

RANGITOO PUNI
LOT 1 & LOT 2
LANDSCAPE CONCEPT MASTERPLAN
FOR RESOURCE CONSENT
REV A

01 MAY 2025



TE KAWERAU IWI
SETTLEMENT TRUST

RANGITOO PUNI
R I V E R H E A D



ISO 14064-1 ORGANISATION

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Although this is not a hearing before the Environment Court, I record that I have read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses as specified in the Environment Court's Practice Note 2023. I confirm that this report is within my area of expertise, except where I state that I rely upon the evidence or reports of other expert witnesses lodged forming part of the project's application material. I have not omitted to consider any material facts known to me that might alter or detract from the opinions expressed. [Redacted]



CONNECTIONS TO OTHER DOCUMENTS

This document is developed in connection with:



LOT ONE
Countryside Living



LOT TWO
Retirement Village



APPENDIX ONE
Landscape Elements

APPENDIX TWO
Auckland Council
Regional Parks Standard
Details Engineering
Drawings



RANGITOOPUNI
Mahere Matua Ahurea |
Cultural Masterplan



RANGITOOPUNI
Design Guidelines

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PROJECT VISION

Rangitōopuni will be set to become the benchmark for iwi led development of Treaty Settlement lands. Te Kawerau āa Maki fought hard to get control over their whenua again, after many years disenfranchised from the land. This development aims to become the catalyst project to enable TKaM continue to develop and care for their iwi/hapu.

WHAT NEEDS TO HAPPEN FOR THIS OUTCOME TO EVENTUATE?

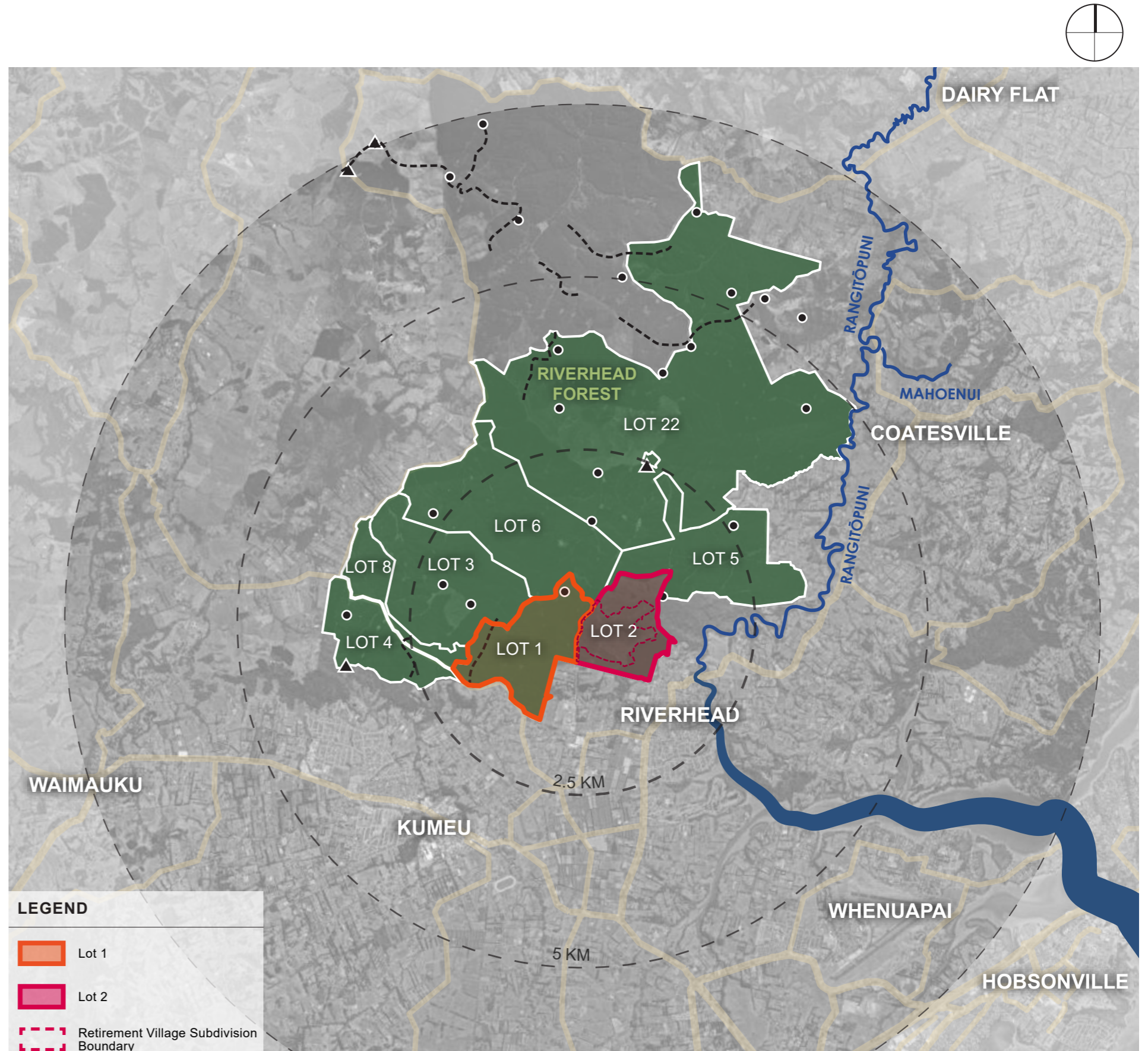
Production forestry has ceased in the areas of the development. Extensive weed and pest control (both of which will be ongoing) will be implemented. Native revegetation of the land, outside of the construction disturbance areas, will start very early in the physical development programme. This will enable the sites to be come clothed again in the ngahere of before. Wetlands and riparian margins will be extensively planted and the remainder of the land will have a dominant maanuka/kaanuka forest mix with pockets of fast seeding species to help the spread of other species. Enrichment planting of taonga species can be planted at any time once protection can be afforded by the maanuka/kaanuka.

The development proposed for lot 1, is 208 large lot sites, developed under the countryside living zone. Purchasers can only build on the prescribed and delivered building platform as the remainder of the site is to be revegetated by the development team.

Walking tracks through and around the development zones will be delivered. These will be pedestrian tracks only as, due to the topography, sections of stairs and boardwalks will be required. Access to the wider recreational pursuits within the existing pine forest, to the north of these development sites, will be maintained. Users of the pine forest area will be provided with a safe carpark area and will be able to use the formed road to access the forest.

Within Lot 2, a senior living village will be delivered. This elevated site is nestled below the ridgeline of the surrounding hills, creating a very private and enclosed location. The village will have many amenity and recreation spaces and buildings, along with a care facility. Native plantings will feature throughout the village along with selected exotic amenity plants. The site is fringed with native revegetation with streams and wetlands protected and enhanced.

Rangitōopuni will be a thriving place for people, fauna and flora.



LANDSCAPE STATEMENT

THE PROPOSAL:

The Rangitooopuni project is the catalyst project for the prosperous economic future of Te Kawerau aa Maki, by the Rangitooopuni Development Limited Partnership.

Taking the former Riverhead production pine forest, with many recreational pursuits within its confines, the project will transform the landscape into a diverse and rich native bush environment, with house discreetly positioned within the plantings.

Walking trails will permeate the site, connecting neighbours and allowing access to the wider pine forest and recreation tracks. A senior Living Village development will be located on the other side of Forestry Road.

EXISTING SITE:

The existing site is/has been clothed in production pine trees for the last 60 plus years. This has always been important whenua for Te Kawerau aa Maki (TKaM) with important events and stories captured in the names of the area. The mana of the site has been diminished with forestry activities, weed ingress and waterway sedimentation.

Access into the forest is largely uncontrolled for recreation activities such as mountain biking, horse riding, walking and running, motocross events and hunting.

THE LANDSCAPE OUTCOME:

This development project will see, in the long term, a richly planted and diverse landscape, supporting birds and insects and the people who have chosen to live within this setting. Public access for walking, biking and horse riding will not be constrained on the road network. The tracks within the development areas are pedestrian access only due to the topography.

Te Kawerau aa Maki will be Kaitiaki over the plantings and tracks, their knowledge of the land, plants and fauna will be passed onto the residents and visitors through mahi toi, wananga, maara huupara and maara kai. Once in the development, you will know you are on Te Kawerau aa Maki whenua.

CULTURAL NARRATIVE

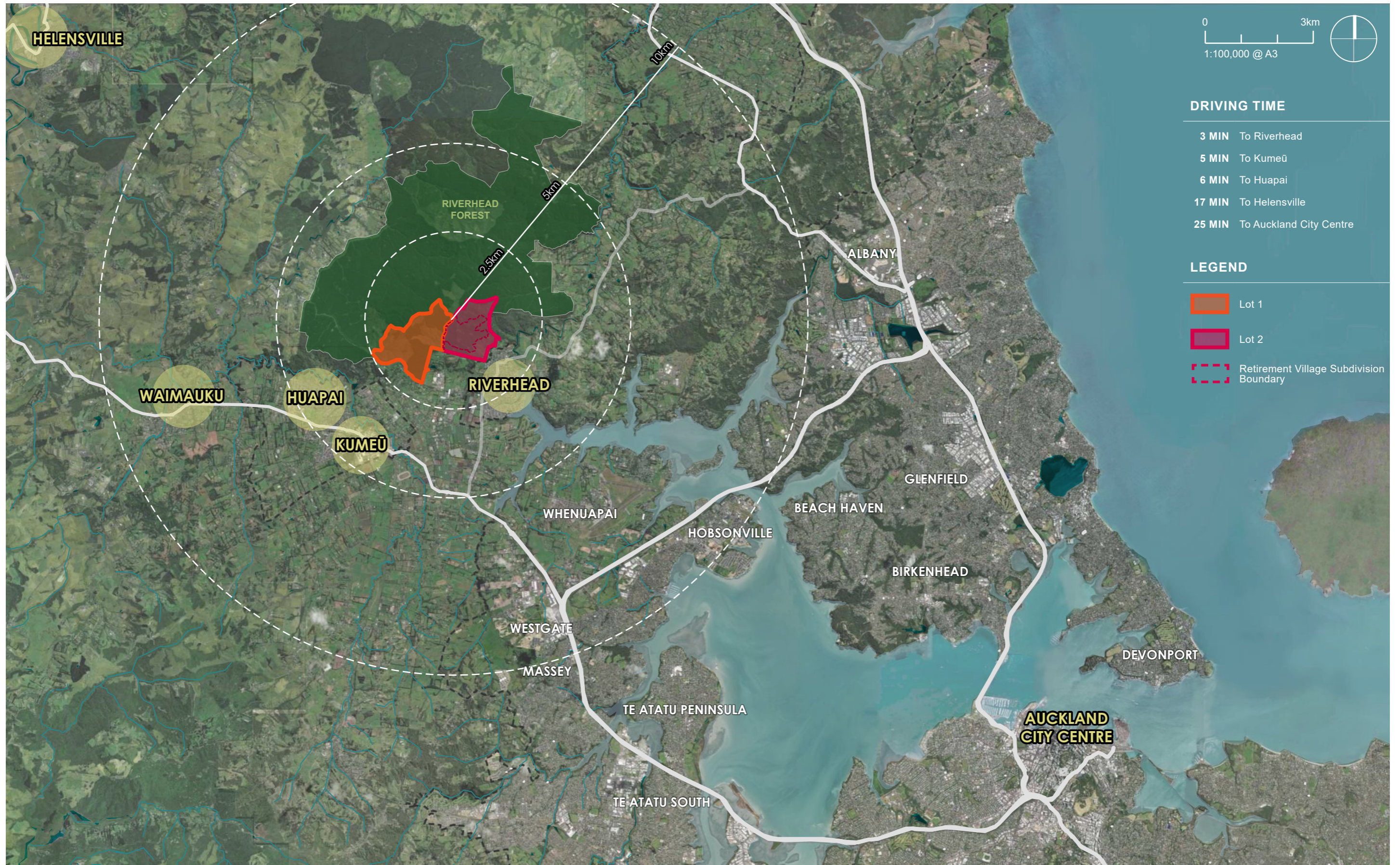
Te Kawerau aa Maki (TKaM) have been working closely with the development team to prepare a Cultural Design Framework document. This is a living document, that will grow as the site and knowledge of the processes occurring are recorded.

