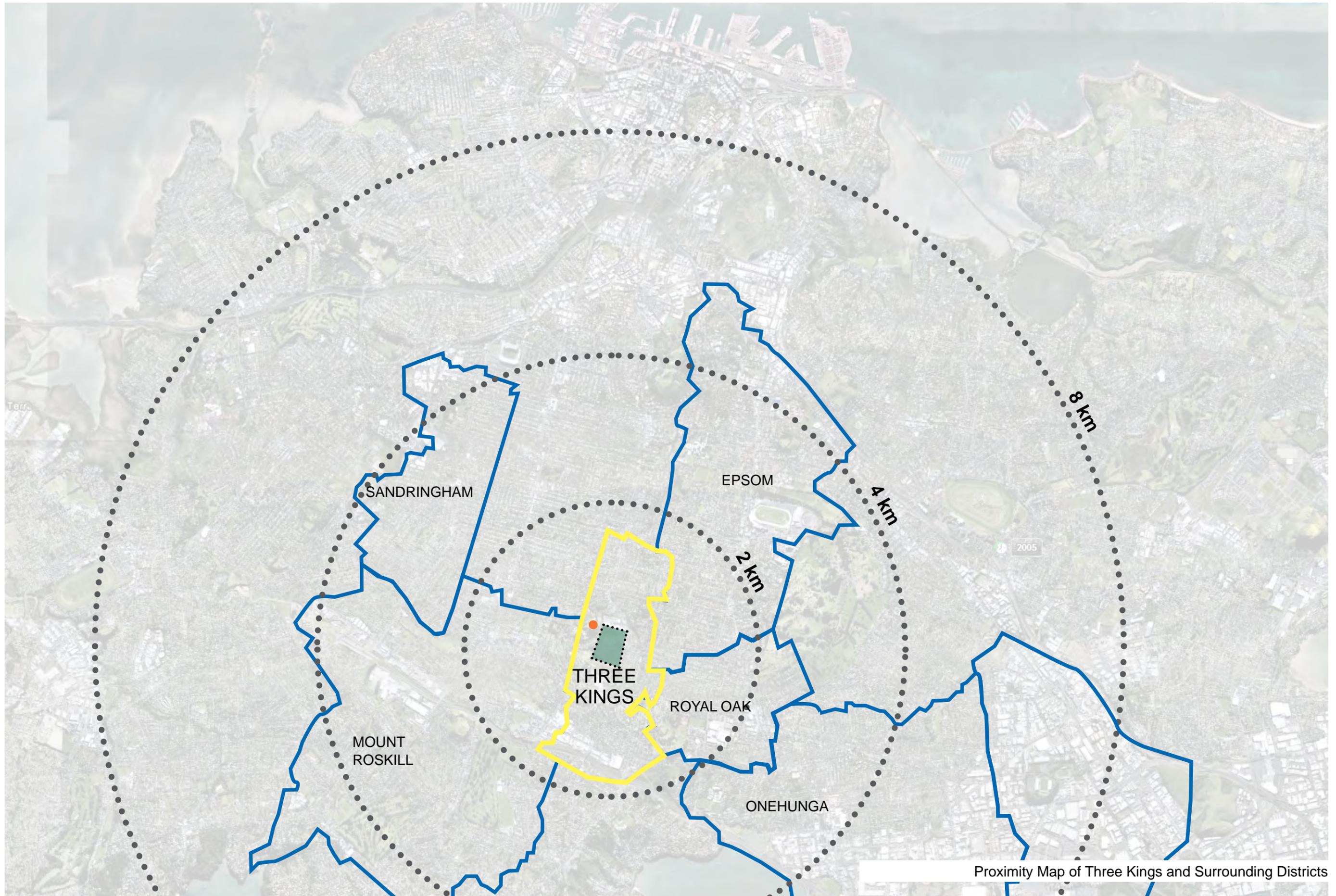
2.0 INTRODUCTION

INTRODUCTION

The Three Kings Master plan study area is comprised of former quarry land owned by Fletcher Concrete and Infrastructure Ltd.

This Master plan seeks to redevelop the former quarry land owned by Fletcher Concrete and Infrastructure Ltd. Former quarry land owned by the Crown and the town centre precinct are part of this study, but not included in the proposed development.

A multidisciplinary team comprising dKO Architecture, Surfacedesign, Inc, Tattico, Pattle Delamore Partners, Harrison Grierson, Tonkin & Taylor, Traffic Design Group and other expert consultants were engaged by Fletcher to prepare this report. The Master plan has been developed in consultation with Auckland Council, the community and other stakeholders over a period of 18 months.



2.1 CONTEXT

CONTEXT

Three Kings is the suburb named after a volcanic centre with three prominent peaks - Te Tatua a Riukiuta that erupted 28,500 years ago. The subject site is a former quarry operated by Winstone Aggregates.

The suburb, approximately 8km south of Auckland, is located amongst other significant volcanic peaks such as Maungawhau (Mt Eden) to the north, Maungakiekie (One Tree Hill) to the east and Owaikara (Mt Albert) to the west and Puketapapa (Mt Roskill) to the south west.

Te Tatua a Riukiuta, the last of the five peaks at Three Kings, is part of a reserve located at the north west boundary of the former quarry. The reserve is well used but currently has poor pedestrian and vehicular linkages from the south and the east due to the quarry land surrounding these edges. The reserve is accessible from a public car park on Duke Street, and through various pedestrian routes from Connolly Avenue, Dally Terrace, Smallfield Avenue and Fyvie Avenue from the west, and Hunters Park Drive from the east. An existing path links pedestrians from Grahame Breed Drive to the southern edge of Big King Reserve,

The subject site is bounded by Big King Reserve and commercial and industrial land to the north, existing dwellings to the west, Mt Eden Road to the east, and reserve land to the south and south-west. The existing Three Kings town centre and Three Kings Park are located south of Grahame Breed Drive.

The former quarry, located at the centre of the existing Three Kings neighbourhood and amongst existing open space assets, is in an optimum location to become an extension of the town centre whilst providing new linkages to surrounding parkland.

In developing the Master plan, a number of Auckland-wide and site specific planning instruments, guidelines and standards have been reviewed.

THE AUCKLAND PLAN

The Auckland Plan sets a balanced strategy for managing Auckland's growth. Between 60% and 70% of growth is targeted within the existing metropolitan urban area. The Auckland Plan seeks to achieve these significant urban intensification policies through a strategy which focuses growth close to town centres and along major public transport routes.

Three Kings is identified as an emergent town centre within the overall Auckland Urban Core Development Strategy Map. The subject site is ideally located adjacent to the existing town centre and on a major high frequency/high quality bus public transport route.

The former quarry is one of very few large brownfields sites on the Auckland Isthmus. It provides a unique opportunity to meet Auckland Council's urban intensification policies without the need to change the character of existing established residential areas.

The Auckland Plan seeks to promote a range of typologies within growth nodes and targets opportunities for apartment development as one of the typologies in growth areas.

The Master plan provides for a range of apartment and terrace house high density housing typologies. The unique nature of the quarry gives the opportunity to build multi-storey 'cascading' apartment buildings within the Three Kings area, but ensuring the buildings are only four levels above the rim of the quarry.

The Three Kings development will be able to accommodate urban intensification as promoted in the Auckland Plan, whilst maintaining high quality urban and open spaces for the neighbourhood.

PUKETAPAPA LOCAL BOARD PLAN

The quarry has been identified in the local board plan as a key site for development and presents significant opportunities for redeveloping the surrounding Three Kings area.

The visions of the Puketapapa local board plan for the Three King Quarry are:

- to address the low level of open space in the neighbouring Albert-Eden Local Board area directly to the north of Three Kings.
- to maximise the level of public open space and protect and enhance the volcanic landscape and views to and from Te Tatua a Riukiuta.
- to improve connections to Te Tatua a Riukiuta, other existing open spaces, Three Kings town centre, surrounding housing and the quarry site.
- to incorporate surrounding land uses into the redevelopment of the quarry to ensure the best possible outcome for the community.

Puketapapa Local Board Plan 2011

2.2 MASTER PLAN PROCESS

MASTER PLAN PROCESS

Fletcher first approached the Council in November 2012 with the suggestion that a comprehensive look at the Fletcher Concrete and Infrastructure Ltd and Council landholdings at Three Kings would give a better urban outcome for redevelopment of the Three Kings centre.

The Puketepapa Local Board at the time was seeking a major precinct plan for the Three Kings area. Fletcher was asked to integrate its work with the local board programme. This was agreed on the basis that the outcomes of the precinct plan would be sufficiently advanced in time for inclusion in the Unitary Plan.

Fletcher has worked collaboratively with the Council.

In particular:

- All requested information has been provided to the Council team to enable them to advance the precinct plan.
- Fletcher has worked with all stakeholders to input into the precinct plan and to develop up its own Master plan. Including South Epsom Planning Group (SEPG) and Three Kings United Group (TKUG).
- Fletcher has met with all key departments and CCOs to work through various issues. This has included Parks, Planning, Urban Design, Stormwater, Auckland Transport, Watercare Services Ltd.
- Fletcher has held multiple hui with the five primary Iwi who have interest at Te Tatua a Riukiuta.

- Fletcher has engaged with other key landowners in the area, particularly Antipodean who owns the town centre, and Housing New Zealand who have significant landholdings to the west.

The Master plan forming this proposal presents a scenario where only Fletcher Concrete and Infrastructure Ltd owned land is developed.

dKO Architecture was engaged as the urban designer and architect of this project since early 2013.

Through the processes outlined above, dKO and its consultant team have carried out extensive studies of the history of the site, the geology and typology, the regional context and volcanic landscape, Council policies, local and international design trends – in particular exemplar developments in Australia and New Zealand.



THREE KINGS PRECINCT PLAN DISCUSSION DOCUMENT - OPTION 3
 Excerpt: Three Kings Precinct Plan (May 2013)



THREE KINGS PRECINCT PLAN DISCUSSION DOCUMENT - OPTION 4
 Excerpt: Three Kings Precinct Plan (May 2013)



THREE KINGS PRECINCT PLAN DISCUSSION DOCUMENT - OPTION 5
 Excerpt: Three Kings Precinct Plan (May 2013)

2.3 PREVIOUS PLANS AND STUDIES

DRAFT THREE KINGS PRECINCT PLAN

The proposed Three Kings Precinct is located within and adjacent to the Three Kings Town Centre, near the intersection of Mt Eden Road and Mt Albert Road. It incorporates the land owned by Fletcher Concrete and Infrastructure Ltd (15.2ha) and the Crown (6.4ha) which has all previously been quarried, the Three Kings Town Centre on the northern side of Mt Albert Road, and the Open Space that adjoin these two areas and significant residential and commercial land holdings surrounding the quarry.

The purpose of the Precinct plan, prepared by the Puketāpapa Local Board with input from the community, is to enable the integrated redevelopment of key sites within the Three Kings area in a way that will ensure high quality outcomes that support a compact city. It will promote legacy developments that support the viability of this emerging centre and integrate the Town Centre, residential, open space and community facilities.

The key messages in relation to the redevelopment of the Quarry include:

- Recognition of its role as a key site for development, which presents significant opportunities for redeveloping the surrounding Three Kings area.
- Increase open space in the area to address the low level of open space in the neighbouring Albert-Eden Local Board area directly to the north of Three Kings.
- Be guided by a design-led process to identify desired future end-use options for the quarry site and the surrounding area.
- Maximise the level of public open space and protect and enhance the volcanic landscape and views to and from Te Tatua a Riukiuta.

- Improve connections to and between Te Tatua a Riukiuta, other existing open spaces, Three Kings town centre, surrounding housing and the quarry site.
- Seek to incorporate surrounding land uses into the redevelopment of the quarry to ensure the best possible outcome for the community.
- Be preceded by filling and contouring practices that do not constrain the final end-use of the quarry site and the surrounding area.



KEY DIAGRAM



THESE PLANS OUTLINE THE VISION OF FLETCHER RESIDENTIAL LTD AND ARE NOT ENDORSED BY AUCKLAND COUNCIL

3.0 VISION



View W from Mt Eden Rd to Te Tatua a Riukiuta

The Master plan vision celebrates the locality, history, cultural heritage and natural environment of Three Kings.

A vibrant, sustainable urban village.

A community created within a highly permeable and widely connected open space network.

A revitalisation of the former quarry site.

A Master plan that celebrates the locality, history, cultural heritage and natural environment of Three Kings.

A community which offers a unique lifestyle choice with residential living areas on the doorstep of a revitalised town centre.

3.1 THE VISION

The Three Kings Renewal Project will be a world class community that Aucklanders are proud of, want to live in and invest in as the revitalisation of the quarry site will restore the area's natural and physical infrastructure. Three Kings is well positioned to become a thriving town centre.

Our concept is of a vibrant community that is an exemplar for sustainable approaches to urban living; a community created within a highly permeable and widely connected open space network.

The Master plan vision celebrates the locality, history, cultural heritage and natural environment of Three Kings.

The community will offer residents a unique lifestyle choice, residential living areas located close to an existing town centre and high quality recreational facilities.

The quality and quantum of public open space is both increased and enhanced. A local park will be provided with recreational opportunities both for the residents within the development and for the community. This public space on the quarry floor is flanked by a mixture of three and four level terraces and cascading apartments, providing surveillance and safety to the public realm. The building form is designed in a manner to address the civic nature of the Street.

A network of cycling and pedestrian trails cross the site link into and strengthen adjoining networks. A pedestrian and cycle path will link the local park to the existing soccer fields to the west of the development and link with the existing path up to Te Tatua a Riukiuta. As previously noted the visual and physical linkages to Te Tatua a Riukiuta are of paramount significance. In addition, future pedestrian connections may be extended to the south and link with the potential new park located on the Crown owned former quarry land. This future connection may also link into Three King Plaza to the south.

Public parking for the use of the park will be provided in the form

of on street car parking through the precinct. Public transport is embraced by the development and the pathway systems will connect with multiple bus stops. Almost all car parking is rear loaded through lane ways maximising the civic nature of streets. Rainwater gardens, swells and other water sensitive urban design features will add to the high quality streetscapes.

In the north western corner of the site a linear green zone has been provided as suggested in the Three Kings Precinct Plan discussion document to provide a buffer to the Te Tatua a Riukiuta. Fundamental to the development is Te Tatua a Riukiuta being a protected view and landmark. All other viewing opportunities as suggested in the Three Kings Precinct Plan have been adopted and enhanced.

The Three Kings Renewal Project is seen to be a world-class exemplar development with a high regard for the public realm. All aspects of the proposal respect the cultural, historical values that make this site special. The recognition and enhancement of Te Tatua a Riukiuta through the design, land-use and additional open space and connections provide this site with a strong sense of place.



KEY DIAGRAM



THESE PLANS OUTLINE THE VISION OF FLETCHER RESIDENTIAL LTD AND ARE NOT ENDORSED BY AUCKLAND COUNCIL



View along The Riu Precinct to Te Tatu a Riukiuta



Auckland Volcanic Field



View of Quarry Site looking North

4.0 ANALYSIS

The initial phase of site analysis involved rigorous investigation and research into the quarry and the historical volcanic landform. The analysis also examines the surrounding urban conditions of the site and the impact a redevelopment of the quarry would have on the community.

Seven key themes provide a framework for assessing the qualities of the site and to highlight the opportunities and constraints of the site. These themes are:

1. Environment
2. Water
3. Recreation and Community Facilities
4. Transport, Access and Circulation
5. Culture and Heritage
6. Character and Visual Amenity
7. Building and Architecture

ENVIRONMENT

Three Kings Quarry is a complex environment and many factors must be addressed during the Master planning process.

Currently the site is mainly comprised of a large earthen quarry. At 40 metres deep at its maximum from the average surrounding grade, the relatively deep quarry is wrapped with a variety of ground conditions. Exposed scoria, basalt, native bush, and general rough ground cover make up the earth walls, which range from navigable inclines to steep cliffs.

Due to the quarrying over the past century, the scoria cones that previously existed have been removed to expose a bare substrate. The excavation and removal of scoria from the quarry site has left a steep cut in the face of the Maunga to the east of the summit.

Just below this face is the quarry access road that has been used by trucks coming from Mt Eden Road along the north of the site to turn along the sites north western face to enter the interior of the quarry. The edges of the quarry are vegetated to provide screening of the quarry activity. In addition, the creation of the large depression has effectively cut off direct access to many of the open spaces around the site, including Te Tatua a Riukiuta.

Surrounding the site are a number of open spaces including Three Kings Park, Big King Reserve, as well as a soccer field to the west and other parks just a few blocks away.

Through an analysis of the site it became apparent that while the precinct is rich with open spaces, there is a lack of obvious connection to these parks and reserves. This is attributed not only to the excavation of the quarry but also by the challenging topography of the Maunga. For years access to the top of Te Tatua a Riukiuta from Mt Eden Road has been indirect and difficult for pedestrians to navigate.

Opportunities and Constraints

The site of Three Kings Quarry, while complex, provides a range of opportunities that are directly linked to the existing topographic and historic site conditions.

There is a great benefit in utilising the existing landforms to help negotiate the grade difference from the level of Mt Eden Road to the proposed level of between RL 60-64m on the interior of the development. A series of designed architectural and landscape

features will help in transitioning the average 15-17m drop in a number of ways. Terraced gardens can be employed to introduce usable green open space that can double as access routes and water treatment zones.

