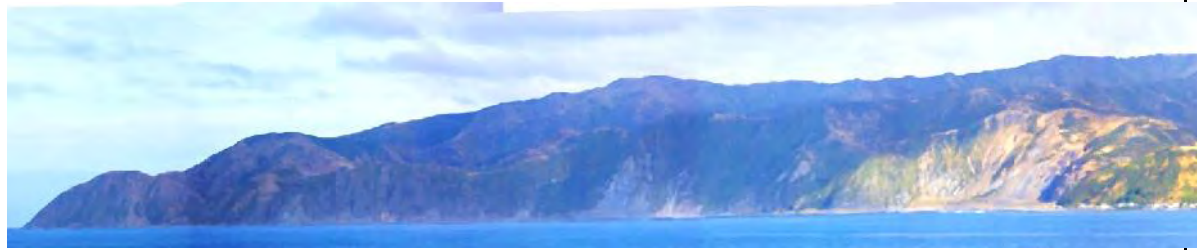


## 6.7 SECTOR 7: TE KOPAHOU

*Te Kopahou translates loosely to “a bent or folded feather”.*



*The rugged landscape of Te Kopahou. The steep coastal escarpment rises sharply above the narrow shore platform from Rimurapa / Sinclair Head (left) to the former Ōwhiro Quarry site (right). Inland, the Waipapa and Hape Stream catchments rise to Hawkins Hill (distant skyline, right).*

Key features/values:

- Large area of rugged and comparatively remote coastal landscape on the edge of Cook Strait
- Significant for rare and threatened native species and coastal ecosystems
- Te Rimurapa heritage precinct of significance to mana whenua
- Historic sites associated with early settlement and World War II
- Visitor destinations: Red Rocks seal colony, Brooklyn wind turbine
- Challenging outdoor recreation opportunities
- Hawkins Hill (495 m) – highest point in the Outer Green Belt
- Large area in north under landfill designation

*Local communities of interest:* **Brooklyn, Happy Valley, Ōwhiro Bay**

*Local community volunteer activities:* restoration planting, botanical surveys, track building, predator control

### 6.7.1 OVERVIEW

Sector 7 (1,124.3 ha) extends south from Zealandia along the main ridgeline, taking in the high points of Brooklyn wind turbine (380 m), Hawkins Hill (495 m) and Te Kopahou (485 m) before descending to the south coast, where it partly adjoins Taputeranga Marine Reserve. It also covers much of the steep country in the catchments of Te Hape and Waipapa **Streams and parts of Carey’s Gully that** separate the main ridge from the urban area. **Some 345 ha in Carey’s Gully and surrounding slopes** are designated for landfill purposes.

#### Master plan

A master plan for the Te Kopahou Reserves is proposed in *Our Natural Capital*<sup>44</sup>, which prioritises the area for protection as a significant ecological site. The *Open Space Access Plan* states that future track development of the Te Kopahou Reserves will be considered as part of the master plan. The Council began preliminary work on a master plan in 2017 but has now decided to incorporate the project into this section of the Outer Green Belt Management Plan, rather than having a separate document, for the following reasons.

<sup>44</sup> *Our Natural Capital*, Action 1.1.1 (d)

- Previously, the Outer Green Belt concept area ended at the top of the coastal escarpment in this sector but it is now proposed to extend the scope of the Outer Green Belt down to sea level so that all the ecologically significant Te Kopahou reserve land will be covered by this management plan.
- This Plan can guide future management of the area in the context of the Outer Green Belt vision for protecting, restoring and connecting nature, in line with *Our Natural Capital*, and balancing the various landscape, cultural, heritage and recreational values alongside biodiversity values.
- Integrated and connected management of the area will be enhanced because this Plan also **encompasses the upper slopes and main ridgeline above Carey's Gully, which form an important link from the Te Kopahou area to Zealandia and other reserves such as Polhill and Long Gully Reserve.**

#### 6.7.1.1 Land status

The land in this sector is of varying status (see Management Sector 7 land status map). A large area of has not been gazetted as reserve land. It was originally acquired for sanitary works (disposal of refuse) but only about 200 ha has a landfill designation. The remaining part of the un-gazetted land is managed as reserve. The area includes much of the Waipapa and Hape Stream catchments and has very high natural values. This latter undesignated area, together with several classified scenic, **historic and local purpose reserves adjacent to the coast, is known as 'Te Kopahou Reserve', as shown** in the Te Kopahou Reserve map. The Reserve area comes within the scope of the *South Coast Management Plan 2002 (SCMP)*. A minor review of that plan will be required to remove the reserve from its scope. This could be done as part of the SCMP review, which is now well overdue and awaiting strategic direction in relation to coastal resilience and climate change.

North of the Te Kopahou Reserve area, within the landfill designation, are three landfills.

The **Council's Southern Landfill in Carey's Gully takes the City's municipal waste. It is currently at stage 3 of 5 stages planned to provide at least 50 years' capacity.** Future requirements could change **through the Council's commitment to reduce waste volumes, potentially aided by advances** in waste management technology. The landfill is highly visible from the ridgeline above and will become more so as fill advances up **Carey's Gully. The landfill plan includes a 200-metre buffer strip** around the upper slopes of the gully but, nevertheless, areas of upper stream catchment, including vegetation, would disappear beneath the fill. Upon permanent closure of the landfill, the intention is to restore native vegetation to the site.

The privately run *C & D landfill is located on Tip Track ridge on the south side of Carey's Gully and is accessed from Landfill Road.* Under its resource consent, fill was previously permitted up to a level of 240 m asl, but the permitted height was increased to 270 m asl in 2017, which will take it up to very nearly the top of the ridge. The C&D landfill designation area also allows for expansion into the adjacent gully. Remedial planting that was done under the earlier consent will be covered over. The landfill is very close to the public Tip Track so the higher level and loss of planting will increase its visibility to recreational users. Adherence to consent conditions and minimising the potential effects on nearby recreational use is important.

The privately-run *T & T landfill is in the next valley north of Carey's Gully, partly on leased Council land.* It will run for about another five years before reaching capacity. It would then become available for public open space but is likely to be for suburban reserve use. Therefore, it is not proposed to include it in the Outer Green Belt reserves.

It is a priority to protect the open space values of land no longer intended for refuse disposal use through appropriate reserve classification. At this stage it is proposed to gazette all the unclassified land within the Te Kopahou Reserve (i.e. south of the Tip Track) as scenic reserve. To the north, in the designated area, the future landfill requirements are to be reviewed within the timeframe of this Plan. As much as possible of the upper slopes will be left undisturbed and decisions about further reserve classifications, including the ridgetop where Hawkins Hill Road runs and the zipline is

proposed, will then follow, taking account of the desirability of protecting an ecological link along the ridgetop between Te Kopahou and Zealandia.

#### 6.7.1.2 Nature

This sector is highly significant ecologically despite having been much modified by land clearance, grazing, pest animal damage, weed competition and fire. A number of rare and threatened plant and animal species, and naturally rare or threatened plant communities are present. Some of the rarity and/or threatened status is due to species being naturally uncommon, having adapted to the harsh local conditions; some is due to the major habitat modification which has reduced distribution to small pockets or vestiges of species and former habitats. The Te Kopahou Reserve is identified a **'priority biodiversity site' in *Our Natural Capital***, with objectives to increase the population of existing threatened, and regionally rare species, as well as locally significant species and ensure their habitat(s) are healthy and restored; and to connect other ecosystems in the surrounding area to enhance and enable ecological restoration. Part of this sector is identified as a site in the regionally significant Wellington South Coast Key Native Ecosystem, recognised by Greater Wellington Regional Council, as shown in the sector maps.

Native vegetation is gradually regenerating following historic clearance of most of the area for pastoral farming, primarily in the gullies and areas around remnant vegetation. Introduced weed **species such as gorse and Darwin's barberry are also prominent as the** landscape transforms. The vegetation is strongly influenced by the harsh conditions of the south coast and is patchy in distribution patterns.