TKaM have told us the stories associated with the whenua, the people who were here, those who moved through the land and what they did and saw.

We appropriate and with the approval of TKaM, these narratives may be brought to life with mahi toi, storyboards and other tools. A space for wananga is to be provided within Lot 1 so that the residents and visitors can share in the stories of the land.

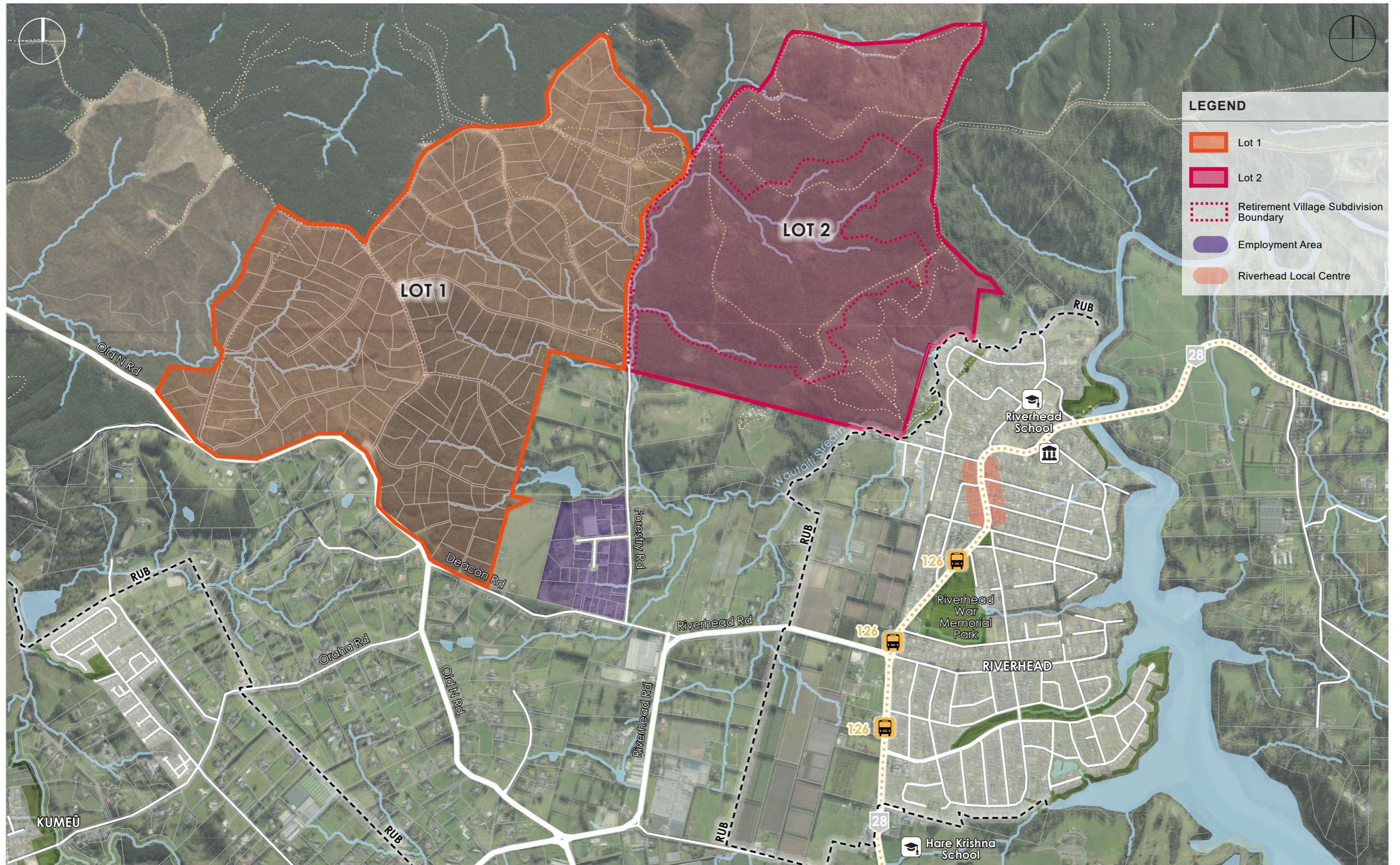
It is the intention of TKaM, that when one of their people enters the site, they know there are within the rohe of TKaM by what they see, hear and feel.

REGIONAL CONTEXT



RIVERHEAD CONTEXT

0 500m
1:15,000 @ A3



RIVERHEAD CONTEXT



1 VIEW LOOKING AT THE NORTHERN PART OF RIVERHEAD INCLUDING DUKE STREET AND COASTESVILLE RIVERHEAD HWY IN THE BACKGROUND



2 VIEW FROM TOP OF SPINE ROAD DOWN AT EXISTING RIVERHEAD SETTLEMENT WITH A VIEW OF TE WAITEMATĀ



3 VIEW TOWARD THE EASTERN PART OF RIVERHEAD (307 RIVERHEAD ROAD PROPERTY IN THE FOREGROUND)

SITE PHOTOGRAPHS

LOT 1



1: VIEW LOOKING TOWARD OLD NORTH ROAD SHOWING THE CURRENT POST PINE FOREST HARVEST NATURE OF THE LOT 1 LANDSCAPE

LOT 2



3: VIEW UP SPINE ROAD

NATURAL FEATURES



5: VIEW TOWARD THE NATURAL FEATURES IN THE NORTHERN PART OF THE SITE



2: VIEW LOOKING SOUTH-EAST ACROSS LOT 2 FROM INTERNAL FORESTRY TRACK, RANGITOTO ISLAND SHOWN IN THE DISTANCE



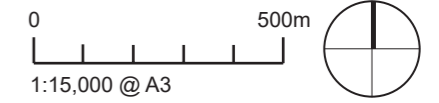
4: VIEW NORTH THROUGH SOME OF THE EXISTING RIPARIAN CORRIDORS ACROSS THE SPINE ROAD



6: VIEW LOOKING TOWARD THE SMALL POOL AND EXPOSED ROCK ALONG THE STREAM CORRIDOR IN THE BASE OF THE VALLEY

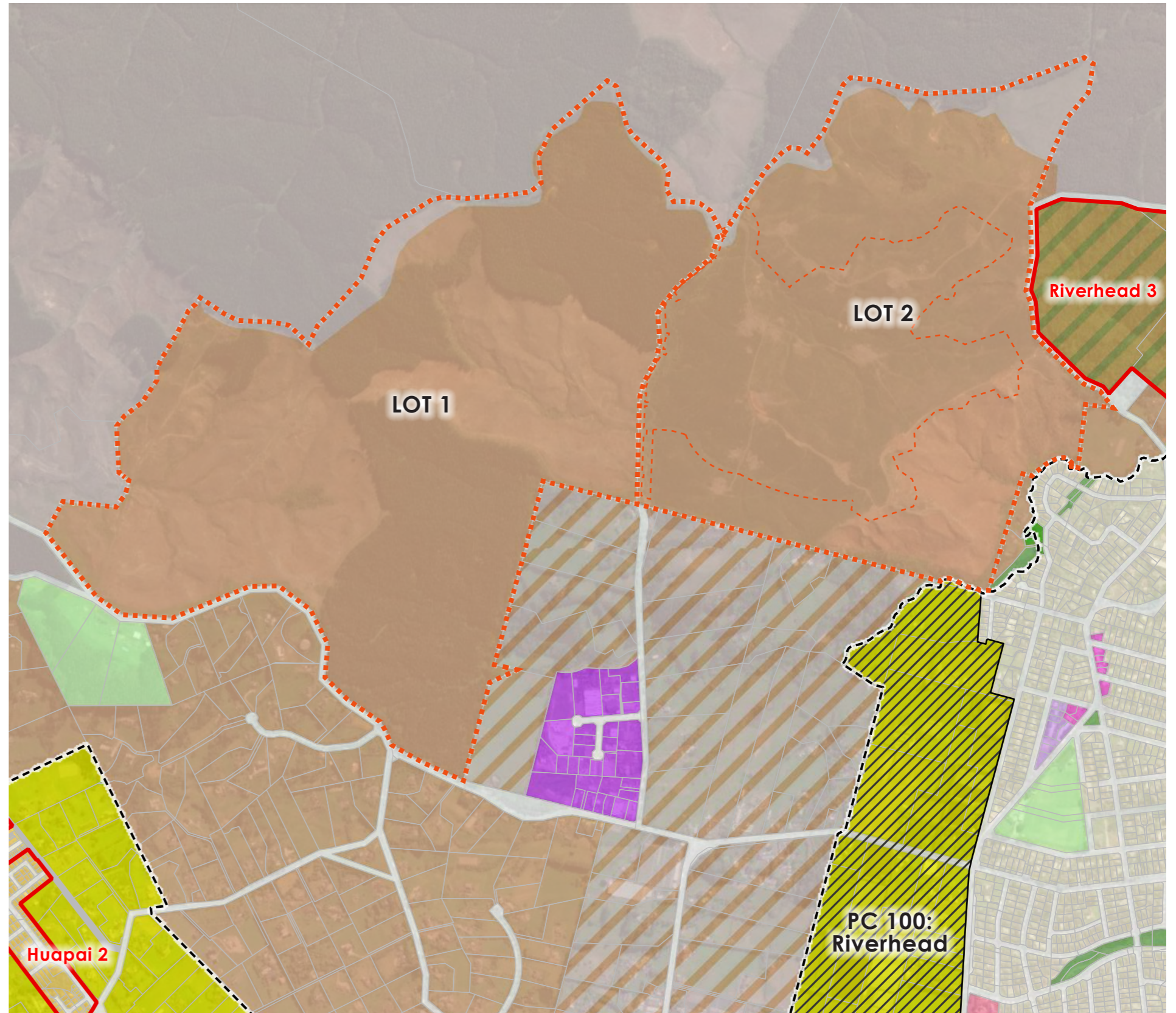
OPERATIVE ZONING

The substantial majority of Lots 1 and 2 are zoned Rural - Countryside Living ('Countryside Living'). Small areas of the very northern parts of both lots are zoned Rural – Rural Production.