Apartment typologies selected for their ability to traverse steep site conditions will be used along the lower part of the site. These tiered apartment buildings can be orientated accordingly to maximise sunlight as well as views towards Te Tatua a Riukiuta. Apartments of this typology can be easily perforated to maintain proper site lines from the exterior of the site as well.

The circular nature of the site also provides the opportunity of roads that gradually slope down as they approach the lower part of the quarry. Pedestrians, bicycles, and vehicles would be able to see the site and the surrounding views to Te Tatua a Riukiuta, One Tree Hill, and Mt Eden as they navigate the entry road network.

One of the greatest opportunities presented through this Master plan is the creation of connective open space experience for pedestrians. This will contribute to the Greenways network proposed under the Puketepapa Greenways Project.

As previously discussed, Three Kings Quarry is sited in the middle of a fragmented network of parks and reserves. The development could act as a primary linkage to a number of sites by providing accessible routes through and around the project. A new network of pathways, stairs, boardwalks, trails, and elevated structures can grant new access from Mt Eden Road through the Three Kings site up to Te Tatua a Riukiuta, something that is virtually impossible at the current time.

WATER

The Three King Quarry sits within a volcanic centre characterised by high permeability scoria. This presents a unique opportunity to manage stormwater flows for the site and surrounding area. The large opening in the ground funnels water from surrounding sites to the centre of the quarry. Excess water is currently dealt with by way of a controlled groundwater bore that holds the water table generally at RL 34m. Generally, the site can drain relatively well due to the high permeability of the scoria substrate.

Opportunities and Constraints

While providing green open spaces for people is a key driver of the Master plan, it is also essential that these spaces are performing at a high level with regards to irrigation and large stormwater event management. There is opportunity to integrate storm water management and drainage into the open space areas contained in the Master plan.

To aid in the matter, the Master plan seeks to employ a wetland ring that runs along the inner face of the old quarry walls. This circular wetland will hold stormwater runoff and act as preliminary filtration before feeding back to the permeable scoria layer and later to the aquifer. By efficiently and responsibly dealing with water on site the development has an opportunity to recharge the aquifer with clean water.

Another benefit of using an extensive network of wetlands is that they provide a diverse and interactive amenity for those visiting the site whilst significantly improving the biodiversity. Pedestrians would be able to walk along and through the wetlands along a series of board walks that would bridge above reeds and open ponds. Access to the aquifer also allows for consideration of active water use through playground facilities, controlled irrigation, heat sink opportunities for the larger buildings and general landscape amenity.

RECREATION AND COMMUNITY FACILITIES

Three Kings is currently well serviced by a series of disjointed open spaces like Big King Reserve, Three Kings Park, Robinson Reserve, Arthur Richards Memorial Park and Fearon Park. Most of these parks are well used by the community around them. However, they exist in a disjointed network where it is very difficult for residents and visitors to experience them as part of a connected whole.

The location and current state of the quarry amongst these parks means that residents from the eastern side of Mt Eden Road do not have legible and accessible paths that lead them to Big King Reserve and other parks to the west of the quarry, and vice versa.

Big King Reserve is currently highly frequented by strollers and dog walkers taking advantage of existing internal footpath network. The reserve is accessible from a carpark on Duke Street, and other minor pedestrian routes. The access from Grahame Breed Drive is via a flight of stairs and footpath through unsurveyed former quarry land. Initial observations have identified this access point as a critical safety and amenity issue.

Three Kings Park is very well used for active recreation by the community and local sports clubs. It is located adjacent to the Fickling Centre, Three Kings Library and council tennis courts as part of a community activity precinct. The Fickling Centre also accommodates community group functions such as local board meetings, citizenship ceremonies and conferences.

Immediately to the west of the current Winstone quarry site is an existing soccer field in the former quarry and a pedestrian trail up to Te Tatua a Riukiuta. To the south, the former quarry land vested in trust in the Auckland Council may become future parkland.

Opportunities and Constraints

A potential pedestrian link could be provided within the Fletcher Residential Ltd Three Kings development to allow visitors to conveniently travel to the Local Park, up to the soccer fields and the existing path to Te Tatua a Riukiuta towards the west. Pedestrian links towards the south may be extended to connect the development to future parkland, Grahame Breed Drive and the Three King town centre.

TRANSPORT, ACCESS AND CIRCULATION

The quarry site is currently disconnected from the surrounding area. The principal entry to the site is from Mt Eden Road. This connects to an access road which currently transitions the approximate 40m level change to the bottom of the quarry. In order for the site to provide linkages in both east/west and north/south axis this vertical transition will need to be addressed in a convenient and clear way.

Currently the visibility into the site is extremely limited due to earth embankments and plantings along Mt Eden Road and Grahame Breed Drive; this will need to be addressed to ensure legibility into the site is achieved for the future.

The Three Kings quarry site is serviced by public bus routes on both Mt Eden Road to the east and Mt Albert Road to the south. Bus stops are located at various points along the periphery.

Opportunities and Constraints

Analysis identified key locations to enter the site, including a requirement for a hierarchy of entry points, streets, laneways and pedestrian trails.



- LEGEND**
- 1. Big King Reserve
 - 2. Local Park
 - 3. Three Kings Park
 - 4. Three Kings School
 - 5. Existing soccer field
 - 6. Robinson Reserve
 - 7. Arthur Richards Memorial Park
 - 8. Fearon Park
 - 9. Future Parkland

Open Space Extended Network Diagram

The current lack of visual permeability into the site will need to be addressed and requires a clear wayfinding strategy to assist in navigating into and through the site.

The quarry is a key unifying site for the surrounding area. Due to the existing network of active and passive recreational spaces adjacent to the site, there is a clear opportunity to encourage walkability and bicycle use within, through and around the development. This network may link into the Greenway network proposed in the Puketapapa Greenways plan, contributing to the improvement of connections to existing open spaces and streets within the area.

CULTURE AND HERITAGE

The initial cultural inspirations for the Master plan design stem from a recognition of the unique history of the Three Kings site. The ways in which the Master plan engages with site edges and transitions between earth features are formed by a cultural and historic understanding of the ways in which the landscape is designed. The process of shaping the Maunga from Maori occupation to industrial mining greatly influence how the landscape within the Three Kings Master plan is realised.

Auckland sits atop a volcanic field made up of over 50 cones. The Three Kings (originally five scoria cinder cones) were part of this larger network of Auckland volcanoes, which still to this day inform the way we see and remember the landscape of Auckland. As the Maori came to Auckland, they saw the importance of these large landscape features and would occupy the sides of volcanoes as a series of Pa sites. Pa being defensible settlements that were built by cutting into the outer sloping faces of volcanoes or hills in order to create navigable pathways and barriers from intruders. The resulting formal language can still be seen today as a stepping pattern that traverses many of the volcanoes in and around Auckland.

Volcanoes in Auckland have also represented growth and progress with regards to building. Quarrying of volcanoes for their raw scoria and basalt provided Auckland with key raw materials that would continue to help build the city. In order to extract the scoria from Three Kings, concentric digging methods would subtract material from the interior of the mounded volcanic form.

Both the cultural history of Three Kings along with its industrial history of occupying and using the Maunga has informed the Master plan. Reshaping of the edges of the Maunga reflect the gestures of connection to the public open spaces. Soft, folded forms that pull the circular shapes of the Maunga into the site will help construct the language of pathways, roads, access routes, and sculptural play space throughout Three Kings. Recognising the importance of industrial artefacts, follies and even exposed quarry rock will punctuate the landscape in a way that connects the users with the rich history of the quarry. Overall, both private residents and the public will be able to read these unique forms as being inspired from a rich historical narrative as they enter and inhabit the Three Kings site.

Opportunities and Constraints

The site offers a wealth of opportunities to interpret the gradual development of the site from prehistoric volcanic formation, to its industrial history as a stone quarry and a future town centre. Identification, interpretation and protection of heritage values are key requirements of the Master plan.

The design team recognises that the Nga Mana Whenua o Tamaki Makaurau Collective Redress Bill will, when enacted, vest the ownership of 14 Maunga (volcanic cones), including Te Tatua a Riukiuta, in the trustee as defined in the Bill, and thereafter declare it a reserve and classify it as a recreation reserve. Under the Bill, Te Tatua a Riukiuta will be governed by a Maunga Authority made

up of representatives of the relevant rūpū entities, Auckland Council, and a Crown representative. The development in and around the Maunga will need to be the subject of liaison with the iwi throughout the design and implementation process.

CHARACTER AND VISUAL AMENITY

The Three Kings Shopping Centre is currently defined as part of an “emergent town centre” in Auckland. As a town centre it will act as a local hub for communities, providing a wide range of retail and business services and facilities, and community facilities. It is expected to provide a range of living options, including mixed-use and higher-density residential options.

The Three Kings Renewal development will have an urban village character in response to the mix of town centre uses, with high quality streetscapes and public open spaces augmented by appropriately scaled built form that response to site and context. A range of building typologies, with a common design language will be utilised . A series of integrated but distinct neighbourhoods will respond to the varied topography on the site and the surrounding land use.

Views to Te Tatua a Riukiuta will be used as a backdrop to the development. Views and vistas to the Maunga will be protected and enhanced to ensure strong visual links to these important historical and cultural elements.

Opportunities and Constraints

Being the site of an old quarry, there is a significant level change between the site and the surrounding land. There are steep falls on the edges of the quarry and the level change from the existing roads to the quarry floor is approximately 40m below the surrounding area. An opportunity exists to overcome the difficult terrain with a combination of earthworks and innovative building typologies that are dynamic and interesting. The result will be of a harmonious melding of architecture, landscape and topography.

The surrounding neighbourhoods do not yet have a distinctive character, this represents an opportunity to develop an identity for the area through a considered urban and architectural response.

The site has significant views toward Te Tatua a Riukiuta, there is an opportunity to create and frame these views not only for the development itself, but for the wider community. The redevelopment will aim to provide visual permeability through the site and preserve important view corridors.

BUILDING AND ARCHITECTURE

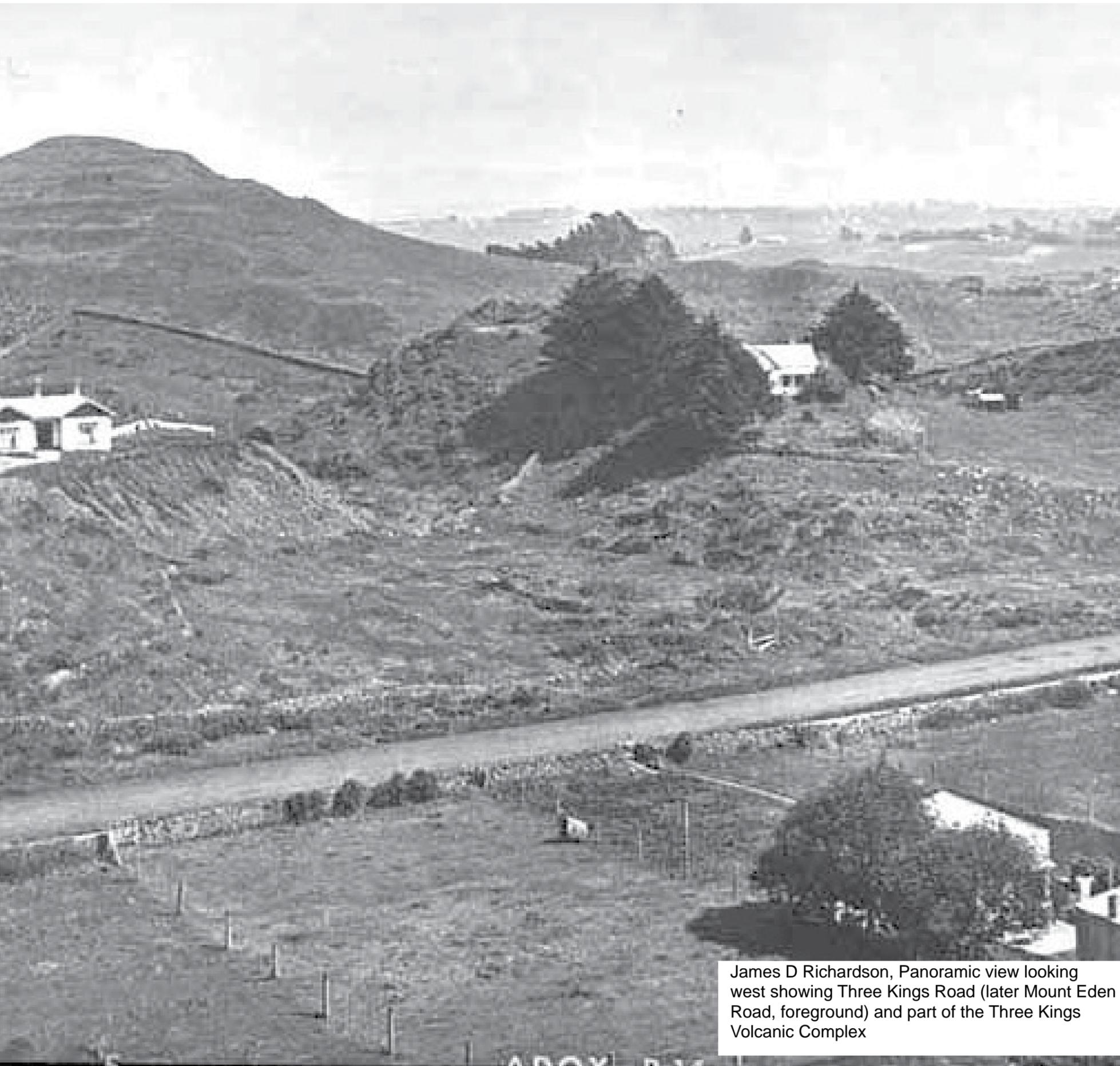
The Master plan is consistent with Residential 8 zoning objectives which aim to allow higher densities for developments within ‘growth areas’ in Auckland. This zoning responds to the need for smaller dwellings and a greater diversity of housing as a means to manage growth within Auckland City.

Analysis of the draft Unitary Plan reveals an allowance of 4-6 storeys in height for development in some areas of Three Kings. In the area around the Town Centre and along transport corridors such as Mt Eden Road where the draft Unitary Plan proposes higher density residential development. This will typically be low rise apartments and terrace houses of up to 16.5m or 4 storeys, except where close to the Town Centre where in some places development of up to 21.5m or 6 storeys may be allowed. The built form on the quarry site will respond to these controls, as well as taking into account local character, environment, community and housing needs

Opportunities and Constraints

Opportunities exist to create a a residential community comprising of well designed, high quality buildings that provide high quality homes for the 21st Century. Typologies will be introduced that respect the planning controls that exist on the site and relate to the landform. Being located in an emerging town centre provides an opportunity to introduce a range of suitable dwellings that address market demands as well a provide housing choice to future residents of the area.





James D Richardson, Panoramic view looking west showing Three Kings Road (later Mount Eden Road, foreground) and part of the Three Kings Volcanic Complex



Diagram of Three Kings Site Constraints

4.1 SITE CONSTRAINTS

ACCESS

- ① Limited opportunities to for vehicle access to the Quarry Site
- ② Quarry Site limits East-West access
- ③ Pedestrian permeability limited by Quarry Site in East-West direction
- ④ Current pedestrian links between areas of open space have safety issues

OWNERSHIP

- ⑤a Existing soccer field with poor passive surveillance issues and difficult access
- ⑤b Existing Crown owned former quarry land has poor amenity, access and surveillance issues

STORMWATER / FLOODING

- ⑥ Quarry Site currently serves as a catchment point for the surrounding area

BUILT FORM / LAND USES

- ⑦ Industrial warehouses to the north create visual issues with Quarry Site

RECREATION / OPEN SPACE

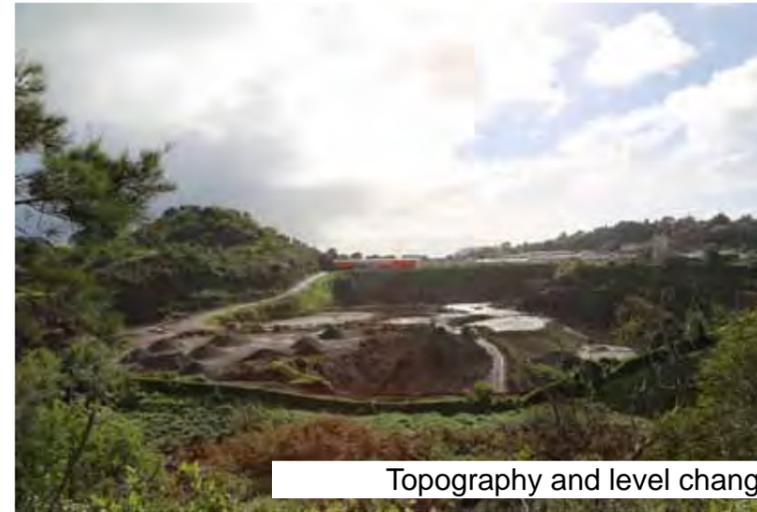
- ⑧ The Quarry Site disconnects local areas of recreation and open space in the Three Kings area
- ⑨ Good connection to Big King Reserve from Duke Street

TOPOGRAPHY AND LANDFORM

- ⑩ The quarry site level at present sits up to approximately 40m below adjacent areas. This level change creates a significant barrier around the site