In brief, there are several distinct ecological zones

- *Shore platform*: raised in the 1848 and 1851 earthquakes. Low-lying beach, dune and rock stack environments supporting hardy shrubs, grasses and herbs adapted to the salty environment and including small pockets of marsh and native turf, including rare plants vulnerable to damage.
- *Coastal escarpment*: very steep slopes, merging into rocky cliff environments in places, exposed to strong onshore winds; wind-shorn grey scrub, shrub, flax, tussock and herb vegetation; and habitat for some threatened species.
- *Exposed tops of ridges and spurs*: native grasses, tussock, speargrass, grey scrub and shrublands.
- *Valleys of Te Hape (Spooky Gully) and Waipapa (Te Kopahou) streams*: more sheltered conditions support a wider range of plants, in regenerating native shrublands and coastal forest including, as well as trees and shrubs, scrambling plants (e.g. clematis) and herbs (e.g. ground orchids). Regenerating tree hebe forest is a notable feature as is the presence of dracophyllum and other unusual shrubs high up on the slopes of Hawkins Hill. Species uncommon to the Wellington ecological district occur.
- *Happy Valley Road locality / Landfill buffer zone*: regeneration is less advanced in this area, as the land was retired later from grazing and fire risk has been higher due to proximity to roads. Gorse, tauhini and bracken are common; manuka, kanuka and some other broad leaved species are present. A feature in the buffer zone is some tree fern / astelia **hillsides, similar to those that are a feature at Makarā Peak.**

As the maps show the majority of this sector is registered as a permanent forest sink, a use that is compatible with managing the natural values, in particular, excluding grazing stock and managing weeds and pest animals to foster regeneration of the native vegetation.

Wildlife habitats are various, from the exposed coastal and ridgetop areas to the more sheltered inland gullies. Wildlife includes sea birds, seals (present at the well-known seal colony), the common skink and common gecko, forest birds and, of course, invertebrates.

### The Speargrass Weevil<sup>45</sup>

**It may come as a surprise that around a dozen of New Zealand's** weevil species and populations are recognised as being threatened with extinction. What is more, our speargrass weevils (*Lyperobius huttoni*) are one of the most threatened.

This tiny (2cm long weevil) eats only one plant species: the spiky speargrass (*Aciphylla squarrosa*). The soil-dwelling larvae feed on the roots. The adults eat the leaves and flower stalks.

The only North Island population of a group of weevils characteristic of the South Island high country is found around the Wellington south coast. They are hosted by *A. squarrosa*, which occurs on the coastal slopes to near sea-level. This population is threatened by browsing by pigs and goats which dig out and destroy their host plant. Being flightless and slow-moving, the weevils are also highly vulnerable to predation by rats and mice.

In 2006 the Department of Conservation estimated that there were fewer than 150 adult speargrass weevils surviving on the Wellington south coast. Between 2006-2007, 40 adult weevils were moved from Hawkins Hill to Mana Island, with financial support from the Friends of Mana Island, **to establish a 'back-up' population** in a safer habitat.

The current status of the south coast population is unknown and increased rodent and ungulate control is required to protect this unique species.

#### Issues:

*Harsh environment:* (climate, soil, terrain) slow plant growth, low survival rates when planting.

*Fire:* flammable weed species and some flammable native vegetation too.

*Steep topography:* difficult access for weed and pest control – hard to establish vegetation cover after fire, weed control or ground disturbance.

*Tracks:* opening vegetation canopy (which could have taken some time to achieve) can result in weed invasion and spread of weeds along tracks; cutting a line through fragile remnant or re-establishing vegetation can destabilise e.g. the hebe forest. However new tracks can help with access to survey biodiversity and allow volunteers and workers to do animal control and planting.

*Adjacent private land:* source of weeds e.g. wilding pines. Also, trampling and browsing damage from feral pig, goat and deer in recent years due to the lack of boundary fencing.

#### *Animal pests and weeds:*

- Can adversely affect all parts of the ecosystem, including plants, birds, lizards, invertebrates - through competition; spread of weed seeds; damage from trampling, browsing, rooting; and predation—which all interfere with natural processes, including, importantly here, succession of native vegetation.
- The effects of weeds and pest animals can decimate the small existing populations of indigenous species here, making those populations even smaller and more isolated to the point they are no longer self-sustaining.
- Pig, goat and possum control, has benefited the regeneration of vegetation but ongoing control of ungulates (goats, deer, pigs), hares, rabbits and possums will be needed to protect native plant communities. Ongoing predator control will also be needed to protect vulnerable wildlife such as lizards and birds, including in due course, kiwi under the Capital Kiwi vision

Source: <sup>45</sup> <https://blog.tepapa.govt.nz/2015/11/20/speargrass-weevils-thriving-on-mana-island/>



Much of the area has come under possum control in the last 12 months and sustained ongoing control will greatly benefit biodiversity.

- The open regenerating landscape is highly vulnerable to weed species. While some, such as gorse, may work as a nursery for native regeneration, others can derail the ecological **succession process and are of particular concern. Old Man's Beard is an example. There is a need to closely monitor and manage weeds.**
- Weeds of most concern are:
  - on the **ridgetops, hillsides and valleys: old man's beard, and boneseed and some not** locally indigenous native species including karo, karaka, houpara and pohutukawa;
  - on the coastal escarpment: boneseed; and
  - on the shore platform various weed species including buddleia, tree lupin and horned poppy.
- Weed control is targeted to protect species (e.g. dracophyllum) or high-value sites where infestations are at low enough levels for control to be feasible within the available resources.
- **Darwin's barberry is at its southern-most extent in the city and less widespread than in other sectors, so some chemical control will be used in addition to biocontrol.**
- Some aerial control of boneseed has been undertaken by Greater Wellington Regional Council in the KNE area as a containment action under its regional pest management strategy.
- *More resourcing is needed for weed and pest animal control and fencing, taking into account the relative remoteness and difficulty of terrain, which add to costs.*
- There is potential to explore alternative technologies like drones to help gather information or manage species.
- *Climate change:* increased frequency and intensity of weather events (storms and droughts) and overall higher temperatures could increase the risk of new plant and animal species establishing to pest proportions.

**Ōwhiro Bay Quarry:** the site is still unstable and disturbed, which complicates its ecological recovery and restoration efforts.

*Isolation:* the area has been isolated from other natural areas by landscape-scale land clearance, **urban development to the east and the landfill operation in Carey's Gully. However, there is potential to strengthen links to Long Gully, Zealandia and Polhill Gully through this sector and across Ōwhiro Valley to Tawatawa Reserve, which will help to connect and extend habitats of rare and endangered species and, in the face of climate change, enable species to move/relocate through the landscape if need be.**

*Capital Kiwi:* the relative remote and undeveloped terrain is potential habitat for reintroducing kiwi under the Capital Kiwi project. However, much needs to happen first for a number of years in the way of pest animal control (in particular mustelids), so it is a long-term collaborative initiative.

### 6.7.1.3 Landscape and land use

#### *Landscape*

This is the most rugged and remote landscape in the Outer Green Belt, with a high level of natural character, despite having been significantly modified by land clearance and industrial-scale activities (quarry and landfill). The area is characterised by steep complex topography, including the entire catchments of several relatively short streams that flow through deep gullies and out to sea through narrow openings in the coastal escarpment. The escarpment, with its steep, exposed cliff faces, rock screes and clinging vegetation, is a visually striking landform, rising to nearly 300 metres in places,

and curving out to the headland of Te Rimurapa / Sinclair Head. A narrow shore platform comprising shingle beaches, small dune areas and rocky outcrops runs along the shoreline below the escarpment.

From the southern and eastern suburbs the main ridge is a prominent skyline, emphasised by the landmark Brooklyn wind turbine and the radome on Hawkins Hill. Stunning views from the many vantage points take in the rugged south coast; **the Terawhiti hill country and Makarā wind farm**; Te Whanganui a Tara/Wellington Harbour and the Orongorongo and Rimutaka ranges beyond; and, on clear days, the Kaikoura Ranges of the South Island across Cook Strait.

The coastal escarpment has been **substantially modified at the site of the former Ōwhiro Bay Quarry**, which was closed in 2000 **after more than 90 years' operation**. The site is **recognisable today in the large-scale benched faces on the escarpment immediately beyond the Te Kopahou Visitor's Centre**. Rehabilitation of the site has been guided by the *Ōwhiro Bay Quarry Closure Management Plan 2000*, which was aimed at making the site safe for the public and starting site restoration. The initial stabilisation works were completed and restoration planting has continued, totalling some 14,000 plants between Te Hape Stream and Rimurapa / Sinclair Head. However, the stability of the quarry faces in an earthquake is uncertain and the planting outcomes need review. Planting of threatened and locally significant species has received community group financial and planting support in recent years.

The landfill activities in the vicinity of this sector have resulted in large-scale landform modification, which affect landscape values now and will continue to do so in the future, as explained earlier.