LEGEND

-  Site Boundary
-  Retirement Village Subdivision Boundary
- Zoning:
-  Residential - Single House Zone
-  Residential - Mixed Housing Suburban Zone
-  Business - Local Centre Zone
-  Business - Neighbourhood Centre Zone
-  Business - Mixed Use Zone
-  Business - Light Industry Zone
-  Open Space - Conservation Zone
-  Open Space - Informal Recreation Zone
-  Open Space - Sport and Active Recreation Zone
-  Rural - Rural Production Zone
-  Rural - Mixed Rural Zone
-  Rural - Rural Conservation Zone
-  Rural - Countryside Living Zone
-  Future Urban Zone
-  Special Purpose Zone
-  Strategic Transport Corridor Zone
-  Rural Urban Boundary
-  Precinct
-  Plan Change

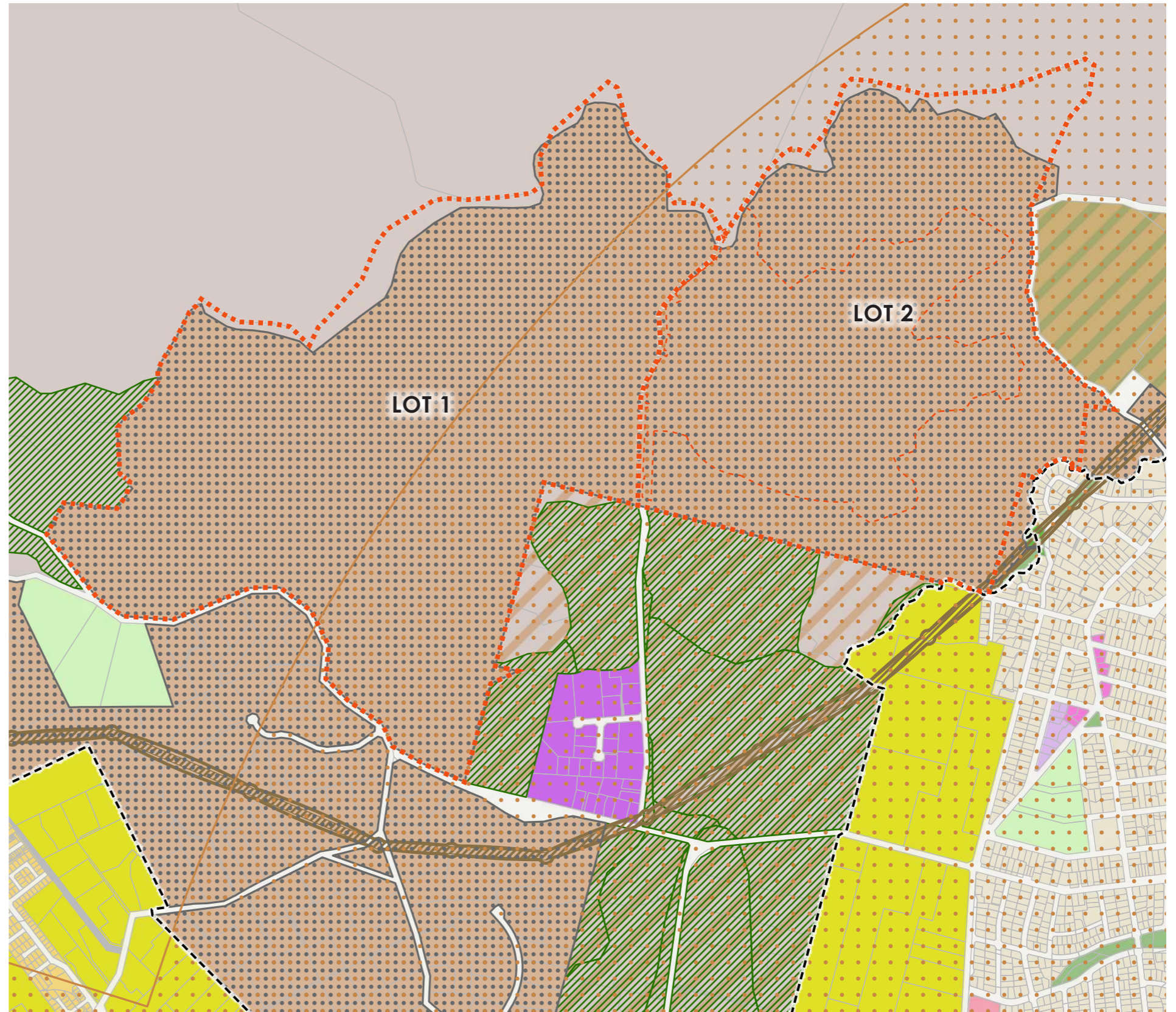
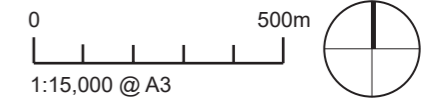


OPERATIVE ZONING CONTROLS AND OVERLAYS

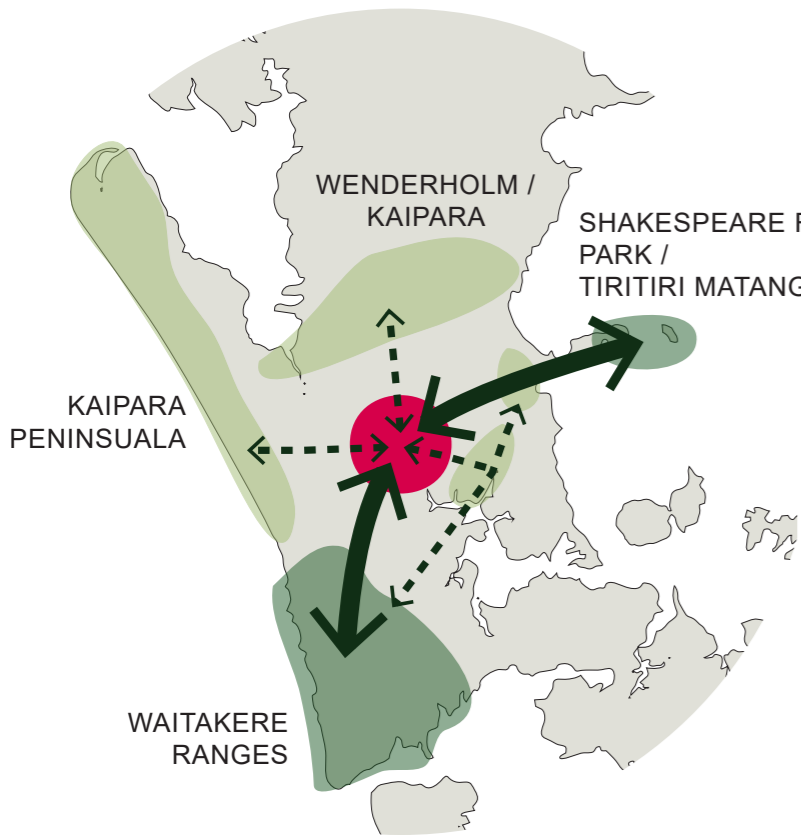
Parts of Lots 1 and 2 and surrounding area are subject to AUP overlays and controls, such as Subdivision Variation Control and Airspace Restriction Designations. Surrounding area to the south and west is subject to Highly Productive Land Overlay.

LEGEND

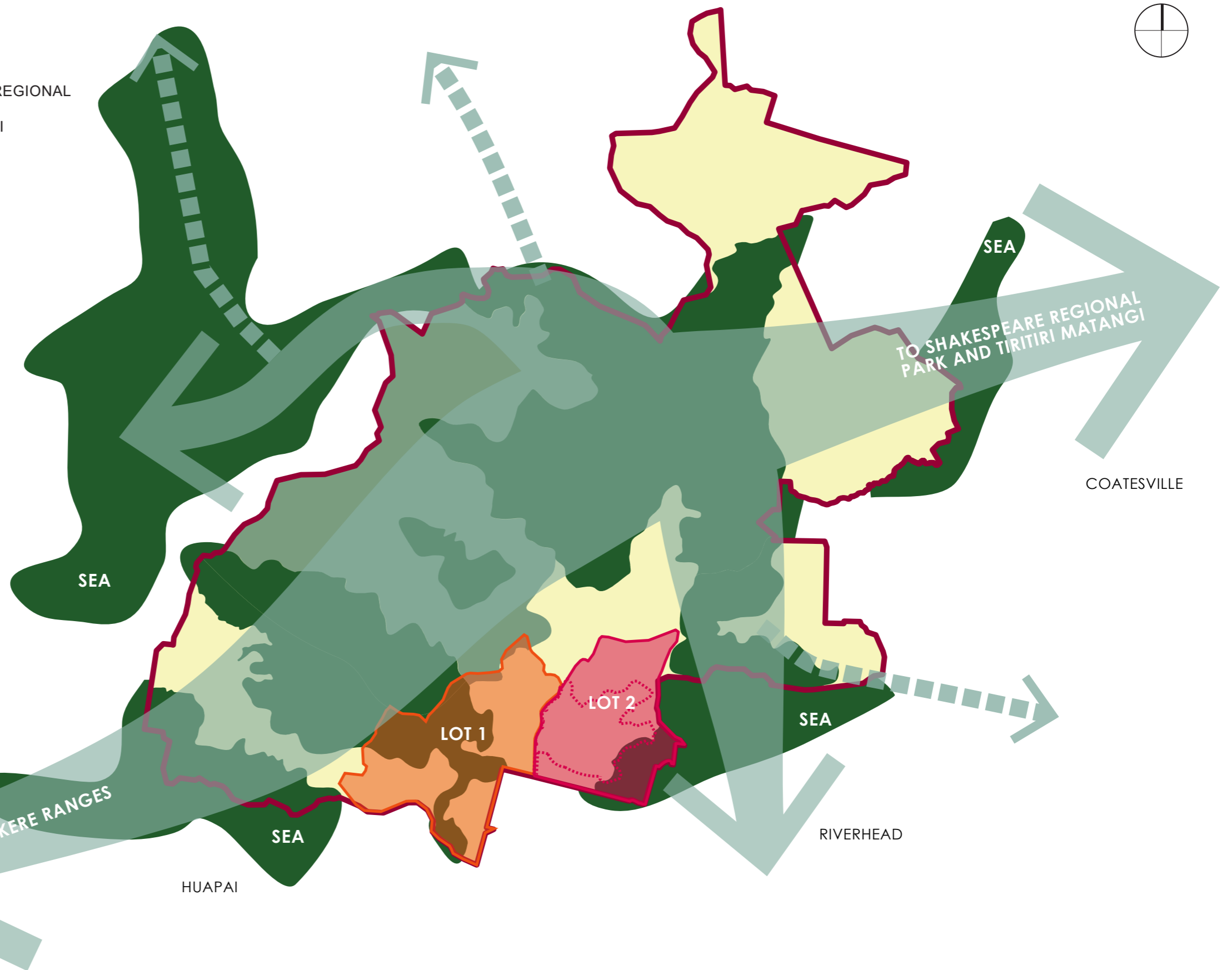
-  Site Boundary
-  Retirement Village Boundary
- Controls and Overlays:
-  Airspace Restriction Designations
-  Subdivision Variation Control
-  National Grid Corridor Overlay
-  Highly Productive Land - Transitional definition from NPS-HPL (i)
-  Rural Urban Boundary



ECOLOGICAL CONNECTIONS



The Site provides service to the wider ecological connectivity of the landscape - extending from the off-shore islands, Tiritiri Matangi and Shakespeare Regional Park in the east across to the Waitakere Ranges in the west.