CULTURE AND HERITAGE

- ⑪ Visual link issues to the Big King Reserve from significant sites



Topography and level change



Industrial warehouses to the north



Passive surveillance issues



Poor amenity



Poor access



Soccer field and surveillance issues



Diagram of Three Kings Site Opportunities

4.2 SITE OPPORTUNITIES

ACCESS

- ① Utilise existing access to site and enhance with landscape elements
- ② Continuation of connections into the site
- ③ Improve pedestrian safety at key connection points
- ④ Create strong axial linkages between the North/South and East/West of site

STORMWATER / FLOODING

- ⑤ Integrate stormwater collection and distribution with site elements
- ⑥ Utilise a wetland holding system to manage and clean stormwater runoff

BUILT FORM / LAND USES

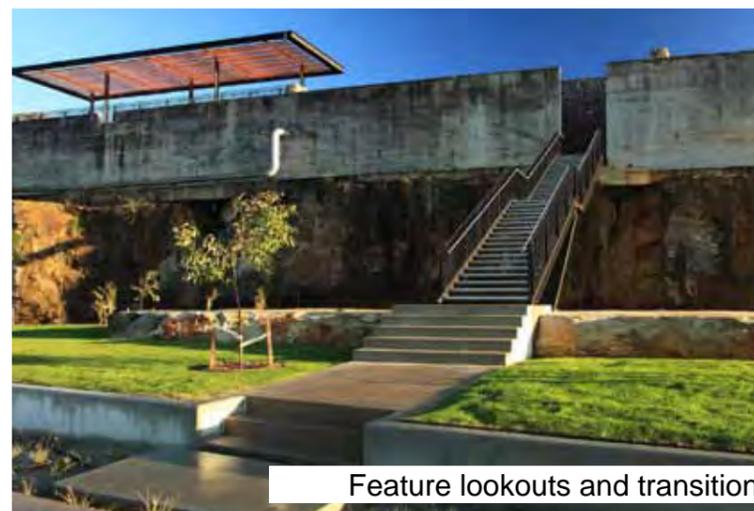
- ⑦ Utilise Quarry walls to provide innovative cascading housing typologies

RECREATION / OPEN SPACE

- ⑧ Provision of new open space to support the surrounding area
- ⑨ Potential Future Parkland

CULTURE AND HERITAGE

- ⑩ Enhance existing view corridors towards Big King Reserve





View towards Big King Reserve

5.0 PRINCIPLES AND STRATEGIES

INTRODUCTION

The Master plan has been developed using a framework of seven key themes:

1. Environment
2. Water
3. Recreation and Community Facilities
4. Transport, Access and Circulation
5. Culture and Heritage
6. Character and Visual Amenity
7. Building and Architecture

These themes provide the structure to address the many challenging planning components. To provide a clear direction, planning principles and strategies for each theme have been developed. These guide the development of the Master plan.

These principles and strategies have been tested with the community as part of the consultation process and have guided the outcomes of the Master plan.



5.1 Environment



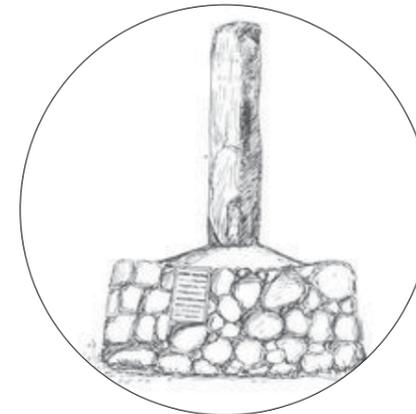
5.2 Water



5.3 Recreation and Community Facilities



5.4 Transport, Access and Circulation



5.5 Culture and Heritage



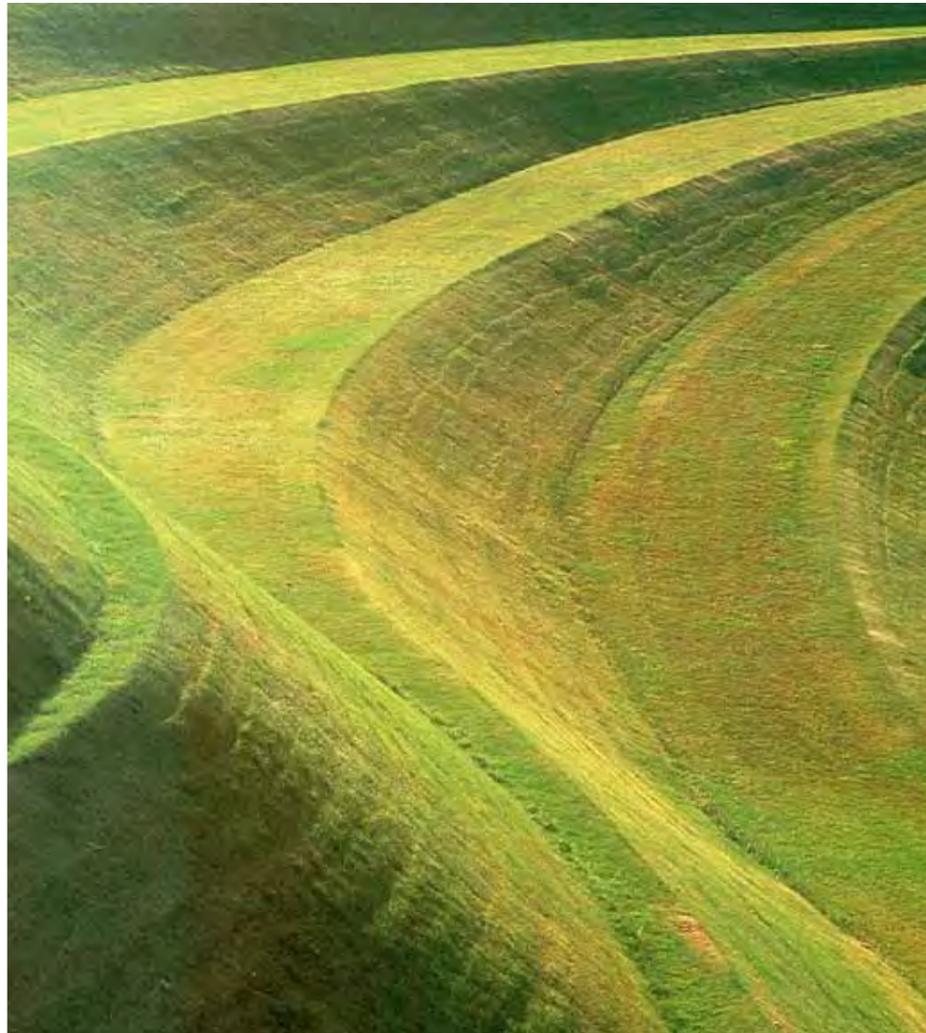
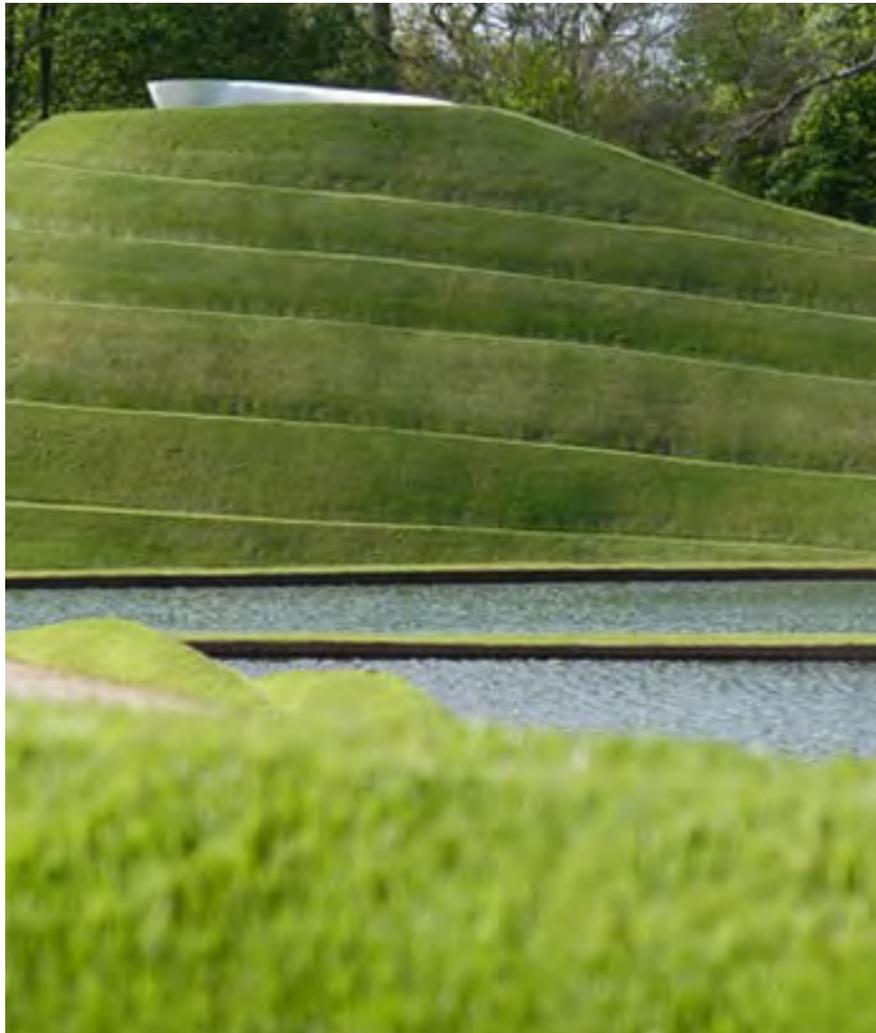
5.6 Character and Visual Amenity



5.7 Building and Architecture



Native volcanic flora typically found in New Zealand



Folded earthforms that can be used to negotiate grade changes through an abstracted formal language

5.1 ENVIRONMENT

INTRODUCTION

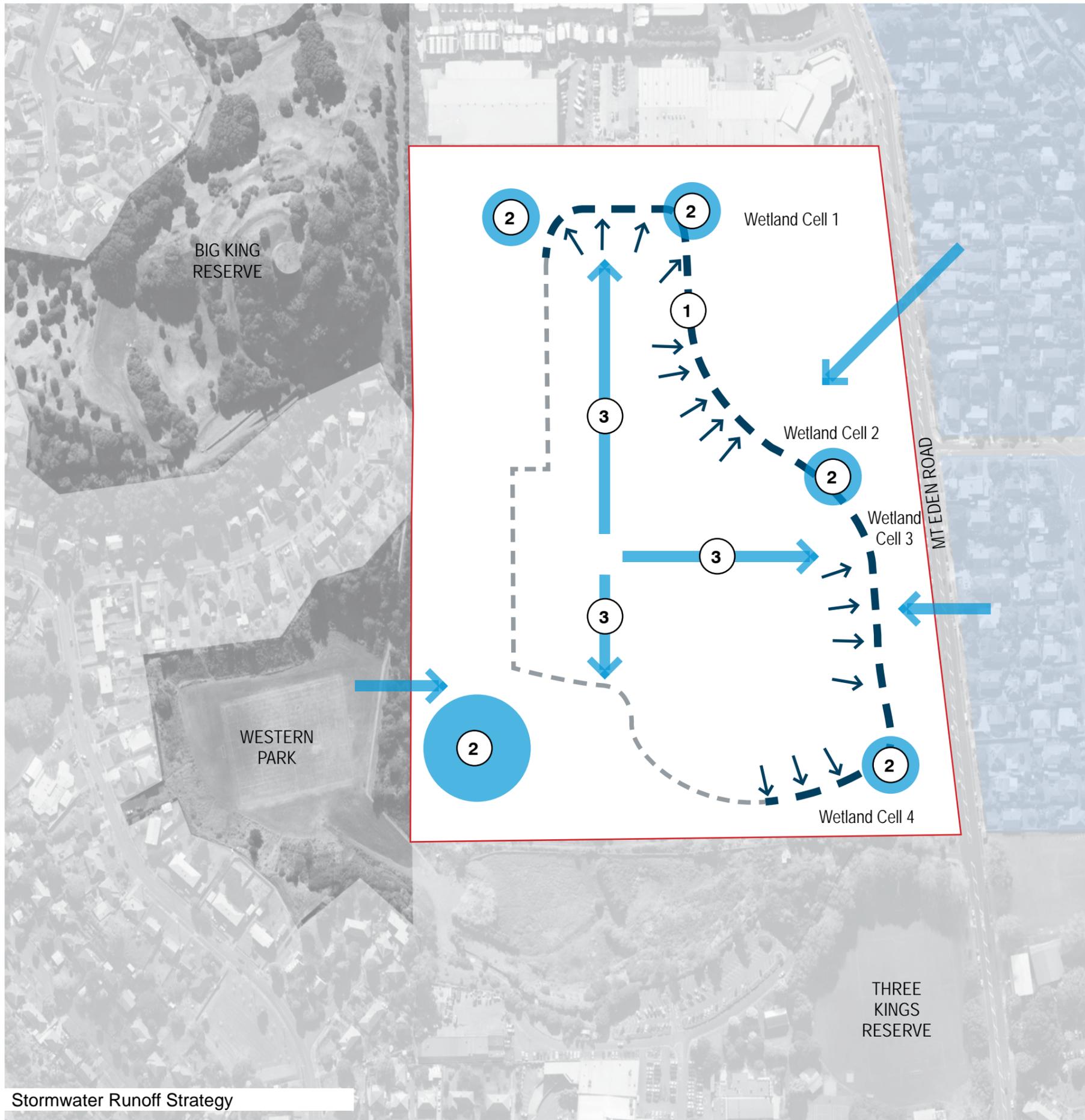
The provision of high quality green spaces is a key principle in converting the site from a former quarry into a desirable neighbourhood. The Master plan aims at providing a mixture of man-made versus natural landscapes.

PRINCIPLES

- Renewal and remediation of the topography in a sustainable and effective way
- Create a connected network of pathways
- Bring native landscape into the site
- Connect users with cultural occupation of the Maunga
- Provide comprehensive stormwater system for the entire site
- Integrated streetscape experience
- Provide high-quality open spaces
- Create an open public amenity
- Connect Three Kings to the Maunga

STRATEGIES

- Create a connected network of pathways and access routes that lead to Te Tatua a Riukiuta from Mt Eden Road.
- Use the existing quarry access route as a Bush Road that shapes the northern end of the site.
- Employ performative wetland ring within interior of the site to hold stormwater runoff in open wetland ponds and direct larger events into the aquifer.
- Use found language of earth-forming from around the site to navigate sloping open spaces
- Provide spaces that can be used for leisure activities and gatherings.
- Design streetscapes that integrate walking paths, low planting, tree planting, on-street car parks, and lead ups to apartments.
- Create a series of typologies that will be used in order to traverse the varying grades around the site, ranging from accessible paths, stairways, and elevated ramps.



Stormwater Runoff Strategy



Wetland holding area Integration

LEGEND

- 1. Wetland road
- 2. Scoria Soakage
- 3. Treatment Swales
- ← Connection to aquifer
- ← Run-off
- ← Off-Site location run off



INTRODUCTION

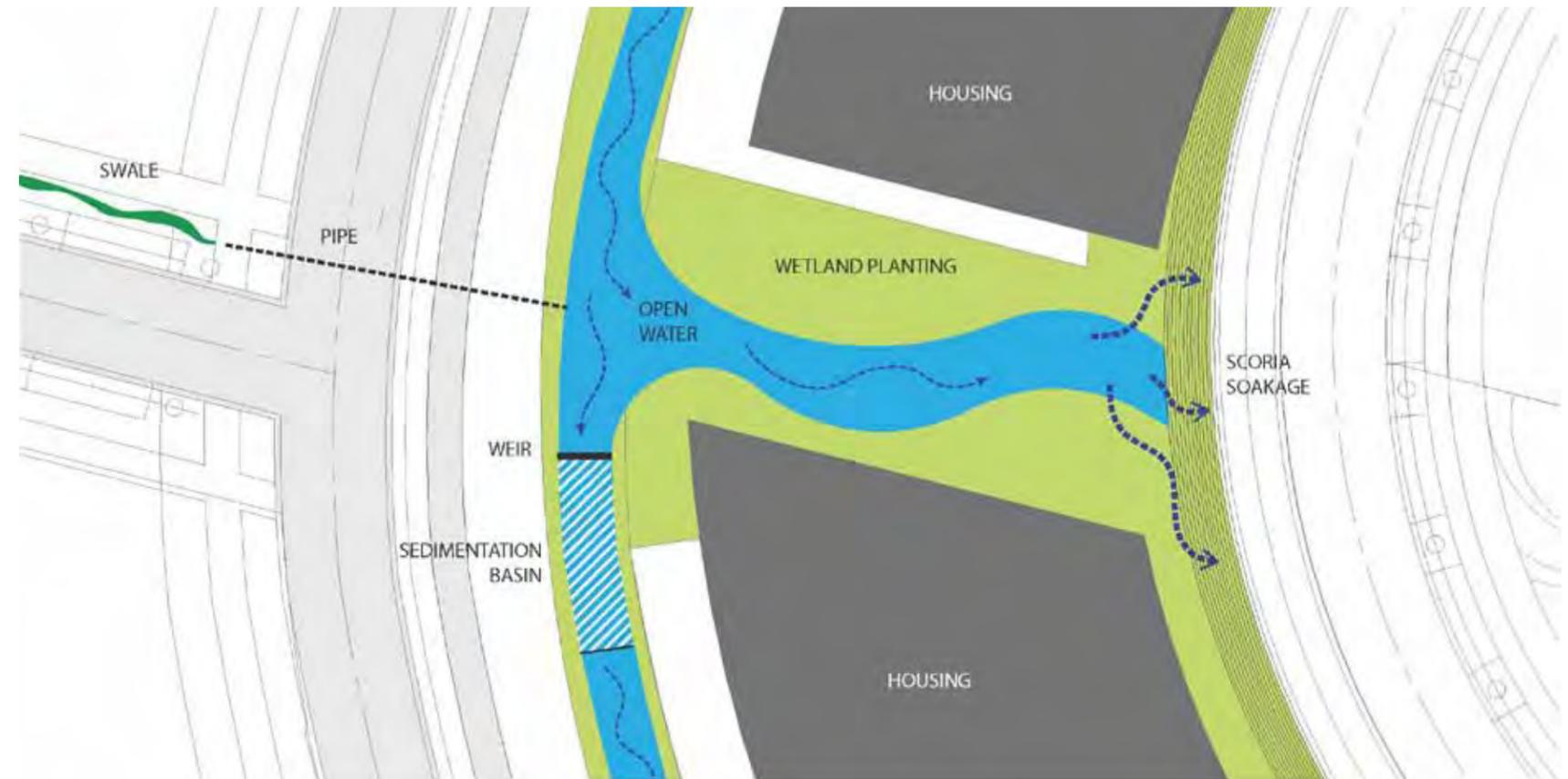
Dealing with water in a responsible fashion is integral in the realisation of the Three Kings Renewal Master plan. The site of the old quarry is linked to a much larger water network, namely the fresh water aquifer sitting directly underneath the proposed site. The systems that will be implemented will be chosen for their strengths in directing rain water, stormwater catchment and holding, filtration and overall public amenity.