#### 6.7.1.4 Culture and heritage

This sector is rich in cultural and historic heritage values.

***Te Rimurapa Māori Heritage Precinct***. The precinct, listed in the district plan, is an area of **Māori settlement and significance** dating back to Kupe. Sites of significance include former **pā** sites, urupa, karaka groves and Pari-whero (**Red Rocks**). **The south coast area was also important to Māori** for food gathering.

*Places of historic value include: the former Ōwhiro Bay Quarry site*, dating back to gravel extraction activities in the 1900s and subsequent quarrying into the coastal escarpment; the coastal road and associated Hape Stream dam, which historically provided access round the coast; two groups of baches located at Red Rocks and Mestanes Bay, which date from 1900s- 1940s and are both registered as historic areas with Heritage New Zealand; the WWII fortifications on Rimurapa /Sinclair Head on former Māori Reserve land; traces of former farming seen in features such as old stock yards and fences; and the Hawkins Hill radome.

Some of these features and places require protective and/or remedial work. There is also potential for woody weed species to invade and damage and/or obscure sites and this will need to be monitored. Little is known about the origins of Te Hape dam but it was built before 1942 and is considered of local historical interest<sup>46</sup>. Located about 100 m inland from the coast, it is a barrier to some fish species. It is proposed to construct a rock ramp to improve fish passage and otherwise allow the dam to deteriorate over time.

Excellent interpretation about mainly the coastal area is presented in displays at the Te Kopahou Visitors Centre but there is potential to tell more of the stories of this area in a range of ways, including digitally.

#### 6.7.1.5 Recreation and access

This sector is a popular destination both locally and for visitors to Wellington:

- the Brooklyn wind turbine is an easily accessible drive-to viewpoint popular for sightseeing, with its expansive views over the city and harbour, rugged Terawhiti hill country and Cook

<sup>46</sup> *Hape Stream Dam, Future Options* (2007). Prepared for Wellington City Council by Parks & Open Spaces Ltd.

Strait. Currently, a further attraction in this vicinity, which has been approved subject to resource consent and leasing arrangements, is a zipline, which would offer an adventure tourism opportunity **in the head of Carey's Gully**;

- the Te Kopahou ridge and gully system, inland of the coast, which provides opportunities for exploring a comparatively remote and rugged environment for the adventurous;
- **the shoreline, beyond the Te Kopahou Visitors' Centre at the end of Ōwhiro Bay Road**, is popular as a comparatively accessible way to explore a dramatic coastal environment with strong natural character, see well-known natural features such as Red Rocks and the seal colony, and – for some – venture further to the more remote coast beyond, with its fishing, diving, tramping and 4-WD opportunities.

A fine balance is needed in this sector to enable visitors to experience the ruggedly dramatic natural environment and its rich stories whilst also protecting and restoring the very values that make the area so special.

### *Issues and opportunities*

**Ōwhiro Bay Quarry site:** The instability of the former quarry faces on the coastal escarpment is a safety risk, currently managed with warning signs and, in places, barriers to contain rock fall. The passage of time and effects of natural events such as earthquake and storm could see the condition of the faces change, so monitoring will be needed and a system for assessing the risk and liability. It could be, for instance, that at that some stage the area should be closed to public access.

**Coastal road:** A number of issues are associated with the unformed public road that runs generally along the coastal platform from the gates at Hape Stream to Te Rimurapa / Sinclair Head and beyond to Karori Stream. In places the actual legal road area lies over steep cliffs and rock outcrops, and much of the route is subject to constant tidal erosion. The road is suitable for off-road vehicles, but a higher level of competence is required to use the more isolated areas of the coast. All users have an obligation to act responsibly, both in relation to other user groups and to protect the environment. Issues include: incompatibility between walkers, mountain bikers and drivers of motorised vehicles including motorbikes; vehicles unsuited to the unformed surface getting stuck; dumping of abandoned vehicles; vehicle damage to vulnerable coastal ecology and disturbance of wildlife; effects of coastal erosion; and risk of rock fall from the unstable faces **of the former Ōwhiro Quarry**.

The road is currently kept open by bringing in machines to regrade it as required, usually several times a year. The user conflicts were reduced some years ago by closing the road to vehicles on Sundays but still remain, especially in high use periods such as public holidays. Other options include restricting vehicle use for more days a week but that option would significantly impede access for the people who regularly go further around the south coast beyond the marine reserve for fishing and food gathering and people who otherwise might not be able to reach the seal colony at Red Rocks. Separating walking, biking and motorised use is another option but would involve widening the roadway or creating separate parallel tracks on the higher, more stable parts of the coastal flat, with potential to damage the natural character and vulnerable shore ecology. In the short to medium term, increased enforcement of shared use rules is proposed and options to increase vehicle closure times to public holidays and night-time will be explored. Night-time closure could be managed with an electronic gate that would allow access by permit to property owners beyond the gate (e.g. bach owners) and allow other vehicles to exit the road after dark. In the longer term, the viability of maintaining a route suitable for private vehicle use is likely to be increasingly doubtful due to the effects of climate change.

**Tracks and access.** Proposals for a number of new tracks in the Te Kopahou area have been received from the community and these will be considered through a public consultation process in terms of principles in *Open Space Access Plan 2016* and the general track network policies in this Plan. There could be potential to improve the existing track network with some loop route connections and opportunities for people to explore from the shore up Hape Stream to discover the hidden valley there. The **area's high natural** character, significant biodiversity values and potential for the deep stream valleys to be future kiwi habitat will need to be taken into account. New tracks in Te Kopahou

can have a significant impact, as outlined earlier. Thin rocky soils and the harsh climatic conditions on the steep topography lead to slow natural vegetation regeneration and poor success rates with restoration planting of disturbed ground. Openings in the low canopy invite weeds to establish and funnel wind into the understorey. Slow rehabilitation of bare track batters on steep slopes will prolong their visibility. The Council considers a dense track network to be inappropriate, bearing in mind these factors as well as the more remote nature of the recreational experiences offering in this area.

As the Management Sector 7 future initiatives map shows, there will be two main entrances to the Outer Green Belt in this sector: one at the Brooklyn wind turbine where development of facilities is proposed (see general policies on entrances, amenities and way-finding) and the other at the **Te Kopahou Reserve Visitor's Centre** on the coast, where visitor facilities are already well developed. In the future, there could be potential to develop off-street parking with a short connecting track up to **Tip Track on a currently leased site off Ōwhiro Road on the south side of the Tip Track spur.**

*Hawkins Hill Road.* This is an entrance to the Outer Green Belt and provides drive-on public access up to the Brooklyn wind turbine, a popular sightseeing spot, as well as walking and biking access south along the ridge to Hawkins Hill and beyond. The road is closed to public vehicle traffic at night by a gate at Ashton Fitchett Drive. There is also right-of-way access along the road to private properties on the ridge and in Long Gully, which has seen increased use of the road in recent years and the need for long-term maintenance agreements. Careful management is needed to ensure safety for recreational users; options include measures to reduce vehicle speed and defining a separate path for walkers and bikers.

*Tramping opportunities:* There is a future opportunity for tramping and overnight stay opportunities **to be developed from the Te Kopahou area, which could offer a 'remote' recreation experience within easy reach of the city.** While a route and tramping hut site within the Outer Green Belt is one option, **a longer route around the coast to the Terawhiti hill country and Makarā coast is another, which could involve private landowner partnership and provision for overnight stays.**

#### 6.7.1.6 Community

There are numerous opportunities for local communities, community groups and neighbours to help care for and enjoy the special values in this sector. Volunteer activities undertaken in recent years have included botanical surveys, track building, restoration planting, rubbish clean up and pest animal control. The popularity of the Te Kopahou coastline as a destination, the proximity of the Taputeranga Marine Reserve and the special cultural and heritage stories of the area are all aspects that could generate participation of special interest groups. Greater Wellington Regional Council is involved in managing the KNE area within this sector, including wider weed and pest animal control, and the Department of Conservation manages the scientific reserves at Te Rimurapa (Sinclair Head) and Pariwhero (Red Rocks), where a salt marsh field and the Red Rocks feature are protected.

The Te Kopahou coastal entrance is the main gateway to the South Coast for sea-based recreational activities, including gathering of kai, fishing, diving and snorkelling. It is therefore, a focal area for co-ordinating public education about the marine environment and resource use and for regulatory surveillance of recreational fishing. Public education days, organised jointly by the Department of Conservation, Ministry for Primary Industries and the Council have set a constructive precedent, **which could be further developed to promote understanding and appreciation of the area's heritage** and highly significant land-based biodiversity values.