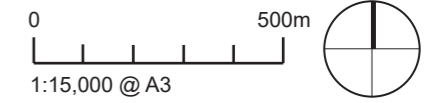


KEY









-  Lot 1
-  Lot 2
-  Retirement Village Subdivision Boundary
-  Ecological Corridor
-  Ecological Stepping Stone
-  Land for development
-  Future land for development

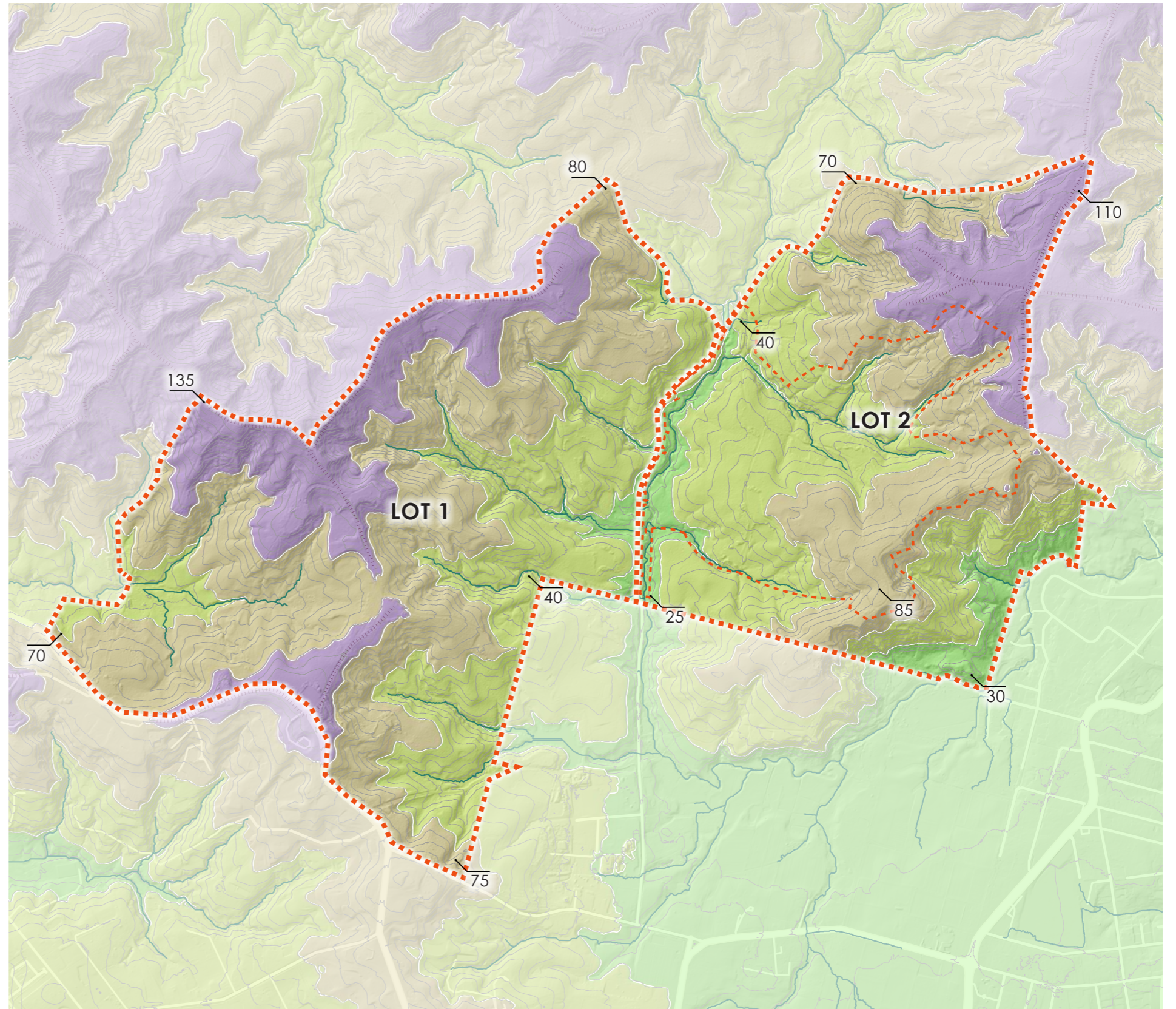
ELEVATION AND CONTOURS

The majority of the Site is situated within the north-south aligned valley system of the upper Wautaiti Stream catchment, which includes numerous unnamed tributary waterways. Forestry Road extends north from Deacon Road, following the base of the valley. In the southern section, Forestry Road is a public road, transitioning into a gated, locked, private road as it enters the Riverhead Forest. The Site's topography is dissected by a series of sub-catchments and streams.

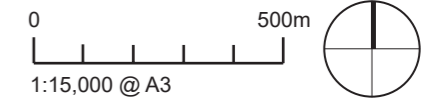


LEGEND










-  Site Boundary
-  Retirement Village Subdivision Boundary
-  Elevated Land
-  Mid Slope
-  Lower Slope
-  Lower Land
-  Stream Gully
-  Ridge

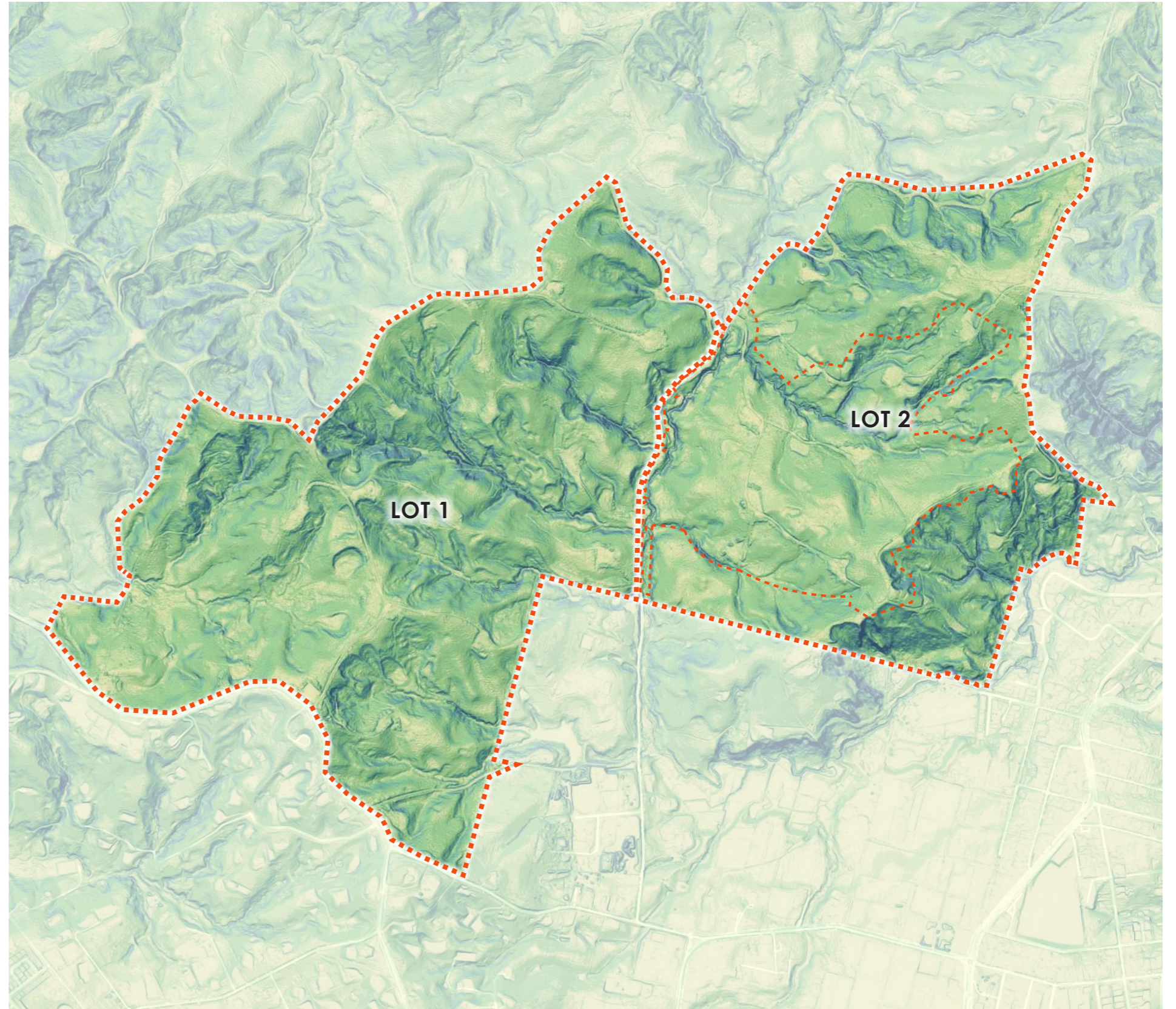


SLOPE

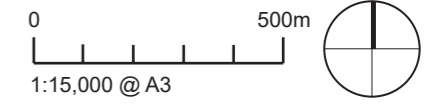


LEGEND



-  Site Boundary
-  Retirement Village Subdivision Boundary
- Slope (in degrees):
 -  ≤ 3 | Flat
 -  3 - 7 | Undulating
 -  7 - 15 | Rolling
 -  15 - 20 | Strongly rolling
 -  20 - 25 | Moderately steep
 -  25 - 35 | Steep
 -  >35 | Very steep

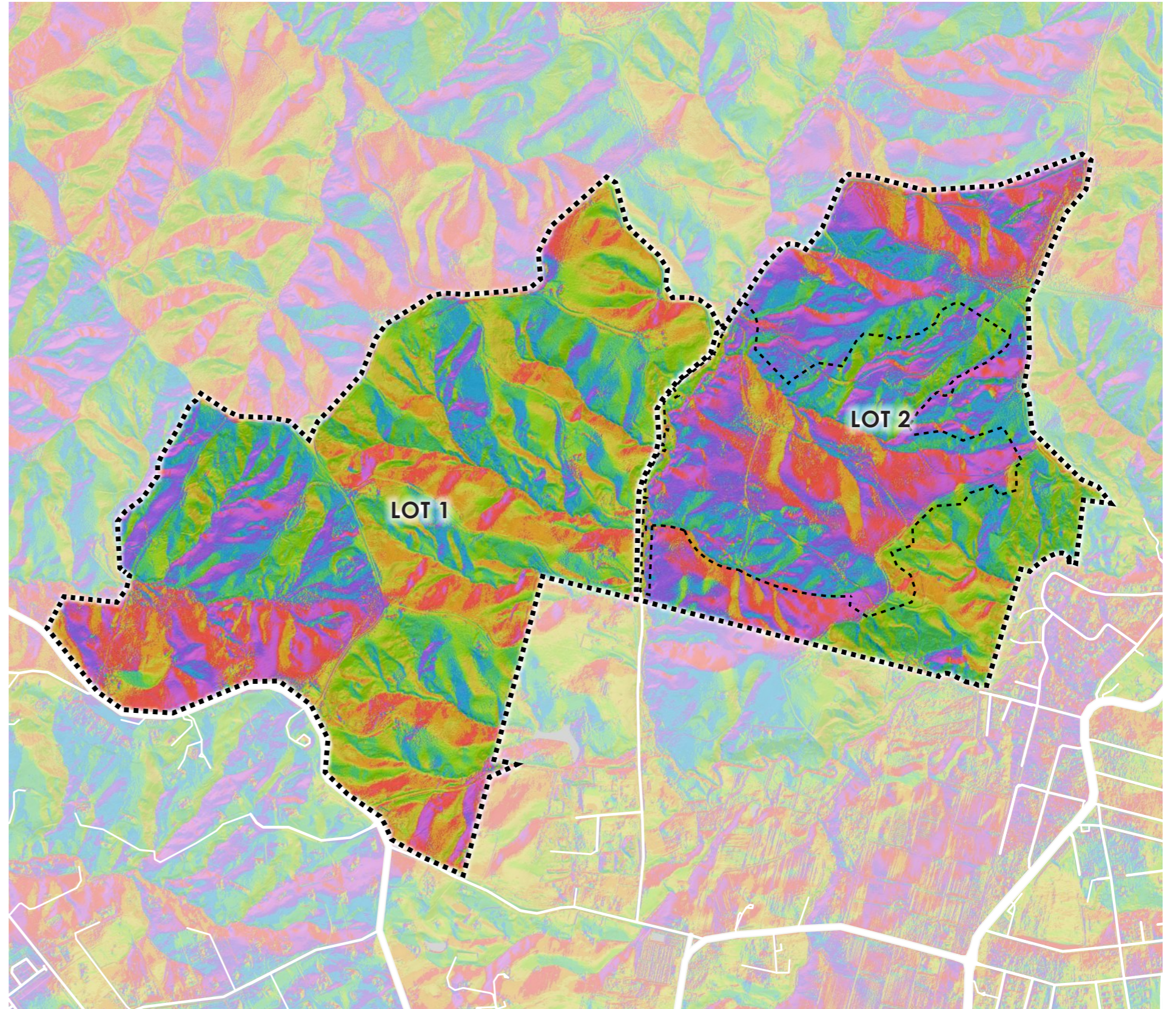
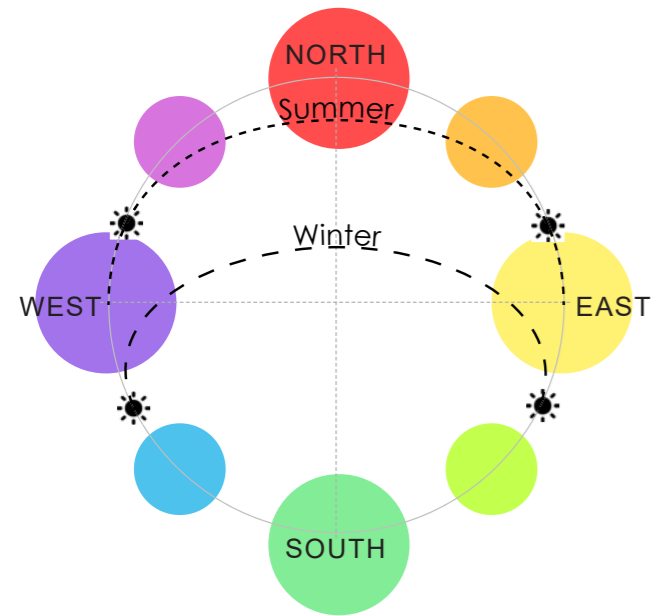