PRINCIPLES

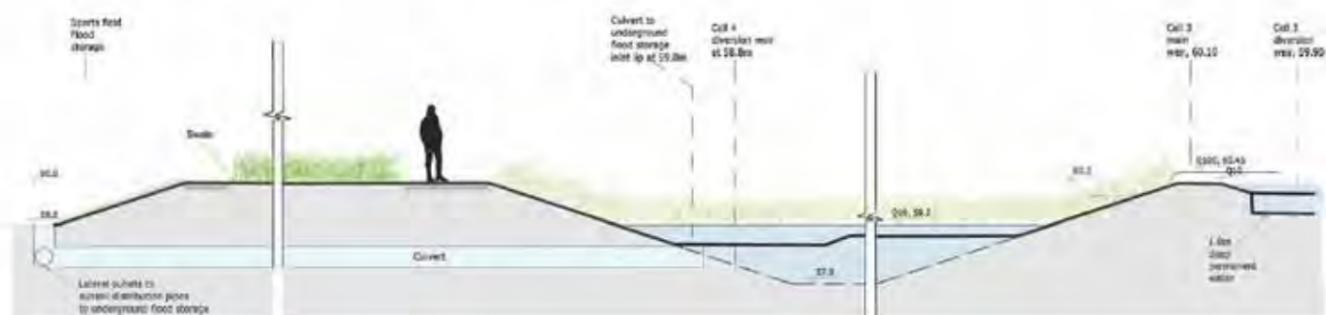
- Fill existing quarry to above the natural ground water level
- Provide on-site water treatment and catchment systems
- Ensure that water travelling back into the fresh water aquifer is done in a controlled and clean way
- Provide water features as public amenity
- Utilise water resource for irrigation to provide for a robust and sustainable vegetative network.

STRATEGIES

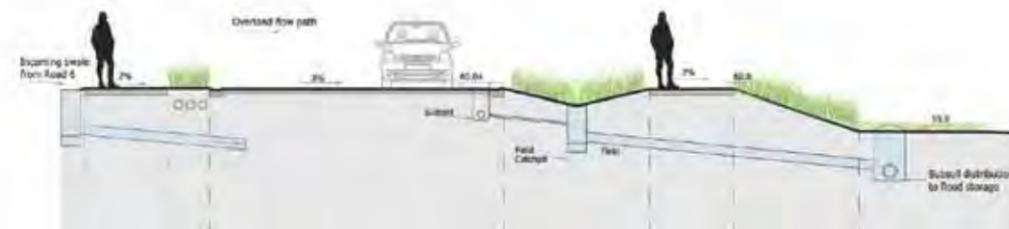
- Build integrated rain garden systems into streetscapes.
- Create a concentric wetland ring that wraps the interior of the site and holds the majority of overflow stormwater runoff prior to filtration through scoria layer and into the aquifer.
- Design wetland ring in a way that provides open to air ponds that connect the user back to the water system
- Establish networked and controlled irrigation to key vegetated areas.
- Provide for use of water for amenity and plants.



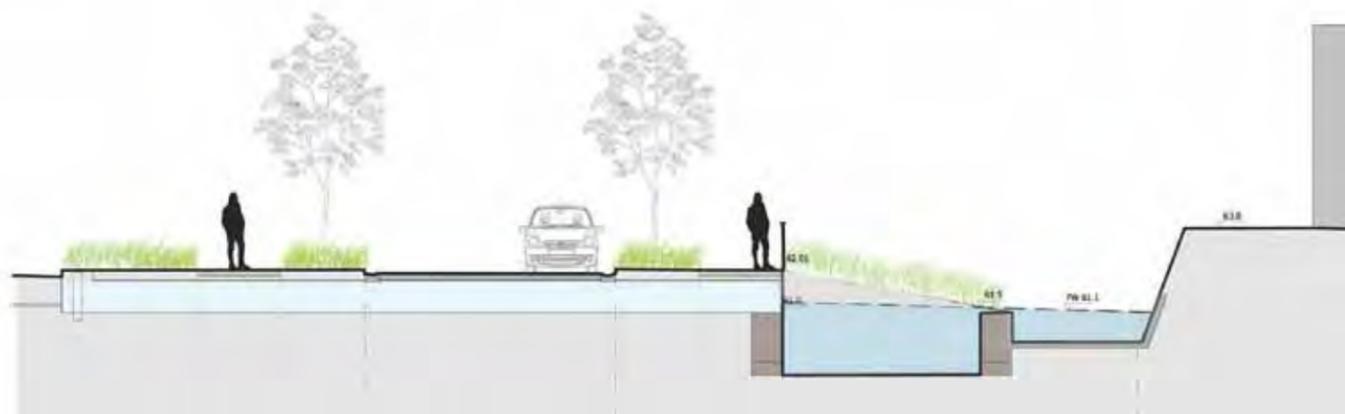
Wetland Diagram



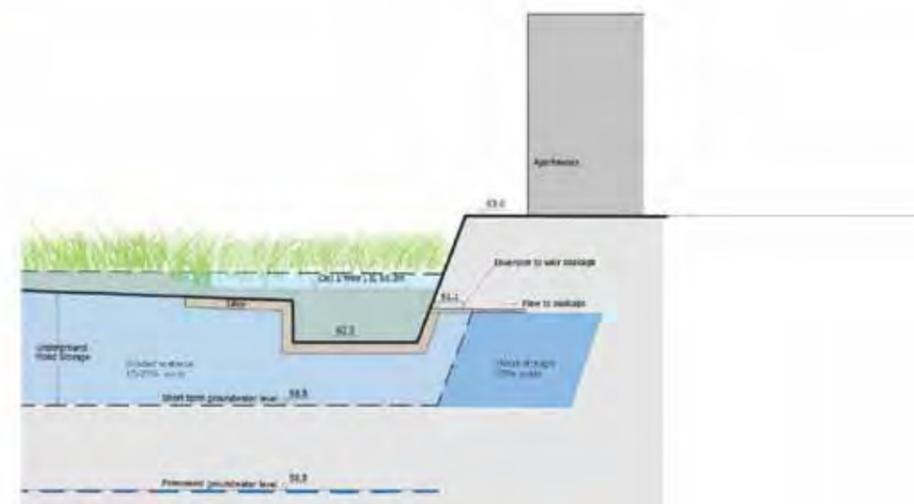
Preliminary Eastern Wetland, Cell 4 Long Section



Preliminary Section along Road 6 (and Edge of local park)



Preliminary Road 3, Wetland Cell 1 Section Alternative B

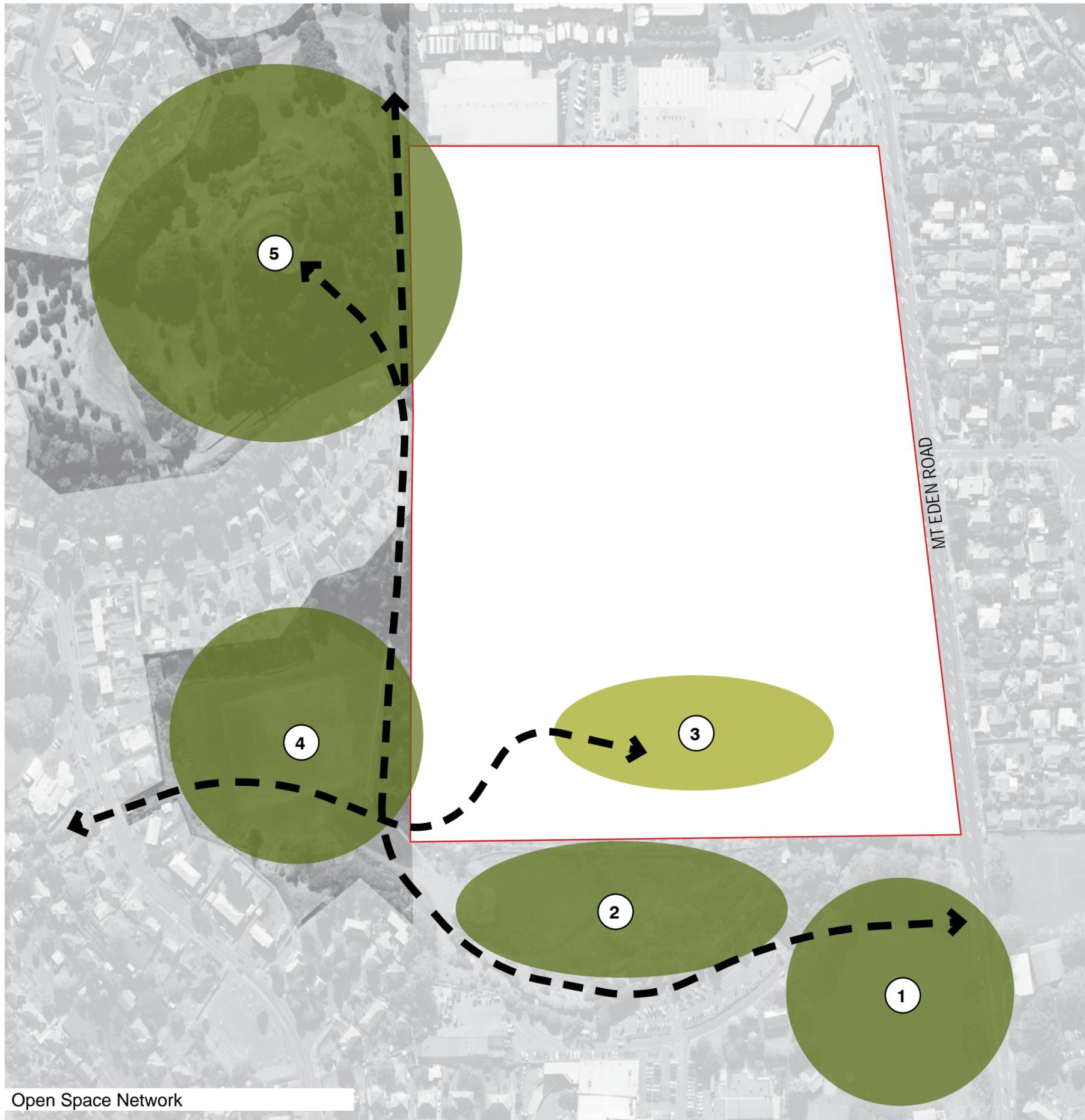


Preliminary Wetland Cell 1 - Outlets

5.2 WATER



Illustrative section of wetland road



LEGEND

- 1. Three Kings Park
- 2. Potential Future Parkland
- 3. Local Park
- 4. Soccer field
- 5. Big King Reserve



5.3 RECREATION AND COMMUNITY FACILITIES

INTRODUCTION

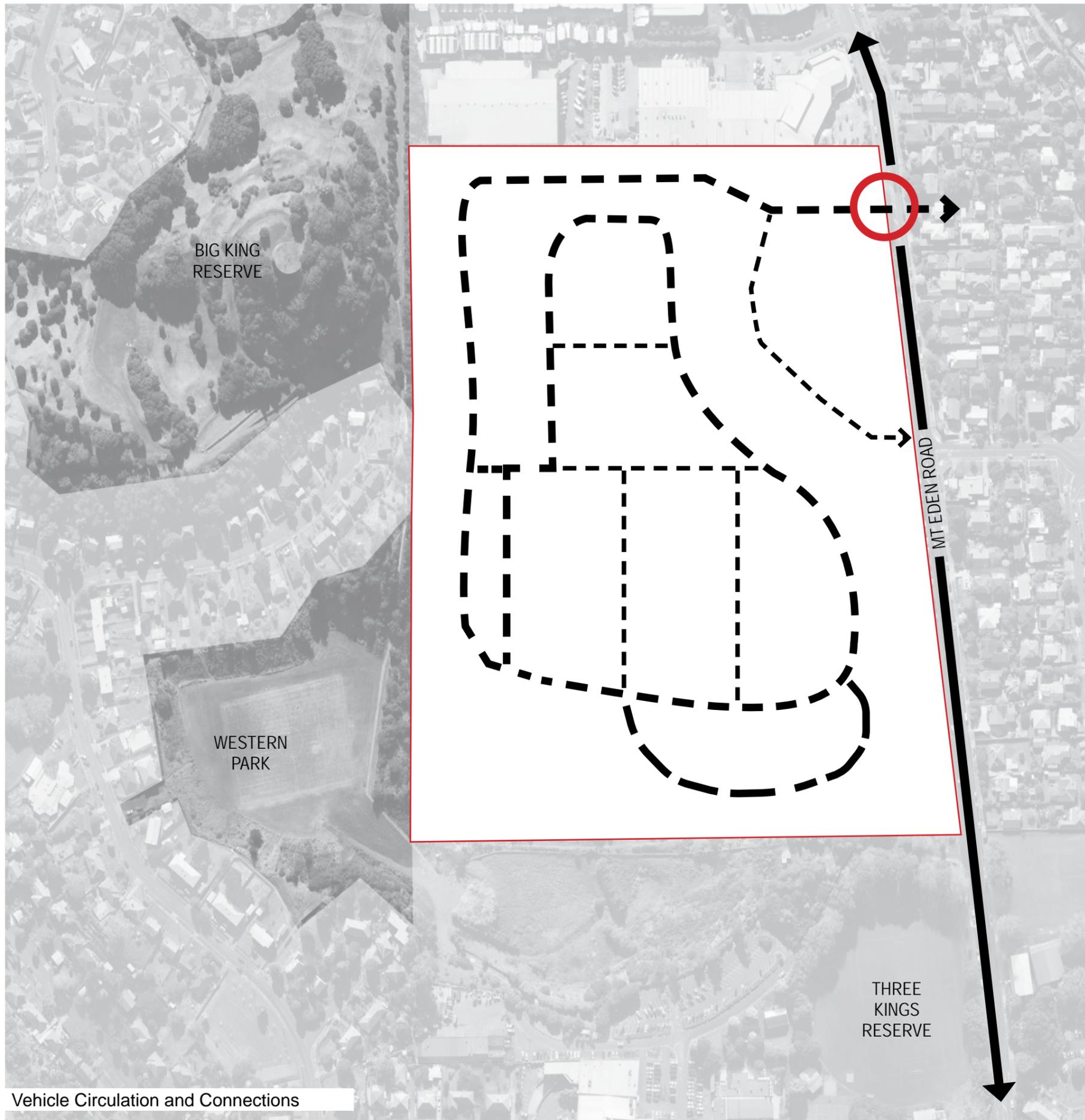
The Master plan should contain a mixture of recreational spaces and community facilities to serve the needs of residents and the community. Opportunities have been explored for active, passive, formal and informal recreation. The Master plan should also provide opportunities for active modes of movement throughout the site, such as walking and cycling trails. These should be supported by community facilities such as public toilets and change facilities.

PRINCIPLES

- Ensure all spaces are flexible to suit a broad range of user groups locally and Auckland-wide
- Identify areas for open space and passive recreation
- Integrate community and cultural activity
- Balance recreation with ecological integrity
- Ensure recreation areas are designed to operate at efficient levels of use

STRATEGIES

- Allocate spaces for passive recreation
- Create a connected network of pathways and access routes that link proposed recreational spaces with the existing open space network
- Create the opportunity for education, cultural and community support opportunities through information billboards and reference points



LEGEND

-  Existing primary access road
-  Proposed primary access road
-  Proposed secondary access road
-  Major Entry



5.4 TRANSPORT, ACCESS AND CIRCULATION

INTRODUCTION

Convenience in getting to, and through the site is key to ensuring that the former quarry becomes usable and developable land. The former quarry site, having been disconnected from the surrounding neighbourhood in the past, will need clear and legible wayfinding strategies to enable residents and the community to use the facilities proposed and to access the greater network of recreational spaces.