#### *Pariwhero/Red Rocks*

Pariwhero/Red Rocks is a striking geological feature on the coast in the Te Rimurapa Precinct. The red, basaltic pillow lava was formed by lava erupting onto the seafloor while sediments were accumulating around it. It runs inland as a rock band but is exposed to view on the coastal edge.

#### 6.7.2 ACTIONS

N = new initiative; E = Existing; Ex = Expand existing

(Notes: (i) Some 'new' projects come within larger funded programmes but have not yet been started.

(ii) Implementation depends on budget allocations.)

6.7.2.1 Land administration		
Land status		
1. Survey off and protect the currently unclassified land outside the designated landfill area as scenic reserve (see Management Sector 7 maps and Appendix III), and seek rezoning as Open Space (b)	N	1-5 yrs
2. Protect as much of the slopes above the landfill <b>in Carey's Gully as possible, as a</b> key area of regenerating coastal forest linking the coastal area of Te Kopahou with Polhill Reserve and Zealandia.	E	ongoing
Licenses and rights of way		
3. Work with landowners and businesses who have legal right of way on Hawkins Hill Road to manage and maintain the road in ways that will protect and benefit <b>public access to and use of the Council's reserves.</b>	N	3-5 yrs
6.7.2.2 Nature		
Caring for Nature		
1. Continue to work with Greater Wellington Regional Council on protecting and managing the Key Native Ecosystem site by implementing the Wellington South Coast KNE Management Plan 2016-2019 and subsequent editions.	E	ongoing
2. Undertake a feasibility study and trials to fence off areas to protect vulnerable plant and animal species from known threats (e.g. to protect <i>Aciphylla</i> from pigs or to protect vulnerable rare plants from rabbit/hare browse).	N	3-5 yrs
3. Work through the threatened plant working group and other partnerships to increase the population of existing threatened, and regionally rare species, as well as locally significant species and ensure their habitats are healthy and restored.	Ex	ongoing
Streams		
4. The streams in Waipapa and Hape Catchments are some of the least modified in Wellington City, protect them by avoiding any stream modifications	E	ongoing
5. Conduct a feasibility assessment and cost benefit analysis of options to improve fish passage past Hape Stream dam, taking into account its heritage value (see 6.7.2.4 (7) also).	N	1-2 yrs
6. Map all known seepages in the landscape and encourage restoration planting where appropriate to restore these habitats	N	3-5 yrs
Indigenous flora and planting		
7. Review the consent conditions for C&D and TNT landfills and ensure that all required restoration and buffer planting has been completed.	N	1-2yrs

8. Investigate and trial planting and maintenance methods on areas where ground has been exposed and/or disturbed e.g. through weed control or track building or maintenance work, to reduce the risk of weed growth.	N	3-5 yrs
9. Continue restoration planting of key threatened, or locally significant species, with continued community group funding/operational assistance.	Ex	1-5 yrs
Wildlife		
10. Continue to monitor the dispersal and establishment of native birds at the coastal end of this sector to help understand the role of the Outer Green Belt as a bird corridor at its farthest reaches.	E	ongoing
Weeds and pest animals		
11. Verify 2017 vegetation mapping for Te Kopahou to inform improvements in weed threat management of key habitat types.	N	1-2 yrs
12. Continue goat and pig control to maintain gains achieved since southwest peninsula goat control programme started in 2012 (highest priority for this type of control in the Outer Green Belt).	E	ongoing
13. Investigate with Greater Wellington Regional Council about increasing boneseed control on the coastal escarpment under the Regional Pest Management Strategy (estimated current area of aerial control is 30% of escarpment area).	N	1-2 yrs
Ecological values on private land		
14. Conduct a feasibility and cost benefit analysis for installing and maintaining a boundary fence to exclude feral animals (such as goats and pigs) from neighbouring rural properties. If shown to be viable seek funding	N	1-2 yrs
15. Support willing neighbouring landowners adjoining Te Kopahou Reserve to assist with trapping and other methods of pest animal and weed control.	Ex	ongoing
16. Work with neighbours to protect biodiversity values, such as threatened plants e.g. through education, fencing.	N	ongoing
17. Partner with landowners and/or occupiers of neighbouring properties to support native bush restoration in areas which have been retired from farming, to improve connectivity between Zealandia and Long Gully Reserve, and to protect the steep headwaters of the side streams draining into Long Gully.	N	ongoing
Research		
18. Conduct a survey of spear grass beetles to evaluate the current population and put in place appropriate measures of protection.	N	1-2 yrs
19. Conduct a review and report on the ecological restoration so far carried out on the former Ōwhiro Bay Quarry site, including effectiveness of methods, key factors to optimise survival and recommendations for the future of the site and restoring nearby areas (see 6.7.2.3 (1) also).	N	3-5 yrs
20. Re-do the photo points taken (1998) around the coast to record the effects on the shore vegetation after implementing the policy to limit 4WD vehicles to the formed coast road <sup>47</sup> .	E	1-2 yrs

<sup>47</sup> Report: *Scientific Study of Vehicle Impacts on Wellington's South Coast* (Oct 1998), Harrison Grierson Consultants Ltd.