ASPECT



LEGEND

-  Site Boundary
-  Retirement Village Subdivision Boundary








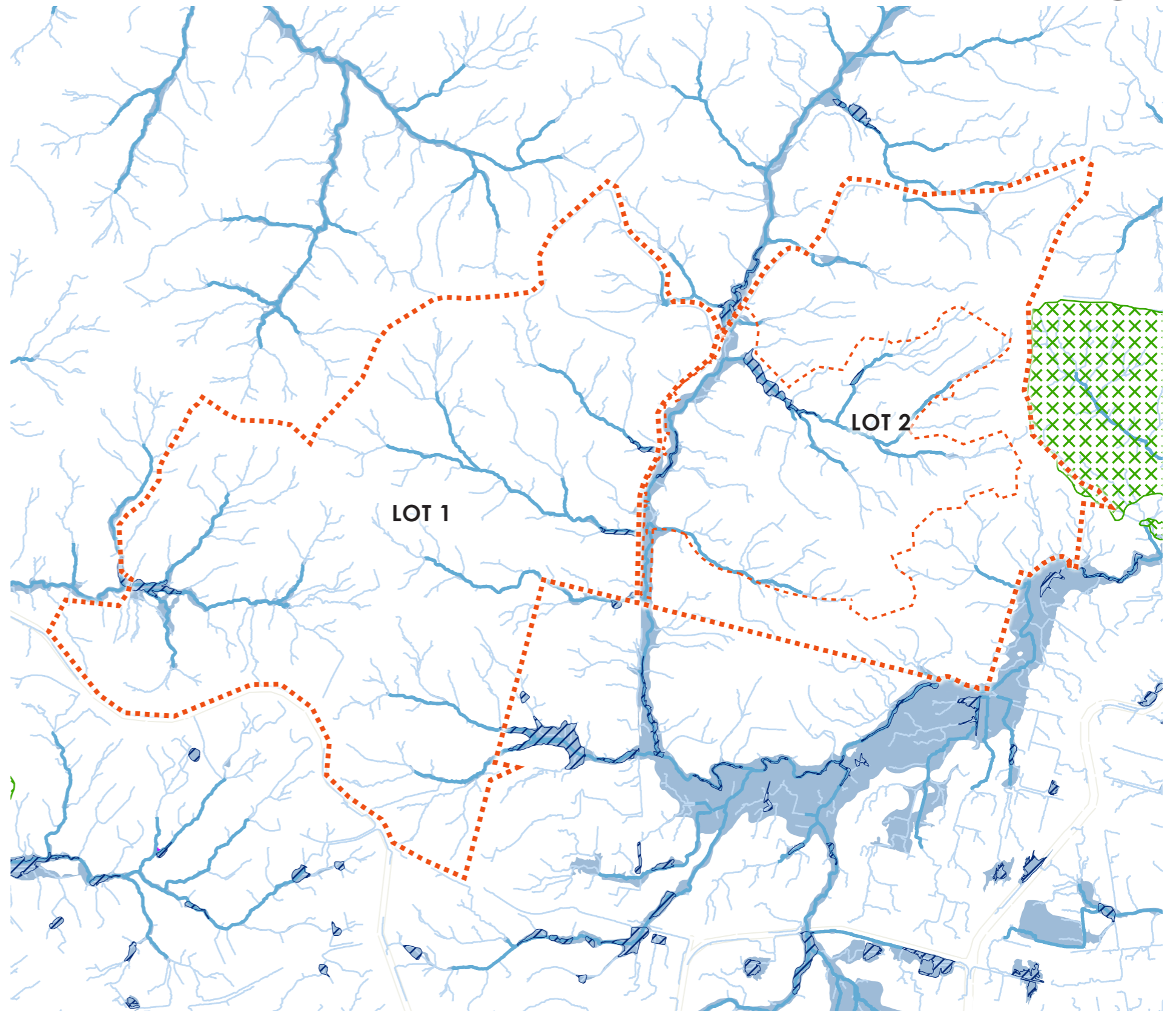
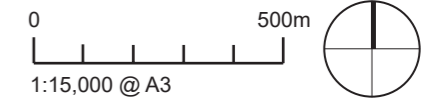
HYDROLOGY AND ECOLOGY

The Site contains a network of permanent, intermittent, and ephemeral streams. The primary permanent stream, which follows the valley floor, is generally deeply incised and includes a section with a series of small rock pools and exposed rock formations. The deforested streams exhibit a range of ecological values, from low to high. Most watercourses within the Site have riparian margins supporting a mix of exotic and native broadleaved scrub. Overall, the forested streams, both intermittent and permanent, are considered to have high ecological value. These streams, located beneath mature pine forest with an indigenous understorey, remain relatively unmodified and retain natural characteristics in their bed, banks, and substrates.

The Site does not contain any identified Significant Ecological Areas (SEAs).

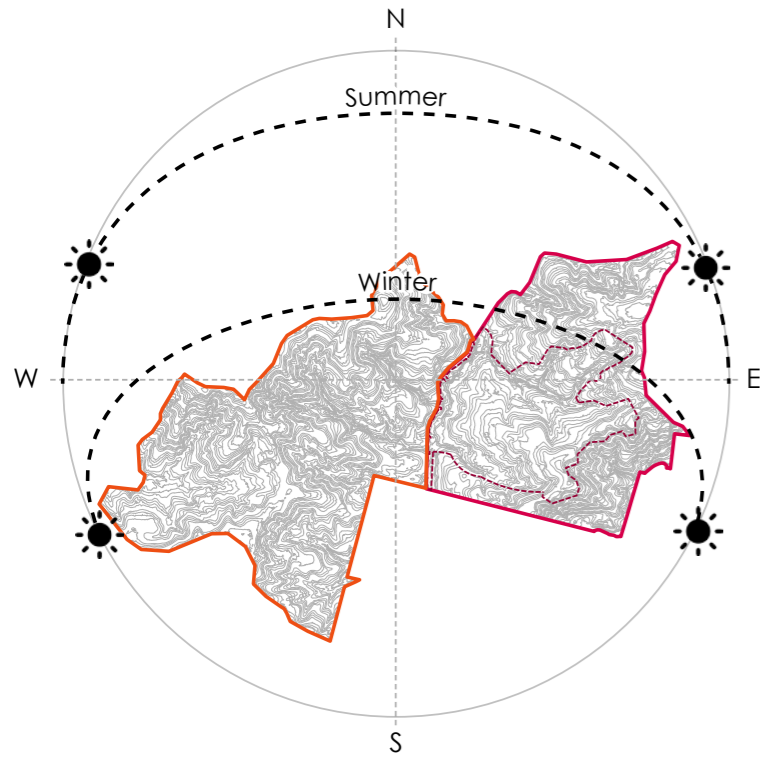
LEGEND

-  Site Boundary
-  Retirement Village Subdivision Boundary
-  Permanent Stream
-  Overland Flow Paths
-  Significant Ecological Areas – Terrestrial
-  Flood Prone Areas
-  Flood Plain



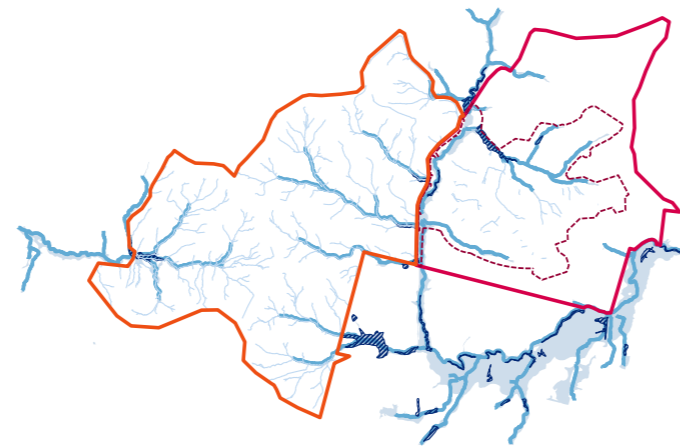
OPPORTUNITIES AND CONSTRAINTS

TOPOGRAPHY AND ORIENTATION



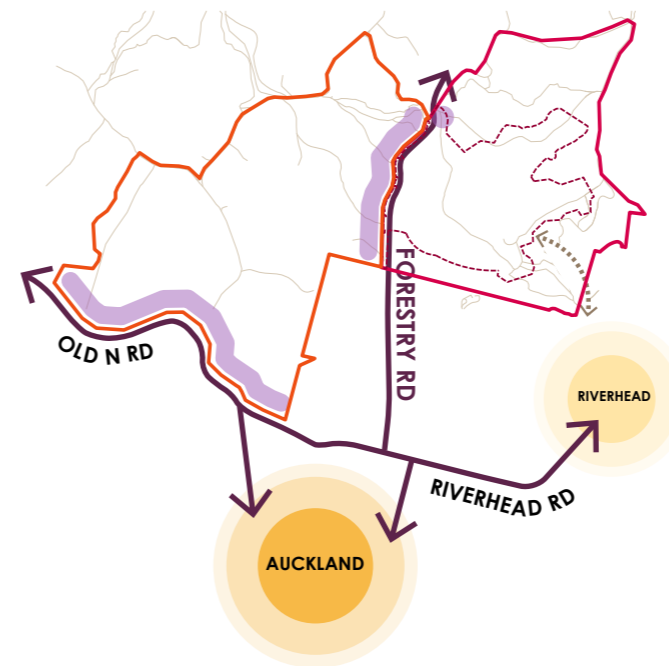
The site naturally cascades into slopes and levels. Roads, connections and housing typologies will need to be specific to the nature of the site.