The hierarchy of streets, lane ways and pedestrian trails provided will create an accessible and permeable urban infill development.

PRINCIPLES

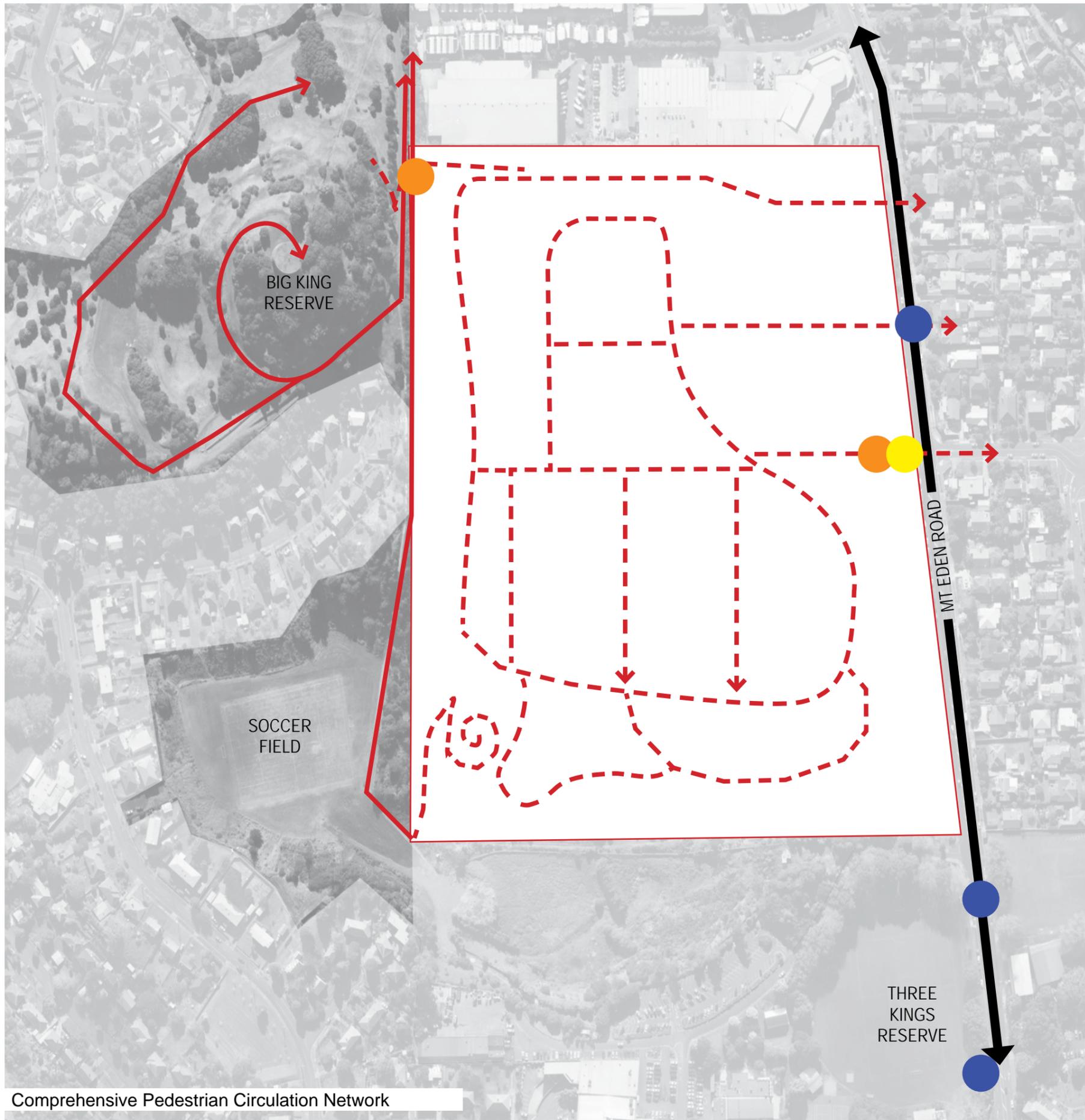
- Encourage use of existing and proposed public transport networks
- Provide universal access to and through the site
- Provide adequate opportunity for visitor parking
- Establish clear entries to the development
- Establish a hierarchy of streets, lane ways and pedestrian trails

STRATEGIES

- Create clear entries to the site from Mt Eden Road
- Provide accessible pedestrian and bicycle connections to public transport nodes on Mt Eden Road and Mt Albert Road
- Encourage walkability and bicycle use through the provision of pedestrian and bicycle trails throughout the site and beyond to the Puketepapa Green Trails. These trails should also connect to existing open space networks to enable a larger community uptake and use of proposed facilities within the development
- Provide a mixture of stairs and ramps to enable residents and the community to navigate the difference in levels on site
- On-street visitor parking is proposed on all main streets to accommodate visitors demand during community events
- Signalised crossing is proposed at the intersection of Mt Eden Road and Bush Road to provide a safe pedestrian connection into the development for the school and Three Kings town centre from the eastern side of Mt Eden Road
- Retain and enhance existing pedestrian trails to Big King Reserve along the western boundary of the development
- The multi-storey cascading apartments, approx. 480-580 units, will provide lift access to public transport.



Bush Road access



Comprehensive Pedestrian Circulation Network

LEGEND

- Existing pedestrian / bicycle connection
- Proposed pedestrian / bicycle connection
- Staircase connection
- Existing bus stop
- Proposed bus stop

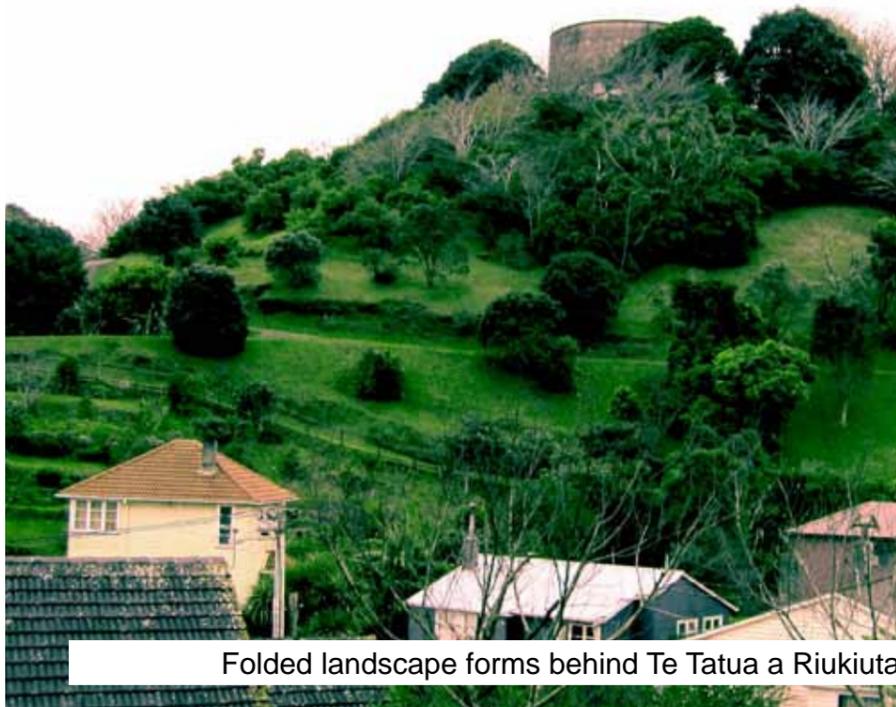




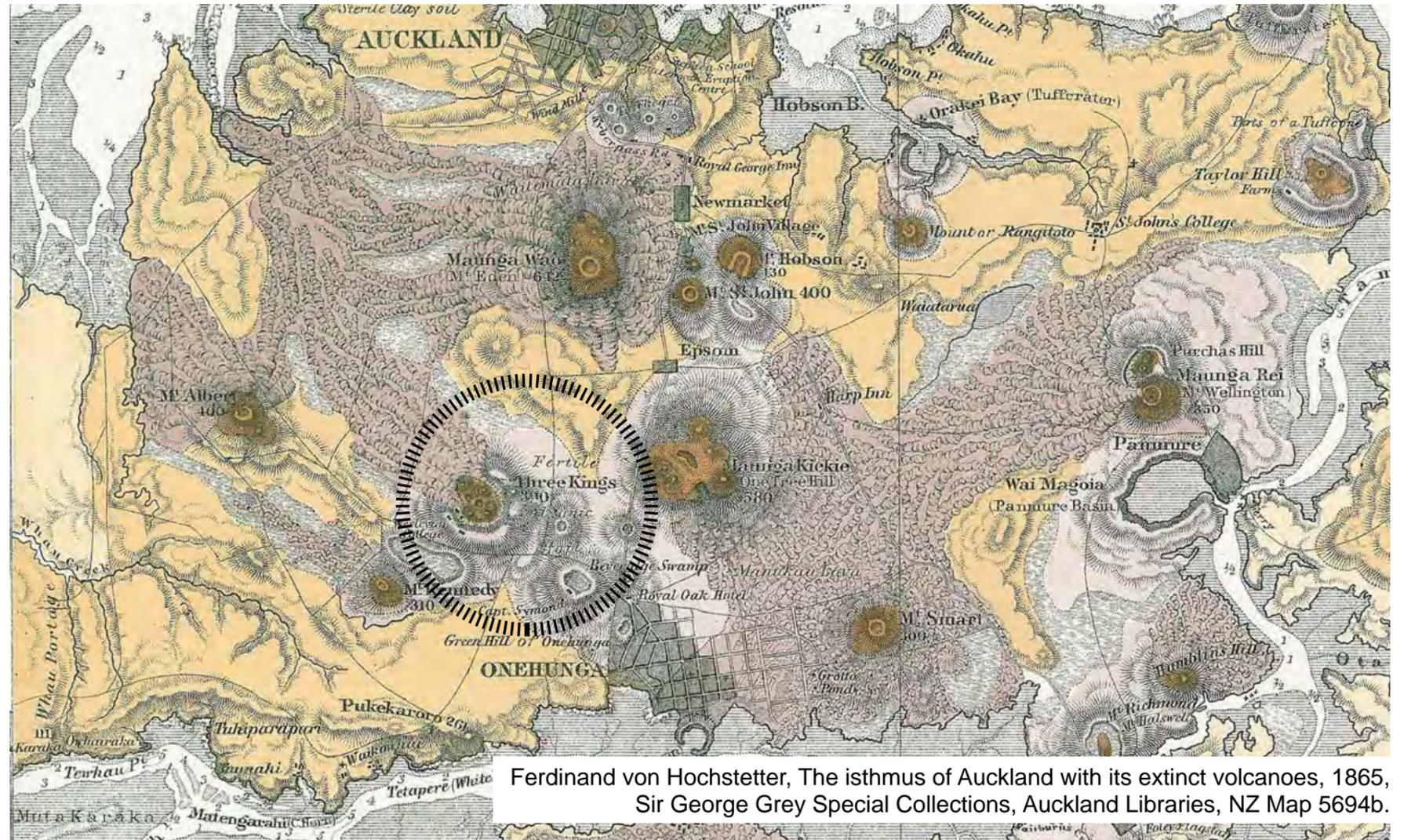
Maori Stonefields



Circular garden at the Getty Center Library



Folded landscape forms behind Te Tatua a Riukiuta



Ferdinand von Hochstetter, The isthmus of Auckland with its extinct volcanoes, 1865, Sir George Grey Special Collections, Auckland Libraries, NZ Map 5694b.

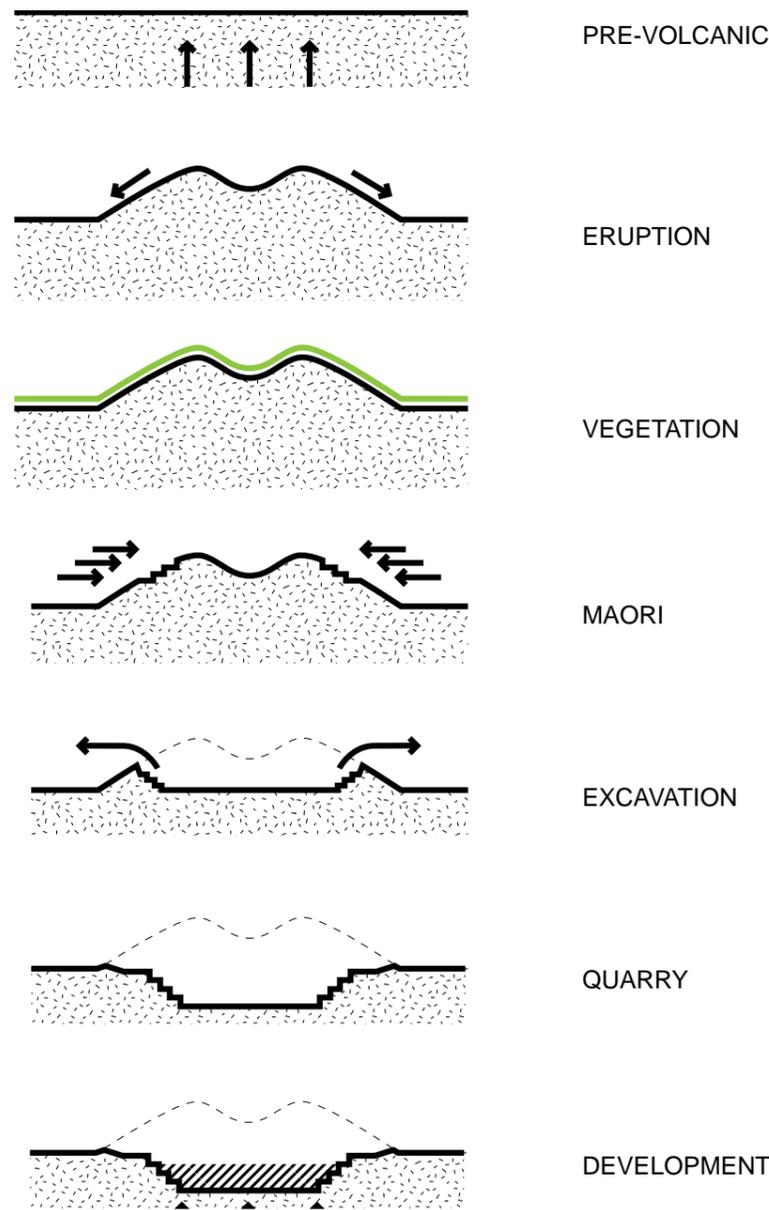


Historical block plant and industrial structures



Quarry site during excavation

5.5 CULTURE AND HERITAGE



Progression of the volcanic landscape

INTRODUCTION

The site of the old quarry at Three Kings is a historically and culturally important site not only to Auckland, but the larger surrounding region. The area was once home to five large volcanic cones, all of which were over 100m high and formed a prominent part of the landscape. In the 19th and 20th century, the area was extensively quarried for scoria and basalt rock and today, only Te Tatua a Riukiuta, at 133m remains as an important park serving the local community. The historical context of our site, its change of use through time, and the importance of Te Tatua a Riukiuta as a prominent historical and landscape feature has greatly informed our design. The proposal aims to tell the story of the historical layers that exist at Three Kings.

PRINCIPLES

- Provide reference to the history of the quarry site and the original volcanic forms, through design within the development. Both architectural and landscape elements.
- Show the layered history of use and development through interpretation.
- Retain and enhance all heritage items and heritage landscapes.
- Create a visual and physical connection between the site and Te Tatua a Riukiuta.

STRATEGIES

Provide visual and physical links to Te Tatua a Riukiuta and surrounding volcanic peaks

- Reinforce the historical and geological links between the site, Te Tatua a Riukiuta and the surrounding volcanic peaks and public domains by connecting them through a series of pedestrian paths, stairs and platforms.

- The principle of Tohu* is applied and respected through the view opportunities towards Te Tatua a Riukiuta throughout the development, maintaining generous view corridor towards the Maunga through the use of built form as framing elements.