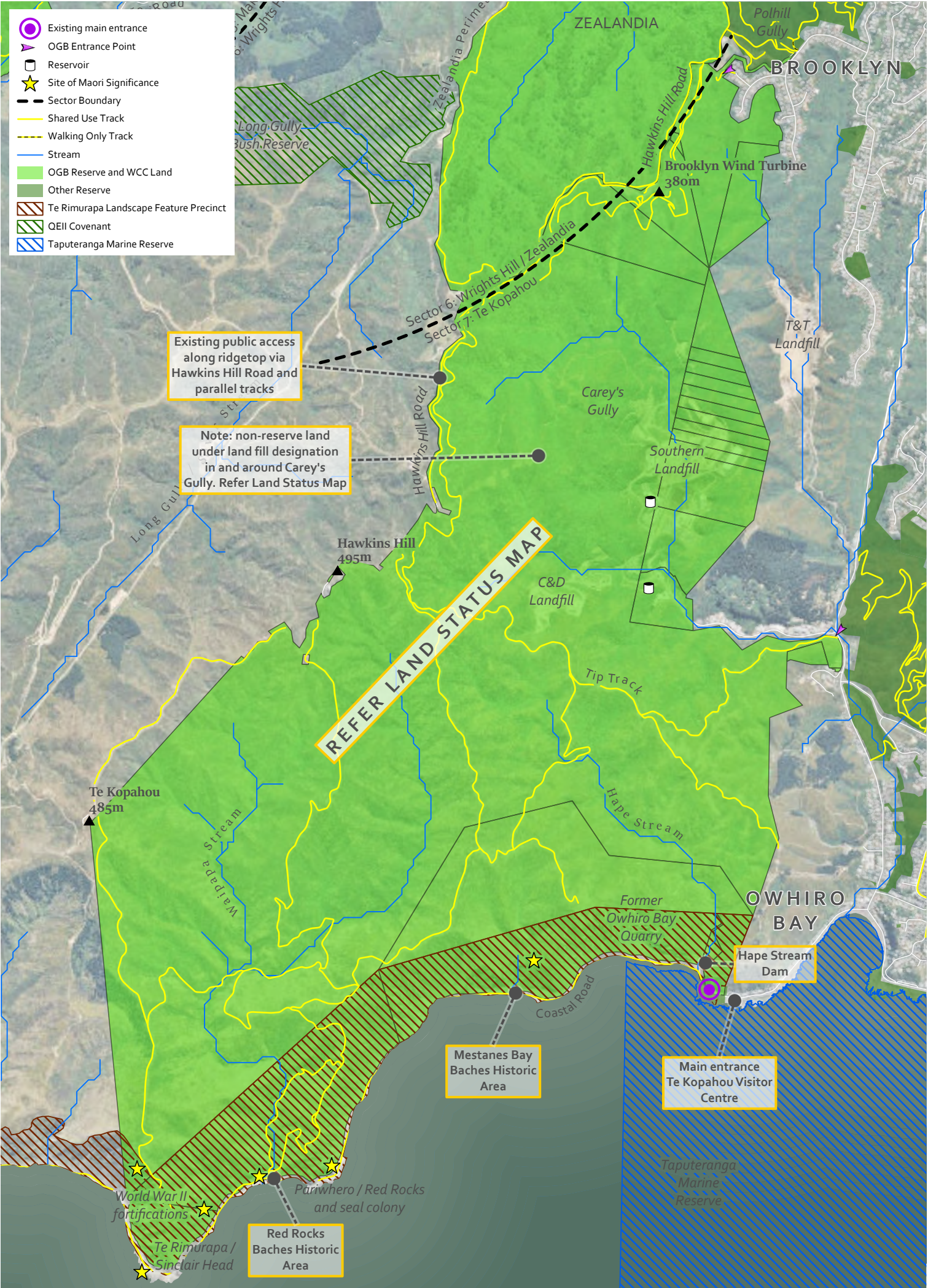


21. In 2026-2027 redo the vegetation plot monitoring (5 plots in Te Kopahou) to evaluate changes as a result of initiating possum control in 2017.	N	5-10 yrs
22. Continue to support research into the factors limiting the dispersal of threatened or locally significant bird species from Zealandia such as <b>tīeke, kākārīki, and</b> toutouwai.	Ex	1-2 yrs
23. Encourage and enable research to improve knowledge of this natural landscape.	Ex	3-5 yrs
<b>6.7.2.3 Landscape and land use</b>		
Landscape management		
1. Review the <i>Ōwhiro Bay Quarry Closure Management Plan 2000</i> to identify any potential outstanding items, as well as identify any new public safety issues, such as stability of the old quarry faces. (see 6.7.2.2 (19) also).	N	1-2 yrs
2. Review the consent conditions of the C & D landfill to ensure compliance with rehabilitation conditions and need for additional screen planting along the Tip Track (see 6.7.2.2 (7) also).	N	1-2 yrs
<b>6.7.2.4 Culture and Heritage</b>		
Protection and restoration of sites and features		
1. Investigate, in consultation with mana whenua, how best to manage sites of <b>significance e.g. pā sites</b>	E	ongoing
2. Maintain vegetation around the historic features and structures to protect them from damage and, where appropriate, maintain views.	E	ongoing
3. If heritage values of a given site or structure are adversely affected by a rare, threatened or uncommon native plant or animal, management options will be identified and evaluated in terms of protecting the heritage values.	N	ongoing
4. Carry out any earthworks within Te Kopahou Reserve ( i.e. any of the areas with existing or proposed reserve status in this Plan) in accordance with the archaeological requirements of Heritage New Zealand.	E	ongoing
5. Work with Heritage New Zealand to manage sites in this sector listed in the Heritage New Zealand register of historic sites.	N	ongoing
6. Taking into account the desire to preserve historic heritage whilst protecting public safety, commission historic conservation and technical structural experts to: a) identify which historic structures to: • maintain, repair and strengthen; or • retain but fence off from the public; or • remove; and b) advise on any removal and remedial works then undertaken, as resources permit.	N	5-10yrs
7. Allow the Hape Stream dam to deteriorate over time subject to periodic checks of its stability for public safety (see 6.7.2.2 (5) also).	N	ongoing

Interpretation		
8. Develop interpretative material in a variety of media about cultural and heritage features and history in this sector, as resources permit and within the overall Outer Green Belt interpretation planning (see general policy 4.4.2.2 and 4.6.2.7); focusing particularly on an updated map of Te Kopahou showing the key cultural and historic heritage features, some introductory information about them and how to visit them via the track network.	N	5-10 yrs
6.7.2.5 Recreation and access		
Recreational activities		
1. Encourage visitors, by way of onsite, brochure and digital information, to keep to tracks to avoid damaging the fragile ecology in Te Kopahou.	N	ongoing
Track network		
2. Prepare and implement an engagement plan to investigate the need, feasibility, suitability and timing of developing new tracks, in consultation with the community, under the criteria outlined in the general track network policies in this Plan, which include ecological impact assessment criteria in the <i>Open Space Access Plan 2016</i> and detailed professional track building and ecological route assessment in the field, bearing in mind the need to: <ul style="list-style-type: none"> <li>consider the more remote, rugged landscape character of the Te Kopahou area as a setting for recreation;</li> <li>minimise short and long-term impacts;</li> <li>avoid sites of high ecological value.</li> </ul>	N	1-2 yrs
3. Limit the development of the track network in this sector to the existing tracks and any tracks approved under the assessment and consultation process outlined in the preceding action for the duration of this Plan.	N	Ongoing
4. Investigate options to improve the safety for recreational users on Hawkins Hill Road and implement agreed measures, including areas of separation between vehicles and pedestrians/cyclists: <ul style="list-style-type: none"> <li>a) planning;</li> <li>b) implement physical upgrades.</li> </ul>	N N	1-3 yrs 3-5 yrs
5. Continue to close the coast road to vehicle use on Sundays and increase park ranger and volunteer warden patrols throughout the week to enforce speed limits and promote respectful shared use behaviour.	Ex	ongoing
6. Investigate the option of closing the coast road to vehicle use on public holidays in consultation with the community, including off-road vehicle users of the road.	N	1-2 yrs
7. Investigate closing the coast road to private vehicle use during night-time hours except by permit, subject to consultation with the community and feasibility.	N	1-2 yrs
8. Develop and implement assessment criteria to guide decisions on managing the risk to the public of rock fall from the former Ōwhiro Bay quarry site, including a review of the existing warning signage.	N	1-2 yrs

Track Maintenance & development		
9. Continue to install minor alternate routes where gradients on 4WD tracks are so long and steep as to detract from recreational enjoyment and to enhance operational access for emergency, fire control and land management purposes.	E	ongoing
10. Ensure stream crossings are either fords at grade (wet-foot crossings) or built over water courses with no use of culverts.	E	ongoing
Entrances, facilities and way finding		
11. Develop the Brooklyn wind turbine area as a main entrance to Te Kopahou, with: a) toilets and drinking water; b) and more information about the Outer Green Belt and recreational opportunities, including a map board, and improved interpretation signage.	N	5-10 yrs
12. <b>Assess the feasibility of developing a parking area off Ōwhiro Road</b> with access to the Tip Track and, if feasible, implement.	N	5-10 yrs
13. Investigate the opportunities for developing a long-distance tramping route around the coast beyond Te Rimurapa/Sinclair Head, in partnership with private landowners, including provision for <b>'remote' overnight stays</b> .	N	3-5 yrs
Way finding		
14. Continue to update the wayfinding signage to help guide visitors on the track network.	E	ongoing
15. Add distances and typical walking and biking times to track information at the main entrances and appropriate junctions of the track network, including: at the Brooklyn wind turbine, at track junctions near Hawkins Hill, at the shoreline entrance at the end of The Esplanade, and at the potential Happy Valley Road entrance.	N	ongoing
6.7.2.6 Community		
1. Work with the Department of Conservation, the Ministry for Primary Industries and Friends of Taputeranga Marine Reserve to co-ordinate shore-based management of the Taputeranga Marine Reserve and public education about the marine resources in the reserve and south coast in general.	Ex	1-2 yrs
2. Where appropriate engage visitors with the special natural values of Te Kopahou and the efforts and challenges required to protect and restore that landscape.	N	3-5 yrs
3. Where possible work with the neighbours and the community to ensure efforts to protect species are connected through the landscape, as an ecological corridor regardless of land ownership.	Ex	ongoing
4. Establish and maintain long-term partnerships with any tourism operators associated with this sector (e.g. proposed zip-line) to contribute to long-term ecosystem protection and enhancement.	N	ongoing