HYDROLOGY



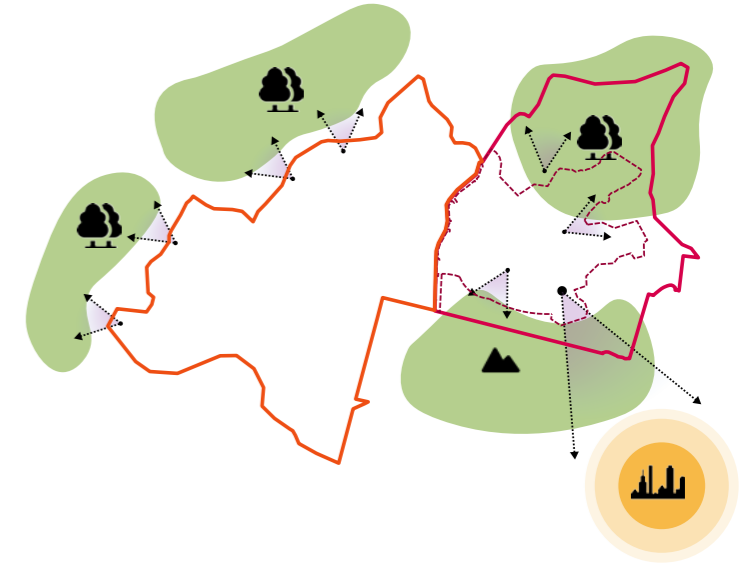
Two streams run along the northern and southern boundaries of Lot 2, creating opportunities for ecological enhancement and recreational routes. The site also contains several overland flow paths, which can be integrated into the stormwater management strategy. A water hole to the north of Lot 1, adjacent to Forestry Road, could provide an amenity feature and serve as a central hub for both lots.

MOVEMENT



The primary transport connection is via Forestry Road, linking to Riverhead Road and Old North Road providing access to Auckland (south) and Riverhead (east). Lot 1 has road interfaces to the south (Old North Road) and east (Forestry Road), while Lot 2 has a single access point in the north-west, from Forestry Road.

VIEWS



The site is in a lower-lying area, surrounded by sloping hills, which limits long-range views. The elevated southern part of Lot 2 offers a broader outlook towards Auckland city centre.



LANDSCAPE PRINCIPLES



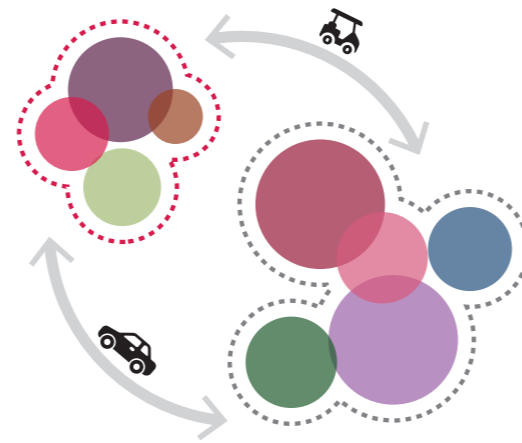
CENTRAL HEART

Designing a central focal point that brings the community together



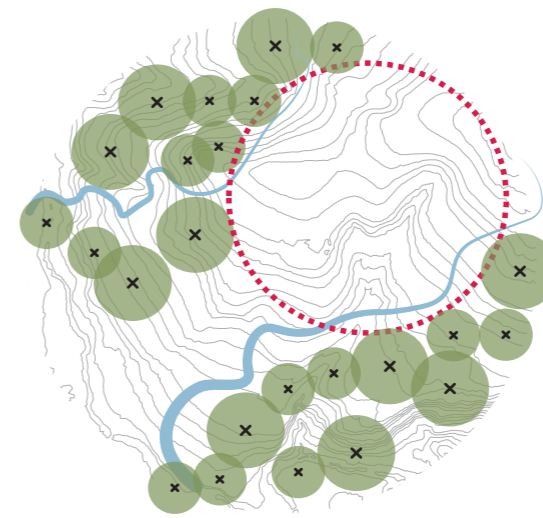
CONNECTIONS

Connecting paths, waterways with the wider cultural landscape



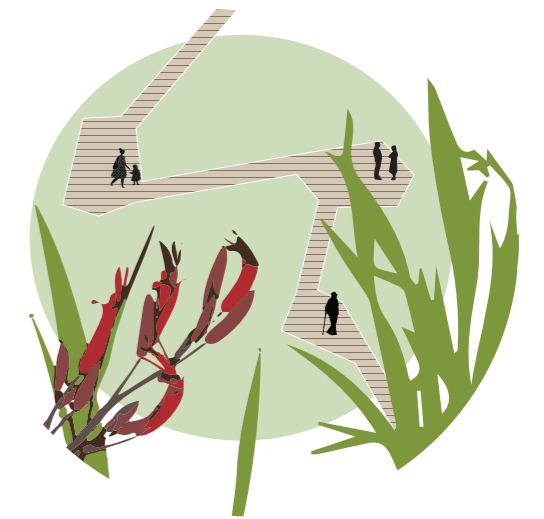
MULTIPLE AMENITIES

Creating a variety of spaces and environments that complement, rather than compete with, existing amenities



ENVIRONMENT

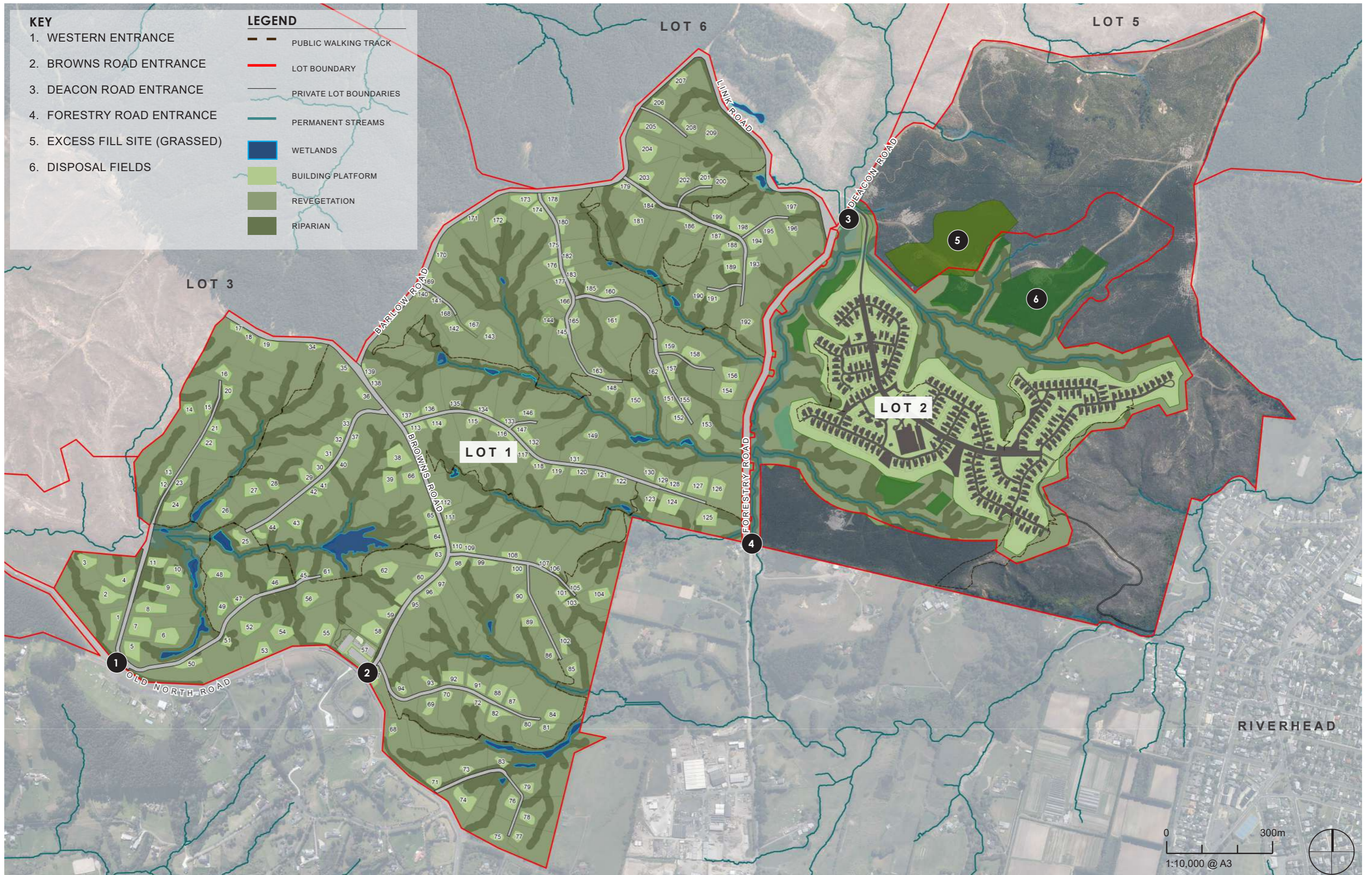
Preserving the site's natural topography and restoring native forest and streams