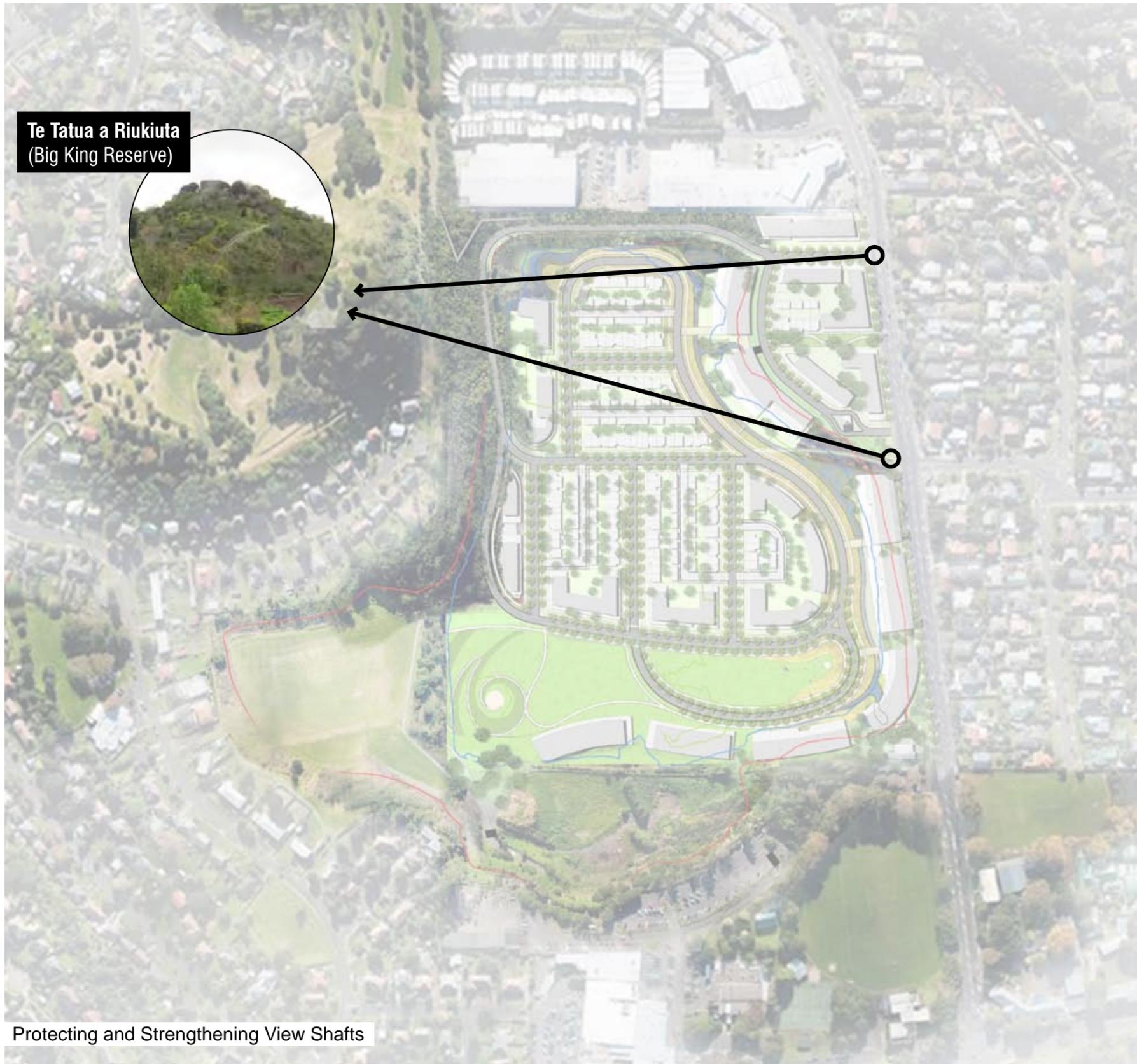
Show the layered history of the site through interpretation

- Lightweight industrial structures evocative of machinery used during past quarry operations will ramp up to a series of platforms that provides access to the Maunga.
- Reshaping of the edges of the quarry recalls historical Maori earthworks. Soft, folded landscape forms that pull the circular shapes of the Maunga into the site will construct the language of pathways, roads, access routes, and sculptural play space throughout Three Kings.
- Acknowledge local heritage by referencing traditional built form of the Pa and terracing that once existed in the area in dealing with the unique topography of the site.

Retain and enhance all heritage items and heritage landscapes

- Recognising the importance of industrial artefacts, follies and even exposed quarry rock will punctuate the landscape in a way that connects both locals and visitors with the rich history of the quarry.
- Maintain and display these forms through the opportunity for public installations. If provided, both private residents and the public will be able to read these unique forms as being inspired from a rich historical narrative as they enter and inhabit the Three Kings site.

Tohu - a sign, mark, landmark or distinguishing feature



Te Tatua a Riukiuta
(Big King Reserve)

Protecting and Strengthening View Shafts



5.6 CHARACTER AND VISUAL AMENITY

INTRODUCTION

The character of the site is defined by the response to the historical and physical context in making places to live, work, shop and socialise. The aim of the Master plan is to introduce an urban village character through built form, landscaping, incorporating surrounding land uses into the redevelopment, making special places and creating distinct but integrated neighbourhoods in the development.

The Master plan aims to create special places, such as the local park that respond to the need for a backdrop to public life and to the need to reinforce connections to the surrounding community and places. The distinct neighbourhood and built forms are a response to the unique topography of the site. Visual permeability will be provided through the site and views to Te Tatua a Riukiuta to be framed and protected.

PRINCIPLES

- Utilise views to Te Tatua a Riukiuta as a backdrop to the development and the wider community. Enhance the urban village character of the redevelopment
- Utilise topography to maximise views and vistas. Ensure visual links to the Maunga are protected and enhanced.
- To create attractive and cohesive streetscapes and public domain
- Enhance the urban village character of the development

STRATEGIES

Utilise views to Te Tatua a Riukiuta as a backdrop to the development, protect visual links to the Maunga.

- Connect the development to the surrounding neighbourhood with a network of paths, stairs and platforms.
- Blocks and key access roads will be orientated to maximise views towards the Maunga.
- Aspect and view linkages to the Maunga are maximised for both the development and for Three Kings suburb through careful alignments of blocks and streets.
- A high level of permeability is provided through the apartment blocks.
- Built forms will be used in the public domains as framing elements to the northerly Maunga view shaft.

Landscaping and streetscapes

- Native pohutakawas and bush plants will be used to line the new roadway to create an experience of travelling through thick New Zealand vegetation.

- Within The Riu Precinct, high-quality streetscapes and rain gardens will be integrated with medium density apartments and access paths.
- Street trees used throughout the rest of the site will be planted along typical road edges and will define the spacing of street parking that will be coupled with the hardscape strategy.
- Wetland zones will be comprised of grasses, reeds, native ferns, and open-to air ponds. Access through these wetlands will be granted by a series of wooden boardwalks that meander through tall reeds.

Utilise topography to maximise views and vistas

- Cascading apartments against the quarry edge maximise outlook and will open views towards Maunga from the quarry floor.

Enhance the urban village character of the redevelopment

- Respond to the site's urban context and integrate surrounding landuses into the redevelopment.

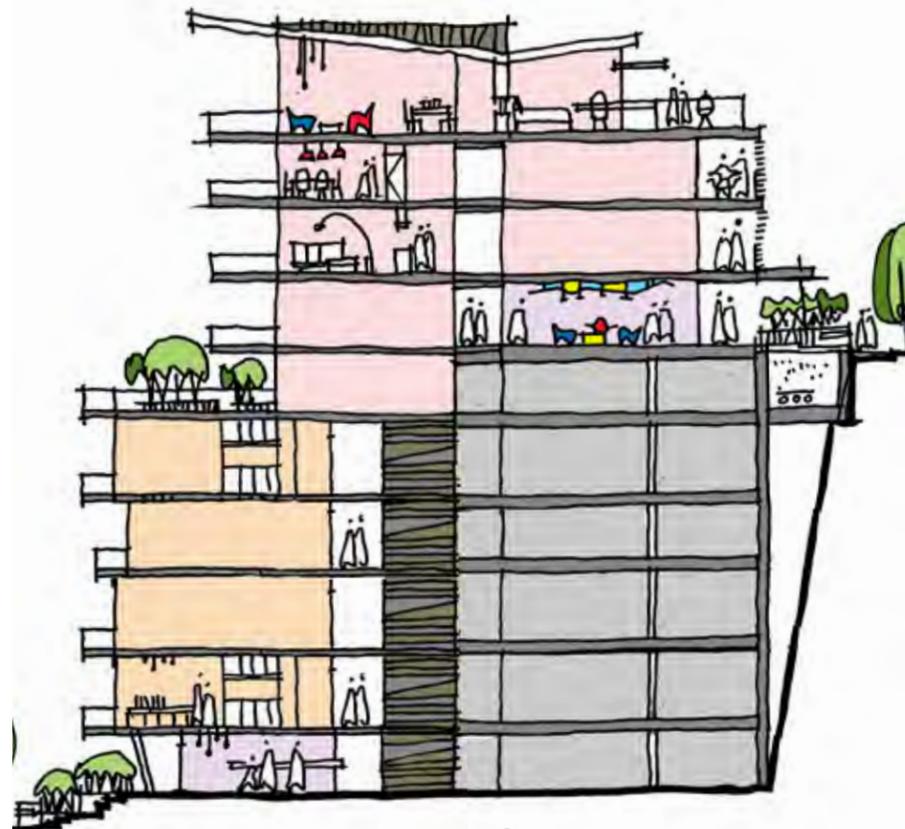


Architectural Precedents

5.7 BUILDING AND ARCHITECTURE

INTRODUCTION

The built form that is proposed is heavily influenced by the context, acknowledging the site's topography, the connection to Te Tatua a Riukiuta and the need to preserve important views and vista as well as the need to provide a frame for public domains and active streets. The architecture responds to the built form in the surrounding area, providing a well thought out urban response. It is varied in bulk and scale, creating unique neighbourhoods and places.



Cascading Apartment Typology

The Master plan is consistent with Residential 8 zoning objectives which aim to allow higher densities for developments within 'growth areas' in Auckland. This zoning responds to the need for smaller dwellings and a greater diversity of housing as a means to manage growth within Auckland City.

PRINCIPLES

- Introduce typologies that respect and relate to the landform
- Provide a consistent design language that creates architectural and visual interest for a range of uses.
- Provide attractive streetscapes and public spaces.
- Create high quality, sustainable homes.
- Bulk and scale of the building to respond to site topography, to be appropriate for the proposed landuse and to form distinct neighbourhoods.

STRATEGIES

Introduce typologies that respect and relate to the landform

- Apartments are proposed to be built against the existing quarry slope. These buildings are designed to take advantage of the height difference between the existing roads and the proposed final level of the development, which will be reduced with the filling of the existing quarry to a manageable level to approximately 15m -17m below surrounding streets. This typology is designed to maximise the potential of the quarried landform by hiding service and car park spaces against the slope, and achieving residential units on the faces with minimal excavation.
- Building typologies such as terraces and cascading apartments will be selected for their ability to traverse steep site conditions.

Consistent design language

- The built form will be contemporary in design and materiality, reflecting the needs of today's urban lifestyle and modern construction methods.
- A common design language is required to provide coherence to a variety of built form responses and diversity at the scales of the site, street and block.
- A consistent design language will ensure that buildings are designed to a common vision that enhances the existing and future desired built form and character of the neighbourhood.

Provide attractive streetscapes and public spaces

- Bulk and scale of the built form and the edge treatment will consider the activation of streets and public spaces.
- Promote built form and open space for safety and surveillance.

Create high quality, sustainable homes

- The proposed built form strategy follows good passive thermal design guidelines surrounding solar access, orientation and cross ventilation.
- Maximise views and outlooks from the apartments.



Master plan in context

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6.0 MASTER PLAN



Master plan Precincts

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LEGEND

- 1. THE PARK
- 2. HILLTOP (WINSTONE PRECINCT)
- 3. THE BUSH PRECINCT
- 4. THE RIU PRECINCT

MASTER PLAN PRECINCTS



North-South Section



East-West Section

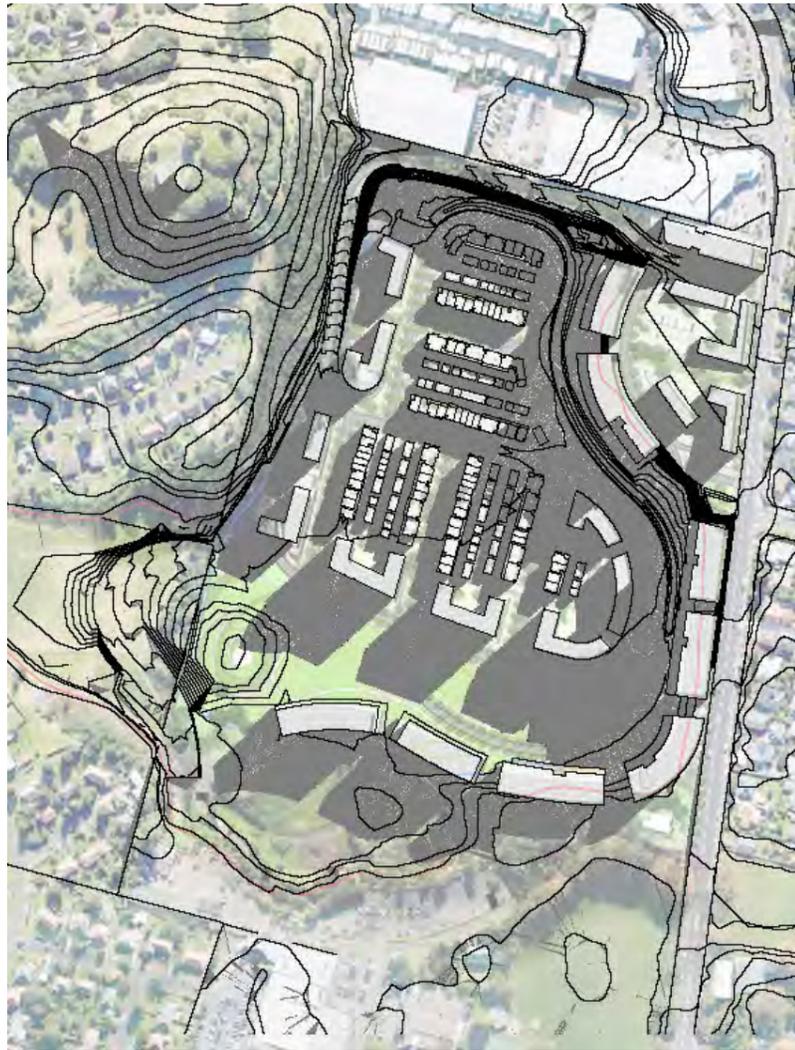
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MASTER PLAN SECTIONS