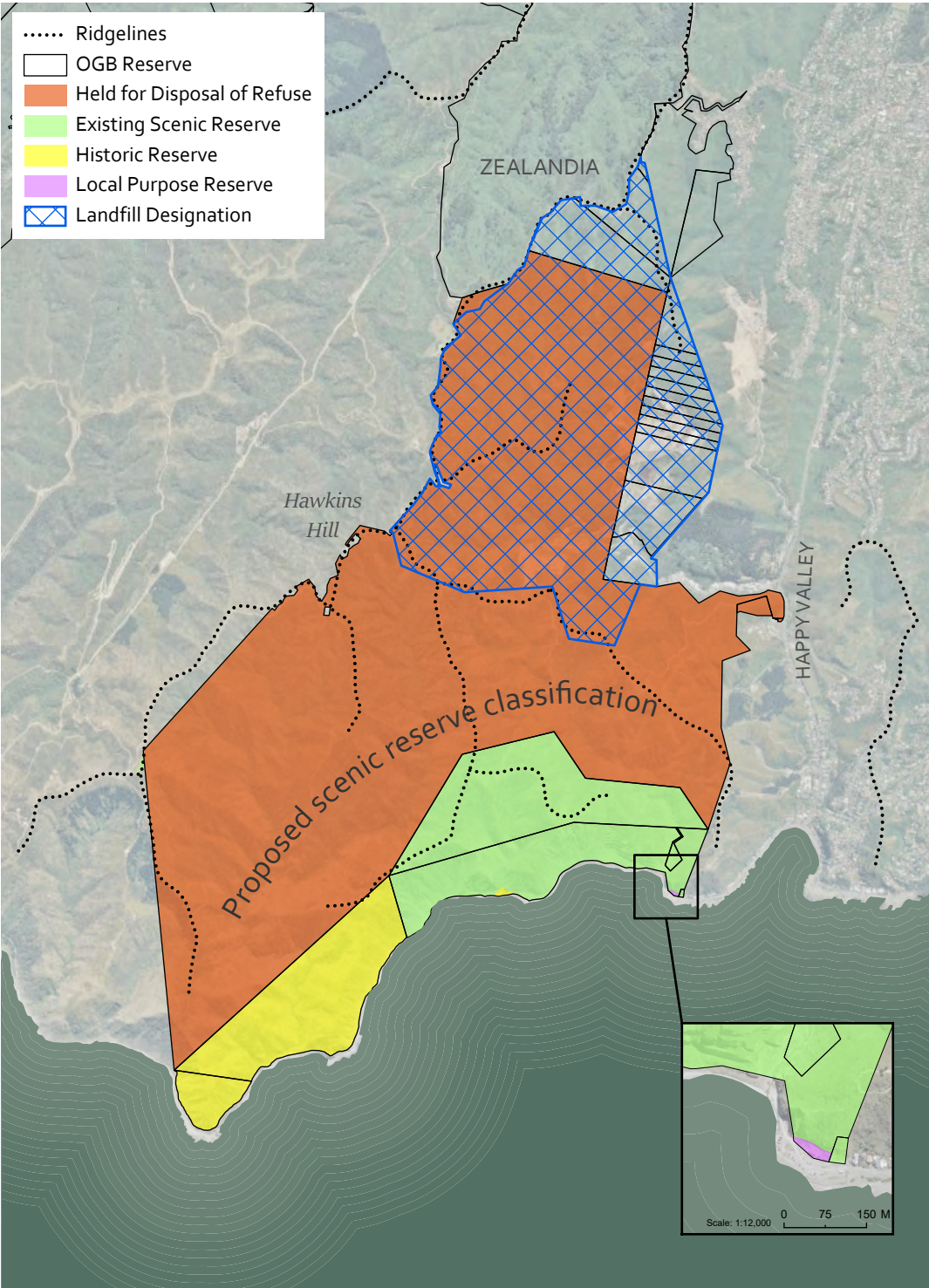




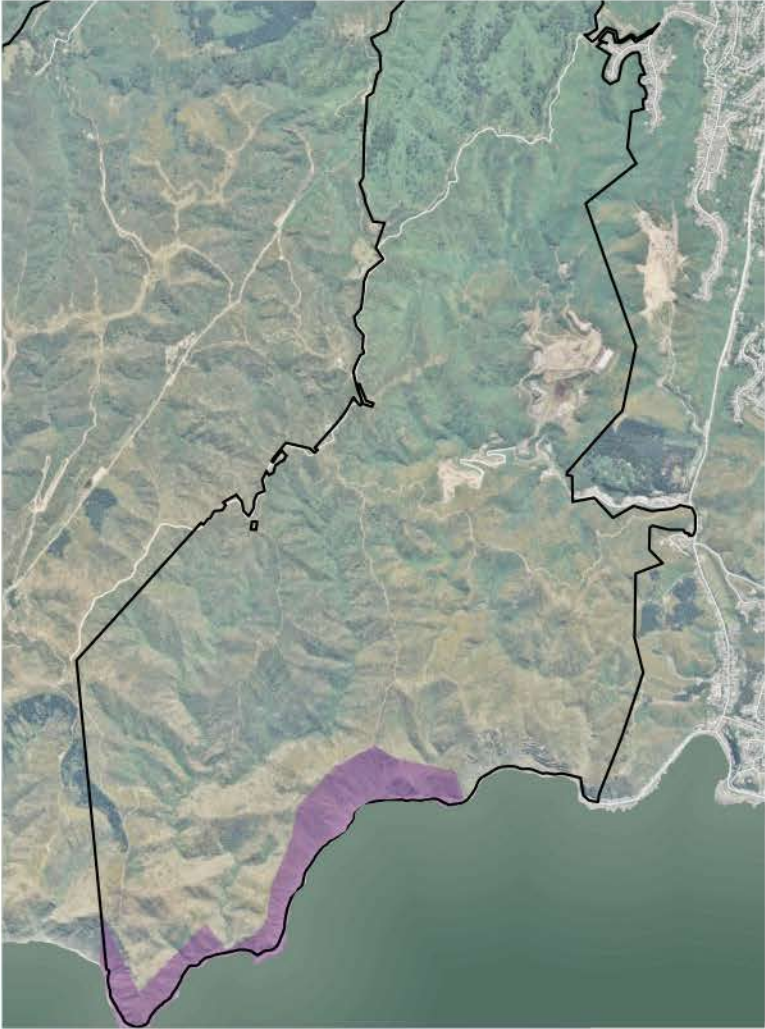


# Te Kopahou Land Status

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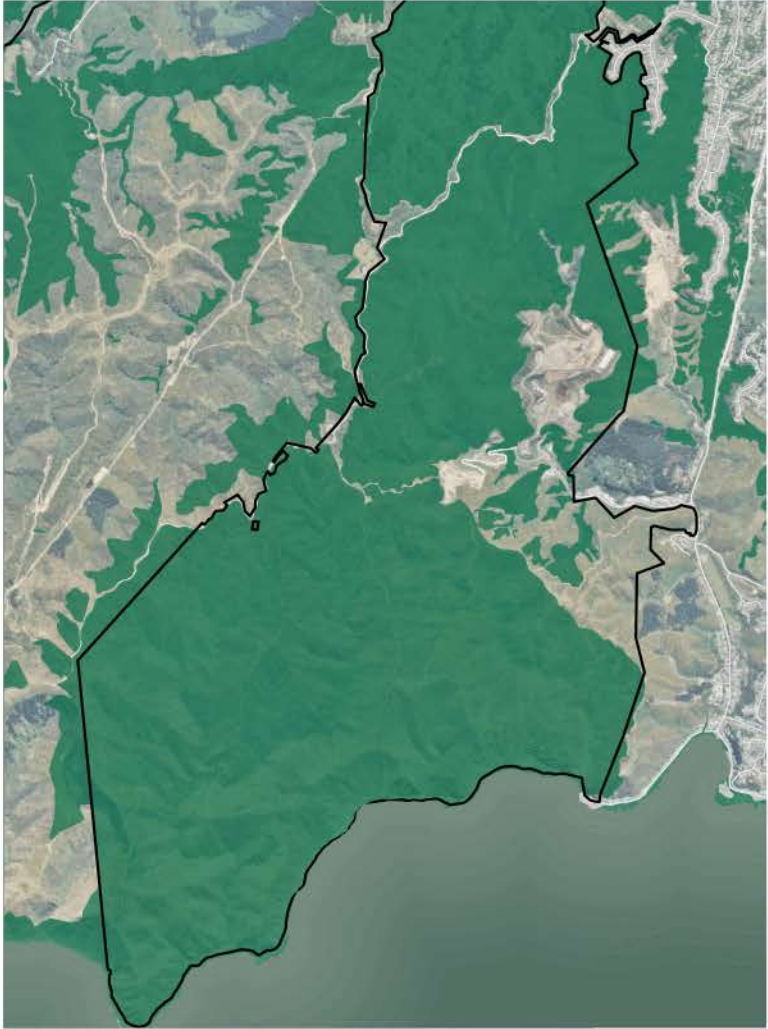