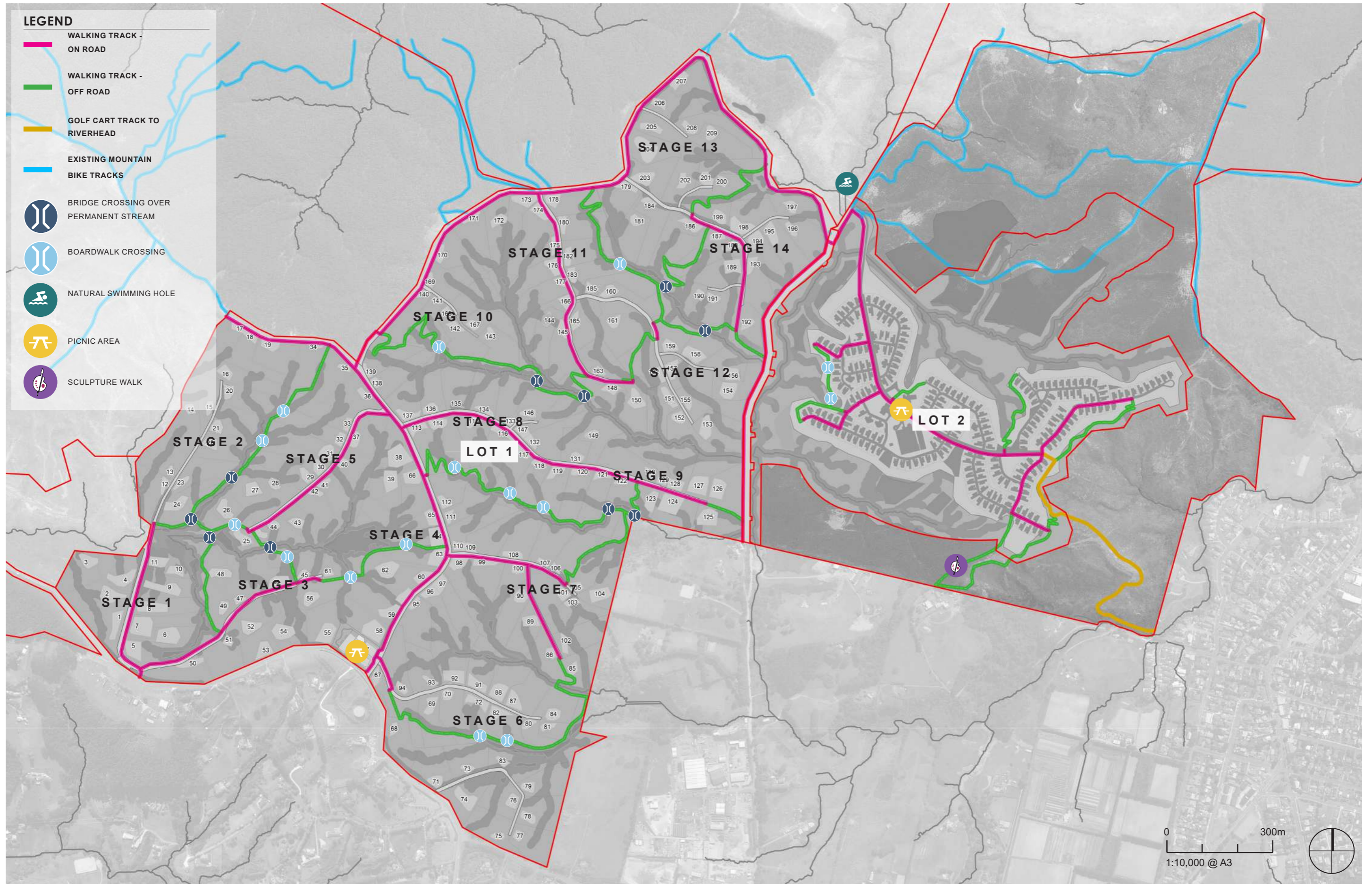
A PLACE TO EXPLORE

Creating a connected green network for ecology and recreation

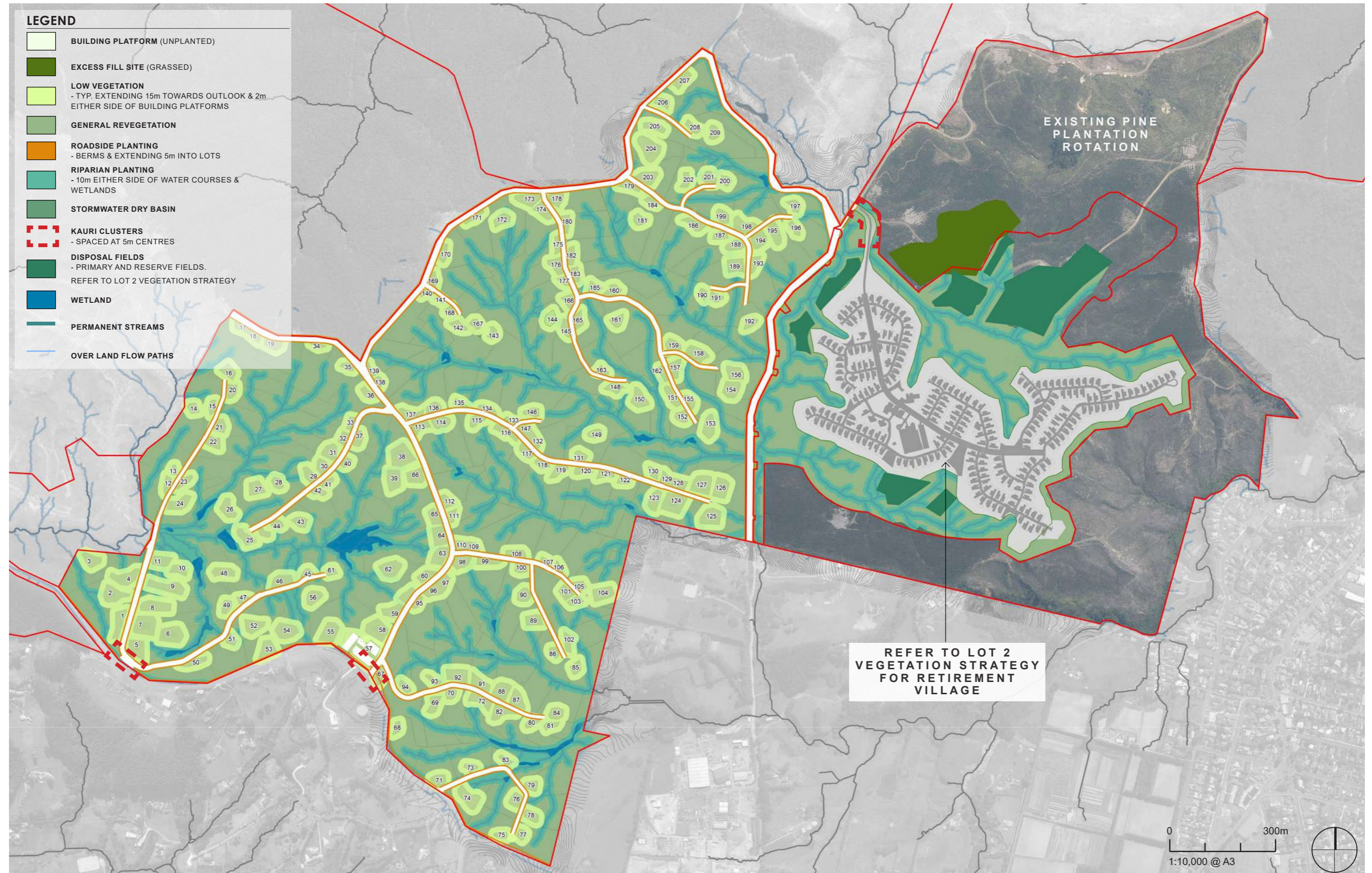
MASTERPLAN



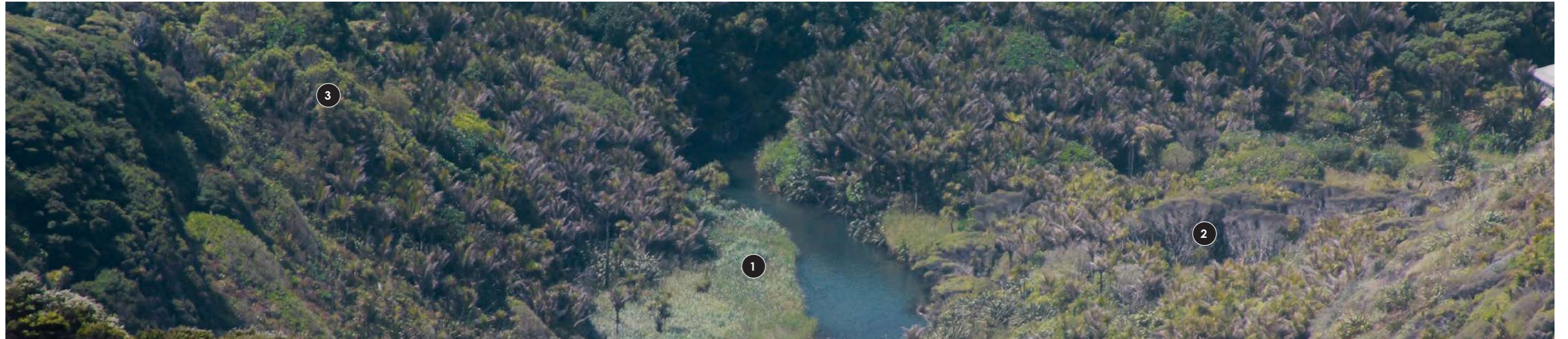
LOT 1 & 2 : TRACK NETWORK



VEGETATION STRATEGY



REVEGETATION - PRECEDENT IMAGERY



1 RIPARIAN PLANTING

RIPARIAN PLANTING TYPICALLY FEATURES A MIX OF NATIVE GRASSES, SHRUBS, AND TREES ALONG STREAM BANKS. THIS VEGETATION CREATES A LUSH, GREEN BUFFER ZONE EXTENDING 10M EITHER SIDE OF WATER COURSES AND WETLANDS.

IT STABILISES SOIL, FILTERS POLLUTANTS, PROVIDES WILDLIFE HABITAT, REGULATES WATER TEMPERATURE, AND MITIGATES FLOODS.



2 SUB-CANOPY

A SUB-CANOPY LAYER FEATURING MĀNUKA AND KĀNUKA CONSISTS OF DENSE, BUSHY SHRUBS WITH SMALL, NARROW LEAVES. MĀNUKA TYPICALLY HAS WHITE OR PINK FLOWERS, WHILE KĀNUKA HAS SMALLER WHITE FLOWERS. TOGETHER, THEY CREATE A ROBUST UNDERSTORY BENEATH THE CANOPY.

BOTH MĀNUKA AND KĀNUKA ARE HARDY, FAST-GROWING SPECIES THAT PREPARE THE SOIL FOR THE ESTABLISHMENT OF OTHER NATIVE PLANTS.



3 CANOPY

A CANOPY LAYER FEATURING KAURI, KAHIKATEA, TŌTARA, NĪKAU, AND PŪRIRI CREATES A DIVERSE AND VISUALLY STRIKING FOREST.















THE MIXED CANOPY HELPS REGULATE TEMPERATURE AND HUMIDITY, CREATING A STABLE ENVIRONMENT FOR UNDERSTORY PLANTS.

THE DIVERSE ROOT SYSTEMS STABILISE SOIL, PREVENT EROSION, AND ENHANCE NUTRIENT CYCLING.

THE VARIETY OF SPECIES ENSURES A RESILIENT FOREST STRUCTURE, CAPABLE OF WITHSTANDING ENVIRONMENTAL CHANGES.

PLANTING TABLE

GENERAL REVEGETATION

	EXAMPLE/SAMPLE		BOTANICAL NAME	COMMON NAME	SIZE (L)	SPACING (M)	%	FORM	HEIGHT AT PLANTING	HEIGHT AT MATURITY	VALLEY FLOOR	LOWER SLOPE	MID SLOPE	UPPER SLOPE	RIDGELINE	ASPECT NORTH/SOUTH
	TAONGA SPECIES			<i>Agathis australis</i>	Kauri	1	5.0	3	Pyramidal	0.5m	30m	●		●	●	●
			<i>Dacrycarpus dacrydioides</i>	Kahikatea	1	5.0	3	Columnar	0.5m	50m	●	●	●			S
			<i>Podocarpus totara</i>	Tōtara	1	5.0	3	Pyramidal	0.5m	15m			●	●	●	N
			<i>Vitex lucens</i>	Pūriri	1	5.0	3	Round	0.5m	15m	●	●	●	●	●	N
			<i>Rhopalostylis sapida</i>	Nīkau	1	5.0	3	Palm	0.5m	10m			●	●	●	S
			<i>Dacrydium cupressinum</i>	Rimu	1	5.0	3	Weeping	0.5m	25m			●	●	●	●
CANOPY SPECIES			<i>Cordyline australis</i>	Ti Kouka	1	1.5	3	Fountain	0.5m	10m	●	●	●			N
			<i>Beilschmiedia tarairi</i>	Tarairi	1	5.0	3	Round	0.5m	20m			●	●		N
			<i>Didymocheton spectabilis</i>	Kohekohe	1	5.0	3	Round	0.5m	10m			●	●		S
			<i>Laurelia novae-zelandiae</i>	Pukatea	1	5.0	3	Pyramidal	0.5m	25m	●	●	●			S
			<i>Prumnopitys taxifolia</i>	Mataī	1	5.0	3	Pyramidal	0.5m	20m	●	●	●			S
			<i>Pseudopanax crassifolius</i>	Horoeka	1	5.0	3	Columnar	0.5m	12m			●	●	●	●
SUB-CANOPY SPECIES			<i>Kunzea robusta</i>	Kānuka	1	1.5	35	Tall shrub/tree	0.5m	10m	●	●	●	●	●	N / S
			<i>Leptospermum scoparium</i>	Mānuka	1	1.5	35	Tall shrub/tree	0.5m	5.0m	●	●	●			N / S















Species based on 'Te Haumanu Taiao : Restoring the Natural Environment in Tāmaki Makaurau' - 4.2.8 WF11: Kauri, podocarp, broadleaved forest and 4.4.3 VS3: Mānuka, kānuka scrub