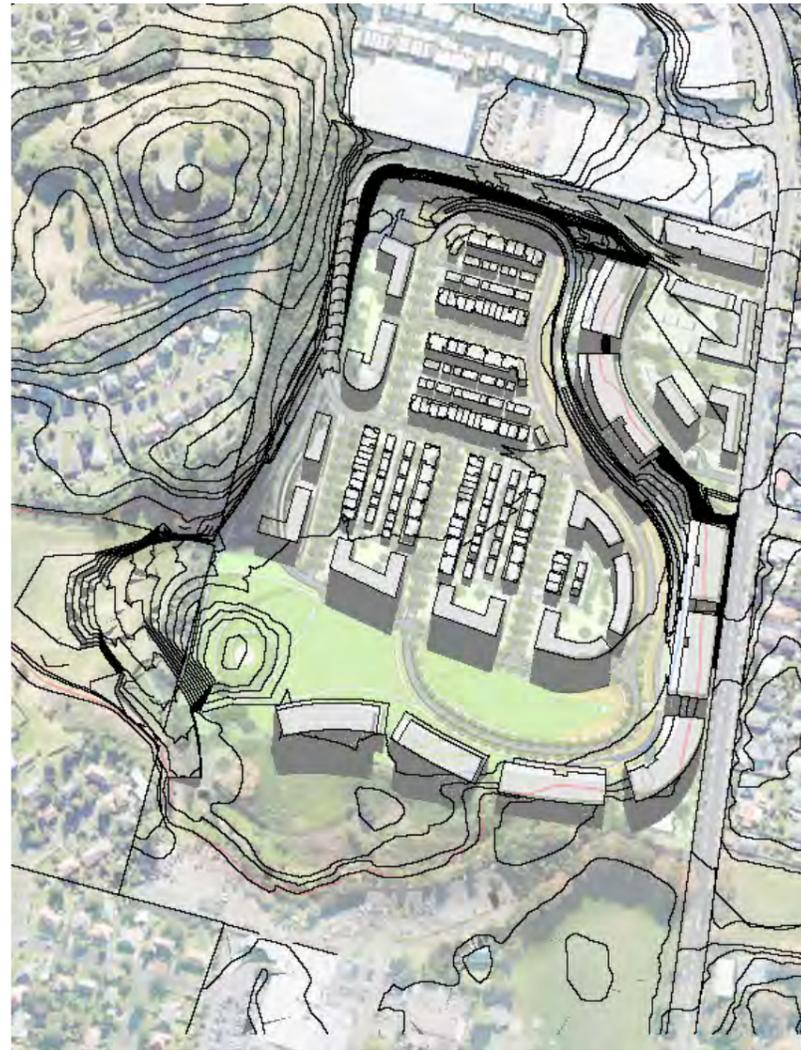


SHADOW DIAGRAM

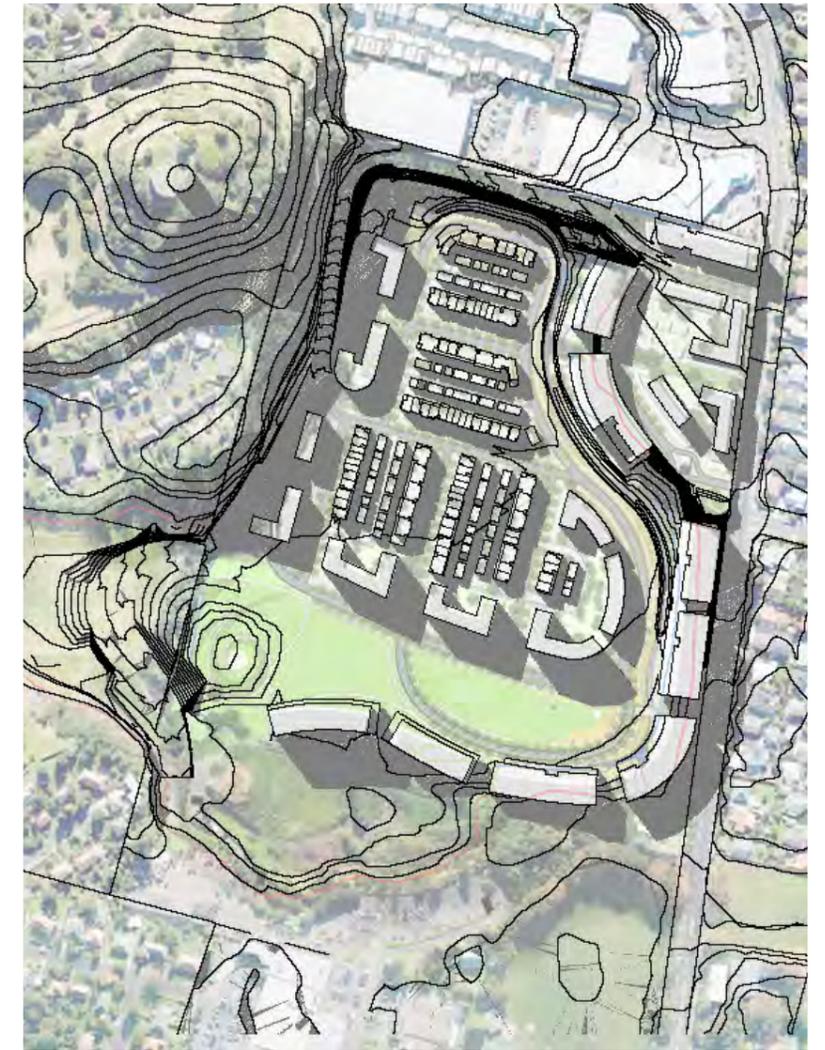
WINTER



WINTER 9AM



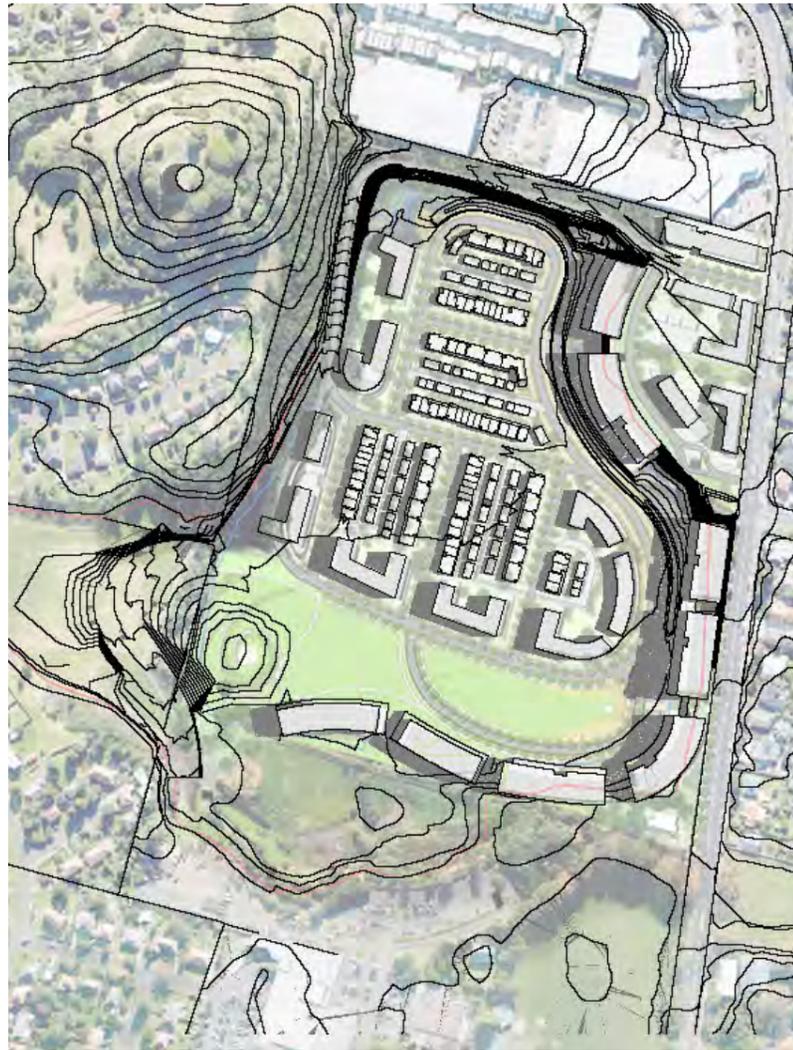
WINTER 12PM



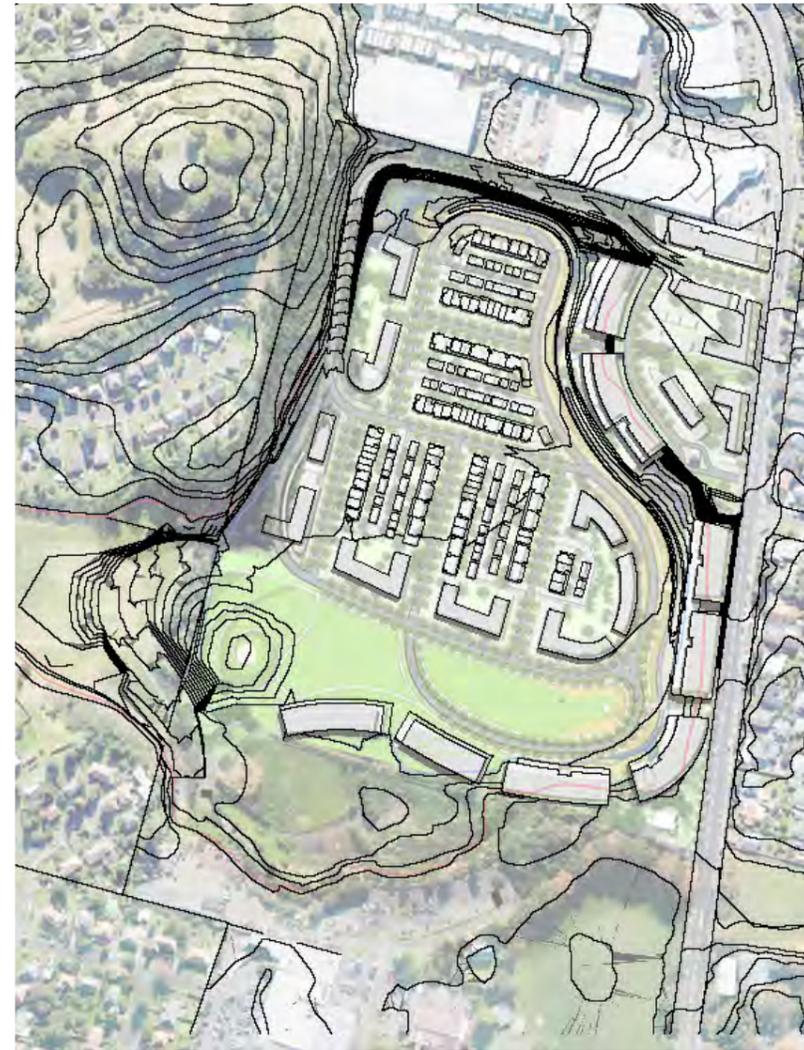
WINTER 3PM

MASTER PLAN SHADOW ANALYSIS

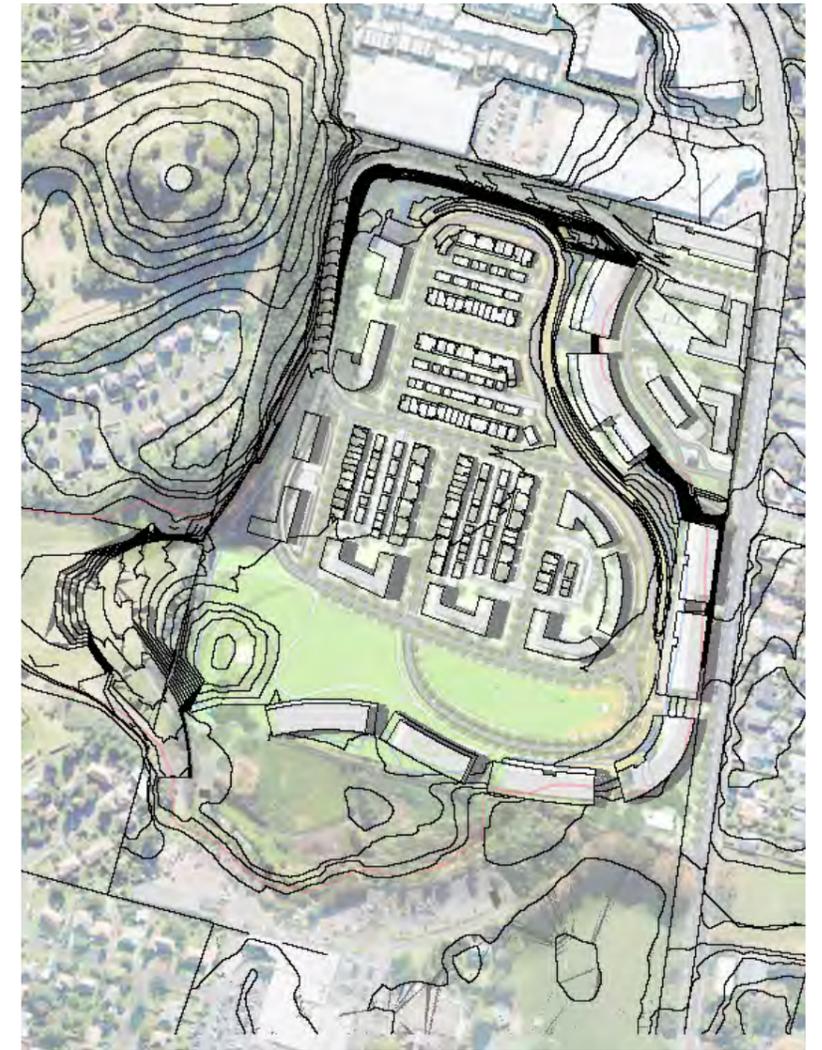
SHADOW DIAGRAM SUMMER



SUMMER 9AM



SUMMER 12PM



SUMMER 3PM



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LEGEND

- 1. LOCAL PARK
- 2. SCORIA SOAK PIT
- 3. CASCADING APARTMENTS
- 4. 5-6 STOREY APARTMENTS

6.1 THE PARK

ENVIRONMENT

The addition of a more centrally located linear park space within the new Three Kings development allows for residents to read the park as an extension of the surrounding native landscape. The park's adjacency to native bush plantings that currently exist with the around the site will help strengthen the natural character of the overall development. Pohutakawas and native bush plantings that line the south of the quarry will also be implemented in planting schemes within the park at lower densities to produce more open space. These linear clearings will in essence be framed by the existing natural landscape and nestle between the apartments wrapping from the south of the site. The Local Park will be accessible for pedestrians to use as an open space. The Park is not devoted to a specific activity and acts more as an informal space for play and relaxation.

WATER

Stormwater will be directed from the centre of the Local Park towards its periphery. These wetland holding areas will provide filtration of stormwater runoff from the green and surrounding area to the aquifer located below the site.

RECREATION AND COMMUNITY FACILITIES

The local park will be the primary outdoor recreational space for residents in the development and the surrounding community. The Local Park is designed to work with the existing Three Kings Park, and would be able to support passive recreation and relaxation uses.

TRANSPORT, ACCESS AND CIRCULATION

The Local Park, located in the southern end of the development will be accessible via the proposed street network. On-street parking will be provided to accommodate parking demands.

The local park will be connected to the existing soccer field to the west through a southern trail, which will also connect to the existing path up to Te Tatu a Riukiuta. Pedestrian connections may be extended towards the south to connect to the potential future parkland within the Crown land and through to Grahame Breed Drive and the town centre.

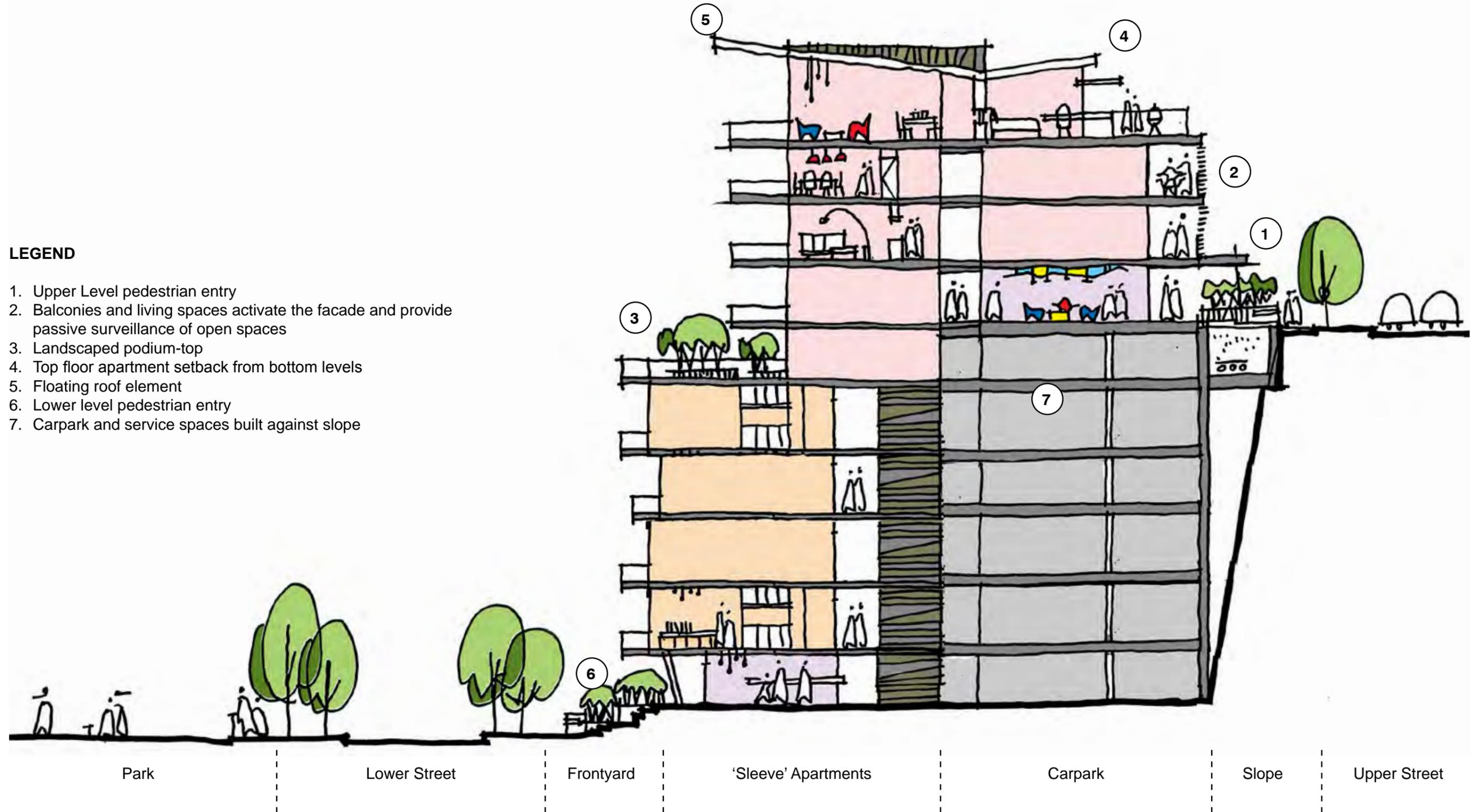
CHARACTER AND VISUAL AMENITY

The Local Park is civic in nature, and has been designed as a place for the community to gather and pursue various leisure activities. Its parkland aesthetic presents a desirable outlook to the proposed dwellings against it.

A mixture terraces and apartments flank the Local Park and the surrounding streets to provide passive surveillance and safety, and scaled to address its civic nature.

LEGEND

- 1. Upper Level pedestrian entry
- 2. Balconies and living spaces activate the facade and provide passive surveillance of open spaces
- 3. Landscaped podium-top
- 4. Top floor apartment setback from bottom levels
- 5. Floating roof element
- 6. Lower level pedestrian entry
- 7. Carpark and service spaces built against slope



Section through proposed cascading apartments

BUILDING AND ARCHITECTURE

The built form strategy around the Local Park has been designed around solar access and outlook to the proposed buildings. On the southern side of the Local Park, a series of cascading apartments are proposed to be built against the existing quarry slope. These higher density apartments have been confined to the south of the Local Park to prevent overshadowing on the open space. To the north of the Local Park, three to four storey walkup style apartments have been proposed.

CASCADING APARTMENTS

The proposed cascading apartments are first introduced on the southern side of the local park to take advantage of the northerly Maunga view shaft.

The buildings are designed to take advantage of the height difference between the top of the quarry and the proposed final level of the quarry floor. These apartment buildings are designed in two parts. Against the quarry slope, the bottom half of the apartment comprises of car park basements built into the cliff. 'Liner' apartments then sleeve the car park basements to present an activated frontage to the public. The Liner apartments will have a northerly aspect, and will interface with the Park. The upper half of the building is a more conventional four storey apartment block that is built on top of the lower half. In a figurative sense, the apartment building, as a whole, is seen to cascade down the quarry slope. This typology is designed to maximise the potential of the quarried landform by hiding service and car park spaces against the slope, and achieving residential units on the faces with minimal excavation.