Key Native Ecosystem OGB Area

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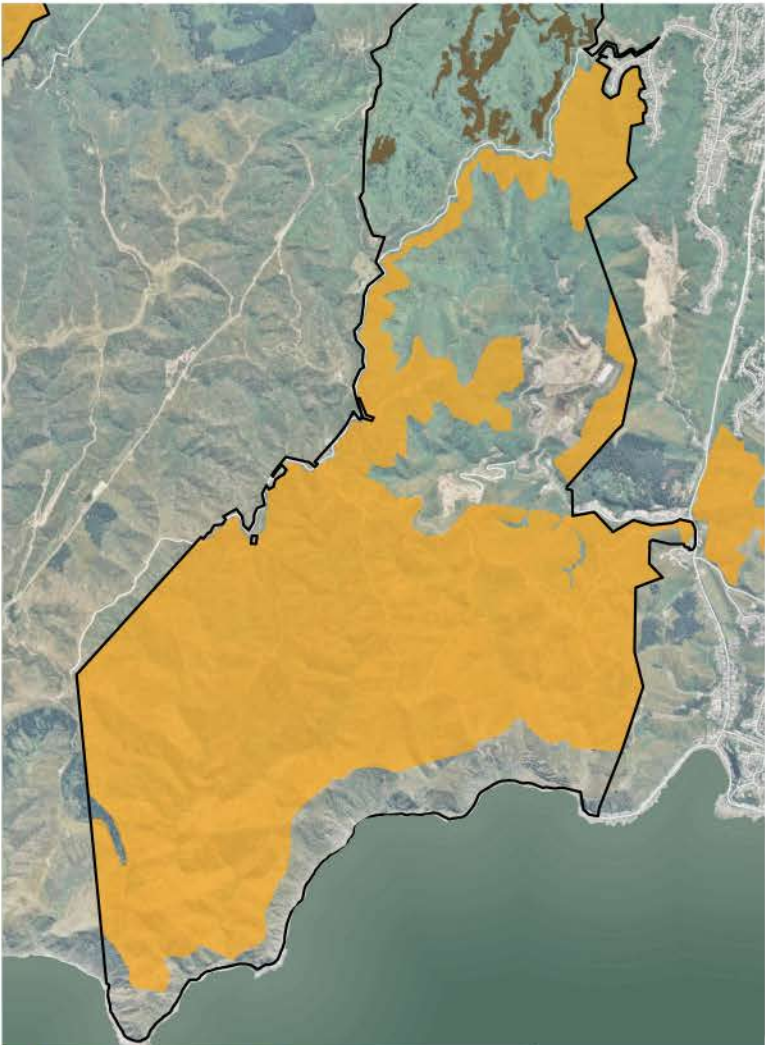
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Important Natural Area OGB Area

0 0.3 0.5 1 KM

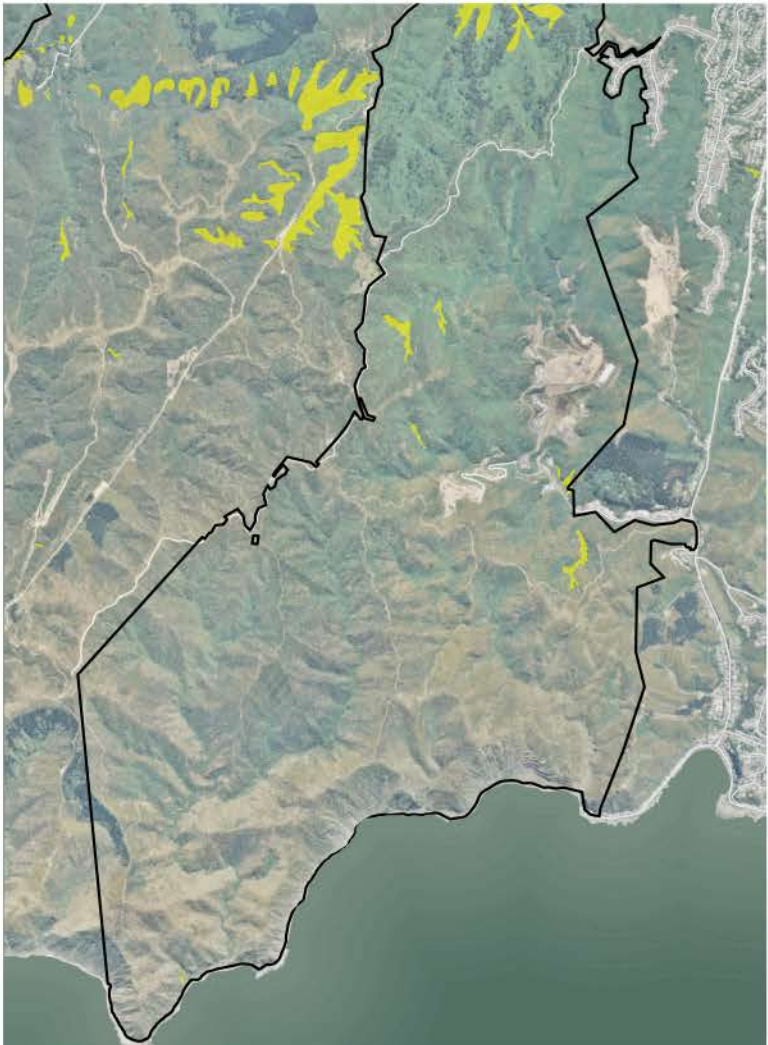
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PFSI Pre-1990 ETS Post-1989 ETS OGB Area