NOTE

Heights are approximate and subject to supply and environmental influences

PLANTING TABLE

GENERAL REVEGETATION - ENTRANCES & GATHERING SPACES

	EXAMPLE/SAMPLE	BOTANICAL NAME	COMMON NAME	SIZE (L)	SPACING (M)	%	FORM	HEIGHT AT PLANTING	HEIGHT AT MATURITY	OLD NORTH	BROWNS	COMMUNITY FACILITIES	RETAIL HUB		
										ROAD ENTRANCE	ROAD ENTRANCE				
TAONGA SPECIES			<i>Agathis australis</i>	Kauri	45 - 160	5.0	3	Pyramidal	2.5 - 5.0m	30m	●	●	●		
			<i>Dacrycarpus dacrydioides</i>	Kahikatea	160	5.0	3	Columnar	3.0 - 4.0m	50m		●			
			<i>Podocarpus totara</i>	Tōtara	160	5.0	3	Pyramidal	3.0 - 4.0m	15m			●	●	
			<i>Vitex lucens</i>	Pūriri	160	5.0	3	Round	2.5 - 3.0m	15m			●	●	
CANOPY SPECIES			<i>Rhopalostylis sapida</i>	Nīkau	160	5.0	3	Palm	1.7 - 2.5m	10m	●	●	●	●	
			<i>Dacrydium cupressinum</i>	Rimu	160	5.0	3	Weeping	2.5 - 3.0m	25m	●	●	●		
			<i>Cordyline australis</i>	Ti Kouka	160	1.5	3	Fountain	1.5 - 2.0m	10m			●	●	
			<i>Beilschmiedia tarairi</i>	Taraire	160	5.0	3	Round	3.0m	20m			●	●	
			<i>Didymocheton spectabilis</i>	Kohekohe	160	5.0	3	Round	3.0m	10m			●		
			<i>Laurelia novae-zelandiae</i>	Pukatea	160	5.0	3	Pyramidal	2.5m	25m				●	
			<i>Prumnopitys taxifolia</i>	Mataī	160	5.0	3	Pyramidal	1.75m	20m			●		
			<i>Pseudopanax crassifolius</i>	Horoeka	160	5.0	3	Columnar	3.0m	12m	●	●	●	●	
	SUB-CANOPY SPECIES			<i>Kunzea robusta</i>	Kānuka	160	1.5	35	Tall shrub/tree	0.5m	10m	●	●	●	●
				<i>Leptospermum scoparium</i>	Mānuka	160	1.5	35	Tall shrub/tree	0.5m	5.0m	●	●	●	●

Species based on 'Te Haumanu Taiao : Restoring the Natural Environment in Tāmaki Makaurau' - 4.2.8 WF11: Kauri, podocarp, broadleaved forest and 4.4.3 VS3: Mānuka, kānuka scrub

NOTE

Heights are approximate and subject to supply and environmental influences

PLANTING TABLE

ROADSIDE PLANTING - TREES

ROAD CORRIDOR & ~5m BUFFER ALONG LOT EDGES TO ROADS

Provides screening and vegetative character to roads

EXAMPLE/SAMPLE	BOTANICAL NAME	COMMON NAME	SIZE (L)	SPACING (M)	FORM	HEIGHT AT PLANTING	HEIGHT AT MATURITY
	<i>Agathis australis</i>	Kauri	45	As shown	Pyramidal	3m	30m
	<i>Cordyline australis</i>	Ti Kouka	45	As shown	Fountain	1.2m	10m
	<i>Dacrycarpus dacrydioides</i>	Kahikatea	45	As shown	Columnar	2.8m	50m
	<i>Dacrydium cupressinum</i>	Rimu	45	As shown	Weeping	2m	25m
	<i>Knightia excelsa</i>	Rewarewa	45	As shown	Columnar	1.5m	20m
	<i>Metrosideros excelsa</i>	Pōhutukawa	45	As shown	Spreading	1.75m	10m
	<i>Podocarpus totara</i>	Tōtara	45	As shown	Pyramidal	1.8m	15m
	<i>Rhopalostylis sapida</i>	Nīkau	45	As shown	Palm	1.5m	10m
	<i>Sophora microphylla</i>	Kōwhai	45	As shown	Weeping	2m	8m
	<i>Vitex lucens</i>	Pūriri	45	As shown	Round	1.75m	15m

NOTE












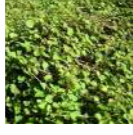






Heights are approximate and subject to supply and environmental influences

PLANTING TABLE

ROADSIDE PLANTING - SHRUBS

ROAD CORRIDOR & ~5m BUFFER ALONG LOT EDGES TO ROADS

Providing a vegetated buffer between the road corridor and private property

EXAMPLE/SAMPLE	BOTANICAL NAME	COMMON NAME	SIZE (L)	SPACING (M)	%	FORM	HEIGHT AT PLANTING	HEIGHT AT MATURITY
	<i>Adiantum cunninghamii</i>	Common maidenhair	1	0.5	6	Fern	0.2m	0.3m
	<i>Apodasmia similis</i>	Oioi	1	1	8	Rush	0.5m	1m
	<i>Asplenium bulbiferum</i>	Pikopiko	1	1	3	Fern	0.5m	0.8m
	<i>Astelia chathamica</i>	Kakaha	1	1	6	Herb	0.25m	1.5m
	<i>Astelia grandis</i>	swamp astelia	1	1	6	Herb	0.25m	1.5m
	<i>Austroderia fulvida</i>	Toetoe	1	2	3	Grass	0.5m	2m
	<i>Austroderia splendens</i>	Toetoe	1	2	3	Grass	0.5m	2m
	<i>Carex germinata</i>	Rautahi	1	1	8	Sedge	0.25m	1m
	<i>Carex secta</i>	Purei	1	1	6	Sedge	0.25m	1.5m
	<i>Chionochloa flavicans</i>	Haumata	1	1	6	Grass	0.25m	1m
	<i>Dianella nigra</i>	Turutu	1	1	6	Herb	0.25m	0.5m
	<i>Fuchsia procumbens</i>	Creeping fuchsia	1	2	6	Liana	0.1m	0.2m
	<i>Hebe stricta</i>	Koromiko	1	1.5	6	Shrub	0.25m	2m
	<i>Lobelia angulata</i>	Panakenake	1	0.5	6	Liana	0.1m	0.2m
	<i>Lomaria discolor</i>	Petipeti	1	0.5	6	Fern	0.25m	1m
	<i>Parablechnum novae-zelandiae</i>	Kiokio	1	0.5	6	Fern	0.25m	1.5m
	<i>Phormium tenax</i>	Harakeke	1	1.5	6	Herb	0.5m	3m
	<i>Piper excelsa</i>	Kawakawa	1	3	3	Tall shrub/tree	0.5m	6m

NOTE

Heights are approximate and subject to supply and environmental influences

PLANTING TABLE



















RIPARIAN & STORMWATER DRY BASIN PLANTING

10m BUFFER TO WATERCOURSE & WETLAND EDGES

Essential for maintaining healthy, resilient riparian ecosystems

STREAM EDGE, FLOOD AND DRY SLOPE

DRY SLOPE ONLY

EXAMPLE/SAMPLE	BOTANICAL NAME	COMMON NAME	SIZE (L)	SPACING (M)	%	FORM	HEIGHT AT PLANTING	HEIGHT AT MATURITY
	<i>Austroderia fulvida</i>	Toetoe	1	1.5	8	Grass	0.25m	1.5m
	<i>Blechnum novae-zelandiae</i>	Kiokio	1	1	8	Fern	0.25m	1.0m
	<i>Carex dissita</i>	Forest sedge	1	1	8	Sedge	0.25m	0.5m
	<i>Carex lessoniana</i>	Rautahi	1	1	8	Sedge	0.25m	1.0m
	<i>Carex virgata</i>	Pūkio	1	1	12	Sedge	0.25m	1.0m
	<i>Carpodetus serratus</i>	Putaputawētā	1	1.5	3	Tall shrub	0.25m	6.0m
	<i>Cordyline australis</i>	Ti kōuka	1	1.5	3	Tall shrub/ tree	0.5m	8.0m+
	<i>Veronica stricta var. stricta</i>	Koromiko	1	1.5	7	Shrub	0.5m	2.0m
	<i>Cyperus ustulatus</i>	Giant umbrella sedge	1	1	8	Sedge	0.5m	1.5m
	<i>Leptospermum scoparium</i>	Mānuka	1	1.5	11	Tall shrub/ tree	0.5m	5.0m
	<i>Melicytus ramiflorus</i>	Māhoe	1	1.5	3	Tall shrub/ tree	0.5m	6.0m
	<i>Phormium tenax</i>	Harakeke	1	1.5	3	Herb	0.5m	3.0m
	<i>Hedycarya arborea</i>	Porokaiwhiri	1	1.5	3	Tall shrub/ tree	0.5m	8.0m
	<i>Hoheria populnea</i>	Houhere	1	1.5	3	Tall shrub/ tree	0.5m	8.0m
	<i>Kunzea robusta</i>	Kānuka	1	1.5	3	Tall shrub/ tree	0.5m	10m
	<i>Myrsine australis</i>	Māpou	1	1.5	3	Tall shrub/ tree	0.5m	6.0m
	<i>Pittosporum tenuifolium</i>	Kōhūhū	1	1.5	3	Tall shrub/ tree	0.5m	6.0m
	<i>Schefflera digitata</i>	Patē	1	1.5	3	Tall shrub/ tree	0.5m	8.0m

Species based on 'Te Haumanu Taiao : Restoring the natural environment in Tāmaki Makaurau' - Table 9.2: Revegetation Schedule for Riparian Zones in Tāmaki Makaurau / Auckland

NOTE



















Heights are approximate and subject to supply and environmental influences

PLANTING TABLE

LOW VEGETATION / WASTE WATER DISPOSAL FIELD

LOW AMENITY PLANTING ADJACENT TO BUILDING PLATFORMS

Maintains outlook and solar access to the living environment

EXAMPLE/SAMPLE	BOTANICAL NAME	COMMON NAME	SIZE (L)	SPACING (M)	%	FORM	HEIGHT AT PLANTING	HEIGHT AT MATURITY
 	<i>Adiantum cunninghamii</i>	Common maidenhair	1	0.5		Fern	0.2m	0.3m
	<i>Apodasmia similis</i>	Oioi	1	1		Rush	0.5m	1m
 	<i>Asplenium bulbiferum</i>	Pikopiko	1	1		Fern	0.5m	0.8m
	<i>Astelia chathamica</i>	Kakaha	1	1		Herb	0.25m	1.5m
 	<i>Carex germinata</i>	Rautahi	1	1		Sedge	0.25m	1m
	<i>Carex lessoniana</i>	Rautahi	1	1		Sedge	0.25m	1m
 	<i>Carex secta</i>	Purei	1	1		Sedge	0.25m	1.5m
	<i>Carex virgata</i>	Purei	1	1		Sedge	0.25m	1.5m
 	<i>Chionochloa flavicans</i>	Haumata	1	1		Grass	0.25m	1m
	<i>Coprosma kirkii</i>	Taupata	1	1.5		Shrub	0.25m	0.5m
 	<i>Dianella nigra</i>	Turutu	1	1		Herb	0.25m	0.5m
	<i>Fuchsia procumbens</i>	Creeping fuchsia	1	2		Liana	0.1m	0.2m
 	<i>Hebe stricta</i>	Koromiko	1	1.5		Shrub	0.25m	2m
	<i>Libertia grandiflora</i>	Mikoikoi	1	0.5		Herb	0.25m	1m
 	<i>Lobelia angulata</i>	Panakenake	1	0.5		Liana	0.1m	0.2m
	<i>Lomaria discolor</i>	Petipeti	1	0.5		Fern	0.25m	1m
 	Kiokio	Parablechnum novae-zelandiae	1	0.5		Fern	0.25m	1.5m
	Austroderia fulvida	Toetoe	1	2		Grass	0.5m	2m

NOTE

Heights are approximate and subject to supply and environmental influences

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