APARTMENTS

Conventional apartment typologies of 5-6 storeys are proposed on the former filled quarry site floor. They are used to provide landscaped active edges to tree lined streets and are located adjacent to local amenity to maximise the benefit to apartment residents. These apartment buildings will be located such that the shadow cast does not adversely affect any adjacent dwellings throughout the year.



LEGEND

- 1. LOW RISE APARTMENTS / TERRACES
- 2. CASCADING APARTMENTS
- 3. STAIRCASE ACCESS TO THE RIU PRECINCT
- 4. BUSH ROAD ENTRY FROM MT EDEN ROAD



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6.2 Hilltop

(Winstone Precinct)

ENVIRONMENT

This zone will match the designed street scapes that will be seen throughout the site. In order to provide unfettered views to Te Tatua a Riukiuta, there will be a high level of perforation within the apartment blocks and key access roads will be orientated towards the Maunga. The Hilltop (Winstone Precinct) portion of the development will also be the site of a stairway that will grant access to the interior of the site 15-17m below Mt Eden Road.

WATER

Stormwater runoff will be collected in rain gardens and channels that will be directed to the water system that serves the rest of the site.

This water system will provide filtration of stormwater runoff from the Hilltop (Winstone Precinct) through soakage and into the aquifer beneath.

RECREATION AND COMMUNITY FACILITIES

This precinct will contain small local parks to provide amenity to the local residents.

TRANSPORT, ACCESS AND CIRCULATION

The Hilltop (Winstone Precinct) serves as a gateway precinct to the greater site as it is located at the intersection of Mt Eden Road and the Bush Road.

It provides a strong interface to Mt Eden Road and creates opportunity for pedestrian and vehicle access into the precinct and site. There is

a single vehicle access point from Mt Eden Road which will service the precinct. There is a pedestrian link provided which will transition the 15-17m level change from Mt Eden Road. This linkage connects to the internal pedestrian network and to the trails located on the western side of the site.

CULTURE AND HERITAGE

The most significant elements for heritage interpretation in this area relates to the stairway which will connect the Hilltop (Winstone Precinct) to The Riu Precinct. It will be a lightweight industrial structure that references the heritage of the site as a quarry.

Industrial heritage will be remembered by the retention of the old block plant cement silo at the entry to the Winstone Precinct.

CHARACTER AND VISUAL AMENITY

The urban residential character of the Hilltop (Winstone Precinct) extends the residential nature of Mt Eden road onto the site. The Hilltop (Winstone Precinct) is characterised by a pedestrian entry plaza from Mt Eden Road and strong western view corridors towards Te Tatua a Riukiuta. Low rise apartments, tree lined streets, and local parks, create a relaxed, green and urban environment. The fine grain nature of the Hilltop (Winstone Precinct) helps integrate the precinct with the surrounding residential areas.

The blocks and built form are orientated to maximise visual permeability through the site and preserve views to the Maunga.

BUILDING AND ARCHITECTURE

As one of the major entries to the site, the bulk and scale of the low rise apartments provide a seamless transition between the surrounding residential areas and the redevelopment.

The low rise apartments and a single five storey apartment are arranged around parks and green links and provide good outlook to the apartments. Cascading apartments built on the quarry slopes take advantage of the topography and open the apartments up to views towards Te Tatua a Riukiuta and The Riu Precinct.



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View SW along Mt Eden Road





LEGEND

- 1. BIG KING RESERVE
- 2. BUSH ROAD
- 3. DENSE VEGETATION TO SCREEN EXISTING WAREHOUSE
- 4. LOW RISE APARTMENTS
- 5. ACCESS TO BIG KING RESERVE



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6.3 THE BUSH PRECINCT

ENVIRONMENT

The Bush Road that was once the access route for quarry trucks will be converted into an extension of the vegetative language of Te Tatua a Riukiuta. Native pohutakawas and bush plants will be used to line the new roadway to create an experience of travelling through thick New Zealand vegetation as pedestrians and cars approach Te Tatua a Riukiuta from Mt Eden Road.

The Bush Road that begins along the northern edge of the site above the interior floor of the site will provide views into the site as well as screen the existing warehouses towards the north. This immersive zone will act as a strong link to the Maunga. Footpaths that originate at the entrance of the bush road at Mt Eden will meet a series of elevated walkways that provide more vertical access up to the top of Te Tatua a Riukiuta.

WATER

Stormwater runoff will be collected in rain gardens and channels that will be directed to the water system that serves the rest of the site.

This water system consists of wetland holding areas that will provide filtration of stormwater runoff from the Bush Road and surrounding area to the aquifer located below the site.

RECREATION AND COMMUNITY FACILITIES

The Te Tatua a Riukiuta peak serves as a significant focal point for the site and the surrounding Three Kings Suburb. Te Tatua a Riukiuta has retained Maori terracing and therefore provides unique passive recreation opportunities and panoramic vistas.

TRANSPORT, ACCESS AND CIRCULATION

The Bush Precinct contains the Bush Road which provides significant access into the site and to footpaths which enable greater access for pedestrians to the Big King Reserve. These pedestrian access ways will be in the form of a series of elevated walkways running parallel to the Bush Road enabling vertical access to the reserve.

Pedestrian access may also be enhanced from the south by a series of walking trails connecting to the Western Park and Grahame Breed Drive. Passive surveillance is provided by terraces which overlook the trails.

A newly formed post industrial elevated structure will be commissioned to the north to provide a new link to Te Tatua a Riukiuta from Mt Eden Road.

CULTURE AND HERITAGE

The Master plan proposes to maximise the visual and physical connection to Te Tatua a Riukiuta by introducing a bush path and setting back the apartment built form as far as possible to create a transitional green buffer and to not obstruct views.

CHARACTER AND VISUAL AMENITY

The character of this area comes from the proximity to Te Tatua a Riukiuta. The aim is to provide views to Te Tatua a Riukiuta from the street and make it the backdrop to the built forms. As such, blocks are orientated to reinforce the east - west view corridor to Te Tatua a Riukiuta. The buildings are low rise to allow for glimpses towards over the top and to provide a visual contrast.

As a result, the area has a suburban nature, with low scaled and finely articulated architecture, tree lined and human scale streetscapes.

BUILDING AND ARCHITECTURE

The buildings provide an active edge to the street and the bush path, providing passive surveillance and safety to these public areas.

The low rise apartments are arranged to maximise views toward Te Tatua a Riukiuta and to provide optimum solar access and cross ventilation.



View W from The Riu Precinct to Te Tatua a Riukiuta



6.4 THE RIU PRECINCT

ENVIRONMENT

Within The Riu Precinct, high-quality streetscapes and rain gardens will be integrated with medium density apartments and access paths. Street trees used throughout the rest of the site will be planted along typical road edges and will define the spacing of street parking that will be coupled with the hardscape strategy.

Apartments and pathways will have direct access to wetland zones that will be comprised of grasses, reeds, native ferns, and open-to-air ponds. Access through these wetlands will be granted by a series of wooden boardwalks that meander through tall reeds.

Street trees will not be planted along alley ways or garage access roads located at the back of the apartments. In many cases, the buildings within the inner precinct will interface with the extensive wetland ring that encircles the site.

WATER

The rain gardens and wetland zones represent the first point of collection for on-site stormwater. In a typical event, the ponds and gardens will fill with rainwater directed off of roads and hardscape. Here, rain water runoff is collected, held, and filtered through naturally permeable layers of fine substrate. Particles and contaminants are extracted from the water as the runoff makes its way to the underlying scoria of the site before being directed back to the fresh-water aquifer.

RECREATION AND COMMUNITY FACILITIES

The Riu Precinct is located at the centre of the site. From its central location it is able to draw on a range of both passive and active recreational spaces. Directly to the south The Local Park is located. This large area of open space provides facilities for a range of leisure

activities. To the west The Riu Precinct connects to a large trail network which provides access to local amenity such as the wetland terrace and soak pit to the south west but to prominent landmark sites such as the Big King Reserve to the north west.

TRANSPORT, ACCESS AND CIRCULATION

The Riu Precinct is accessed from the Bush Road to the north. Within the Precinct itself a highly permeable street and pedestrian network is provided in both a north-south and east-west direction. This connected network allows for easy access to all local areas of amenity and recreation.

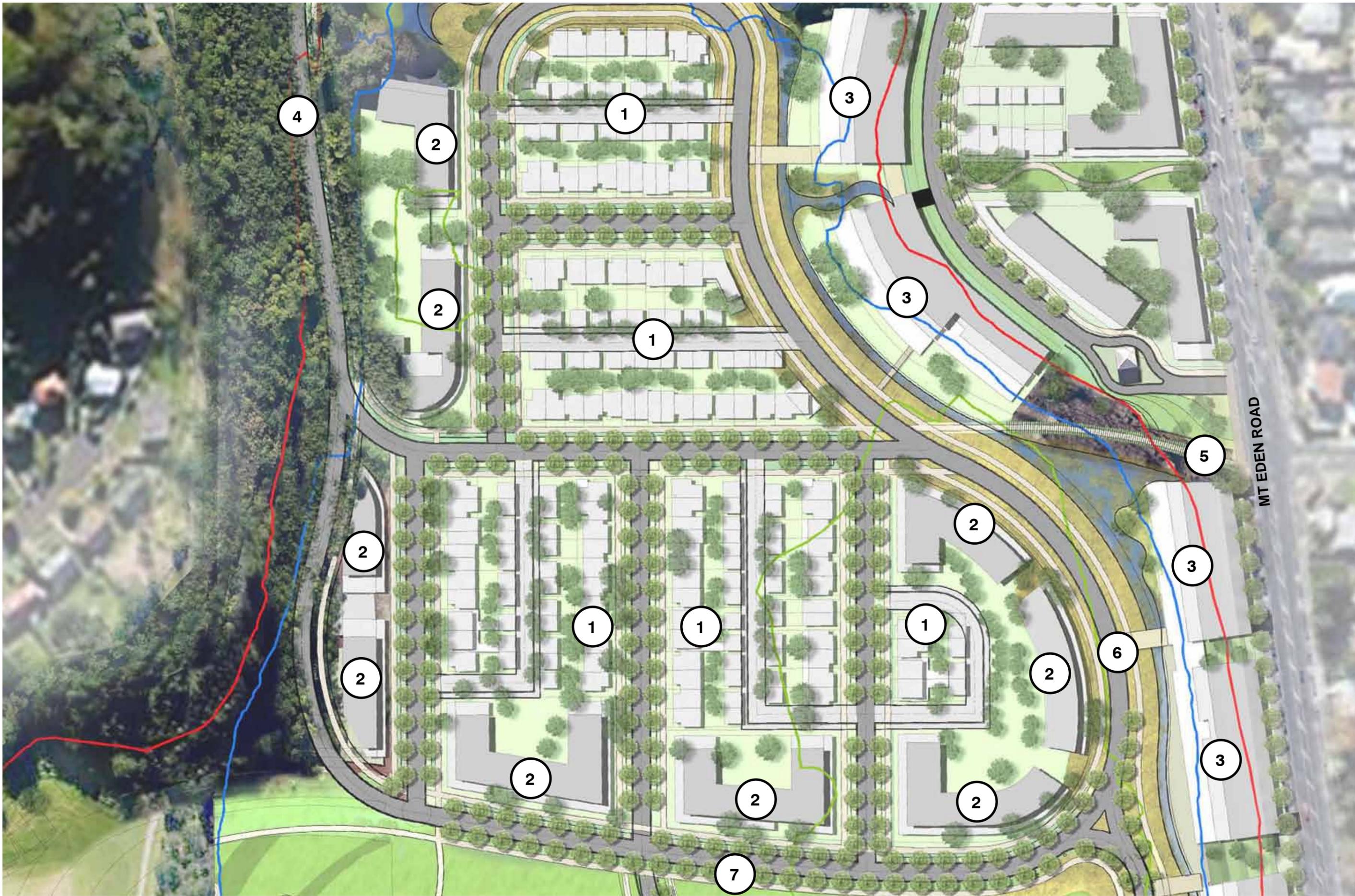
CHARACTER AND VISUAL AMENITY

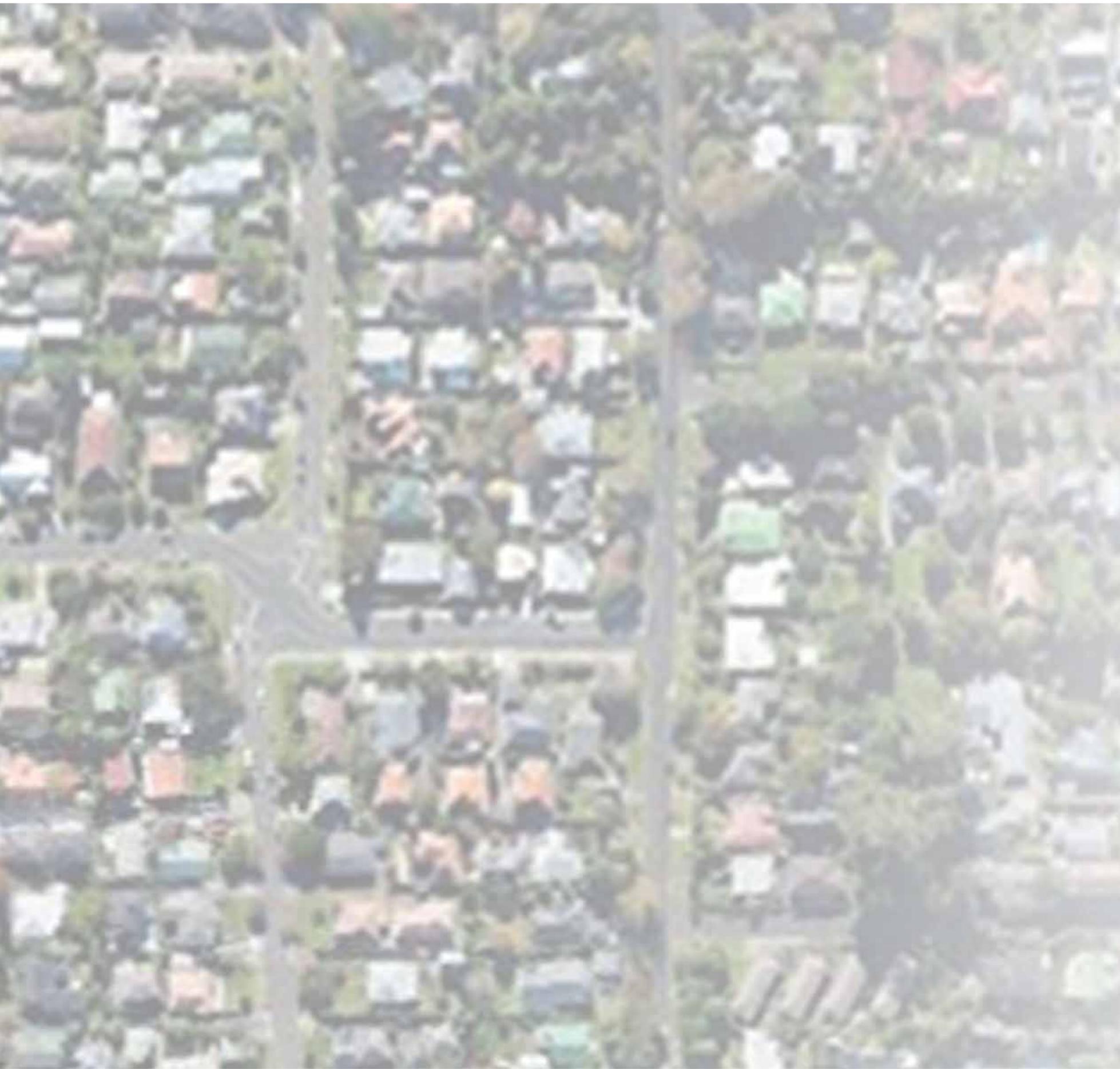
The Riu Precinct is a residential neighbourhood characterised by the high quality streetscapes, rain gardens and easy access to the wetlands.

The built form consists mainly of terrace housing towards the centre, on the valley floor and three storey apartments towards the quarry slopes. The apartments and terraces are designed so that the carparks are located to the backs of the buildings in the centre of the blocks, this provide street addresses and active edges to tree lined street, enhancing the greenness of the valley. The well landscaped streets, along with pathways that winds through the wetland in a series of boardwalks establish The Riu Precinct as the green neighbourhood heart of the redevelopment.

BUILDING AND ARCHITECTURE

The buildings are aligned to the street to provide passive surveillance and an active street edge. They are orientated to maximise solar access and cross ventilation in the apartments.





LEGEND

- 1. TERRACE HOUSING
- 2. APARTMENT HOUSING
- 3. CASCADING APARTMENTS
- 4. BUSH ROAD
- 5. PEDESTRIAN ACCESS TO MT EDEN ROAD
- 6. WETLAND ROAD
- 7. LOCAL PARK





View to Te Tātua a Riukiuta

7.0 DESIGN ELEMENTS TO BE INCLUDED IN THE PLAN CHANGE

This Master plan guides and coordinates the planning and development decisions for the Three Kings quarry site into the long term. It will serve as a visionary document to communicate the intended direction for the regeneration of the site and its integration into the surrounding area and their communities.

It establishes methods and approaches to respectfully develop the site and ensure that the proposed development does not adversely affect the existing site further.

It achieves this through appropriate built forms and sustainability initiatives which respond to the the unique site conditions that the quarry presents.

Through this the Master plan will strengthen and enhance the past, present and future use of the Three Kings quarry site.