0 0.3 0.5 1 KM

Scale: 1:47,500



Important Forest Remnant OGB Area

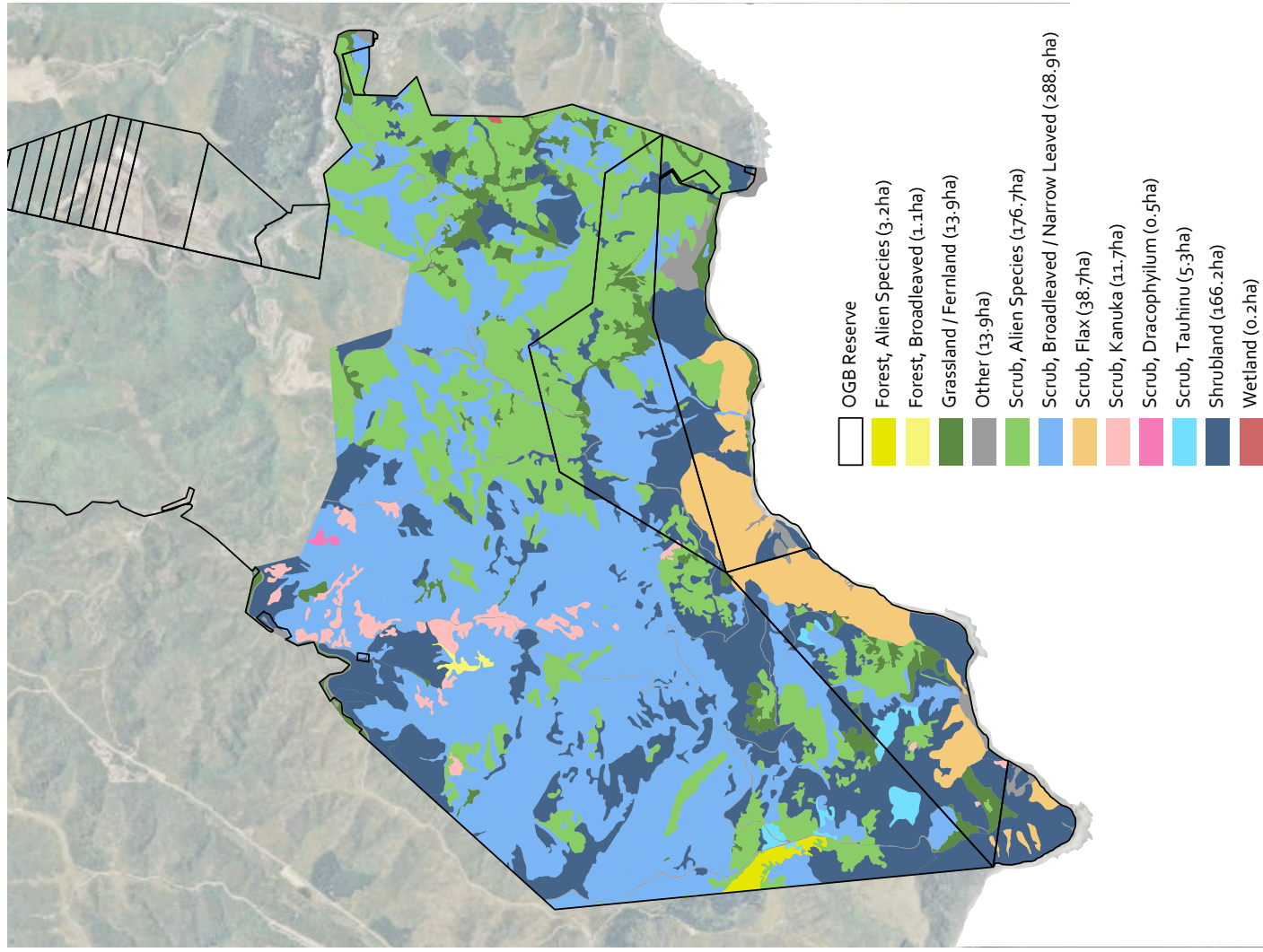
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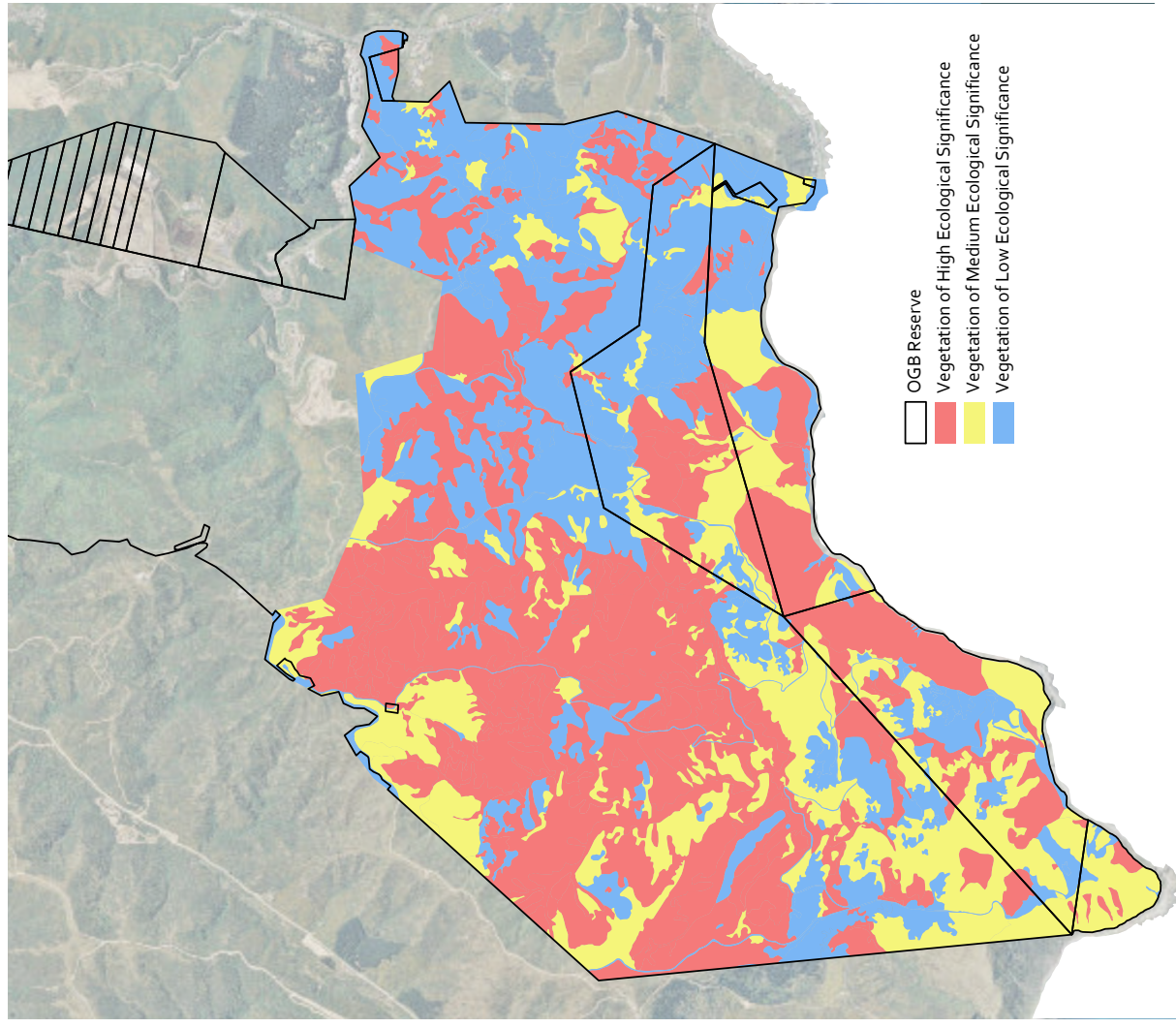
Te Kopahou Vegetation Types

Scale: 1:30,000 0 0.3 0.5 1 KM



Te Kopahou Vegetation Areas of Ecological Significance

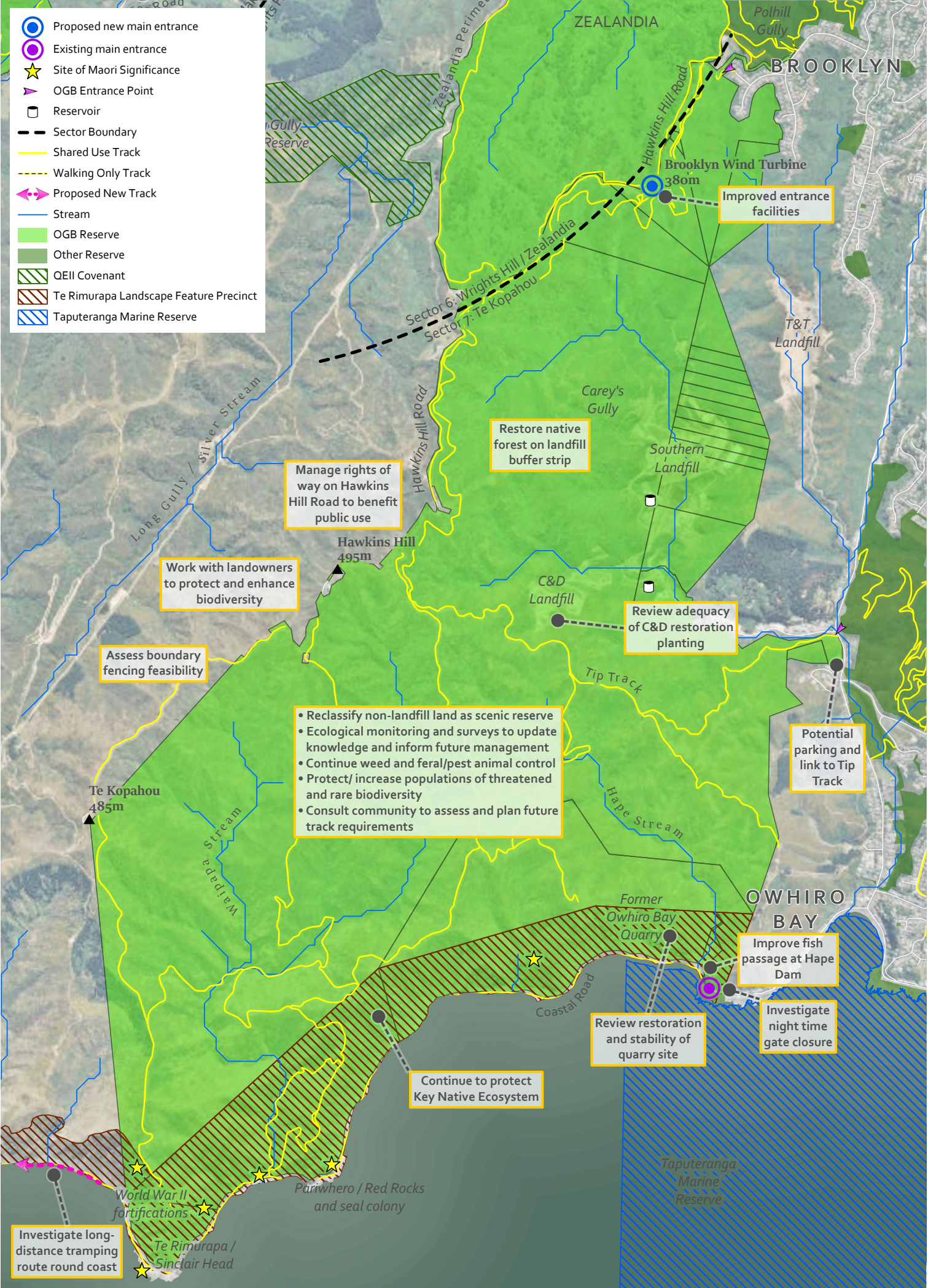
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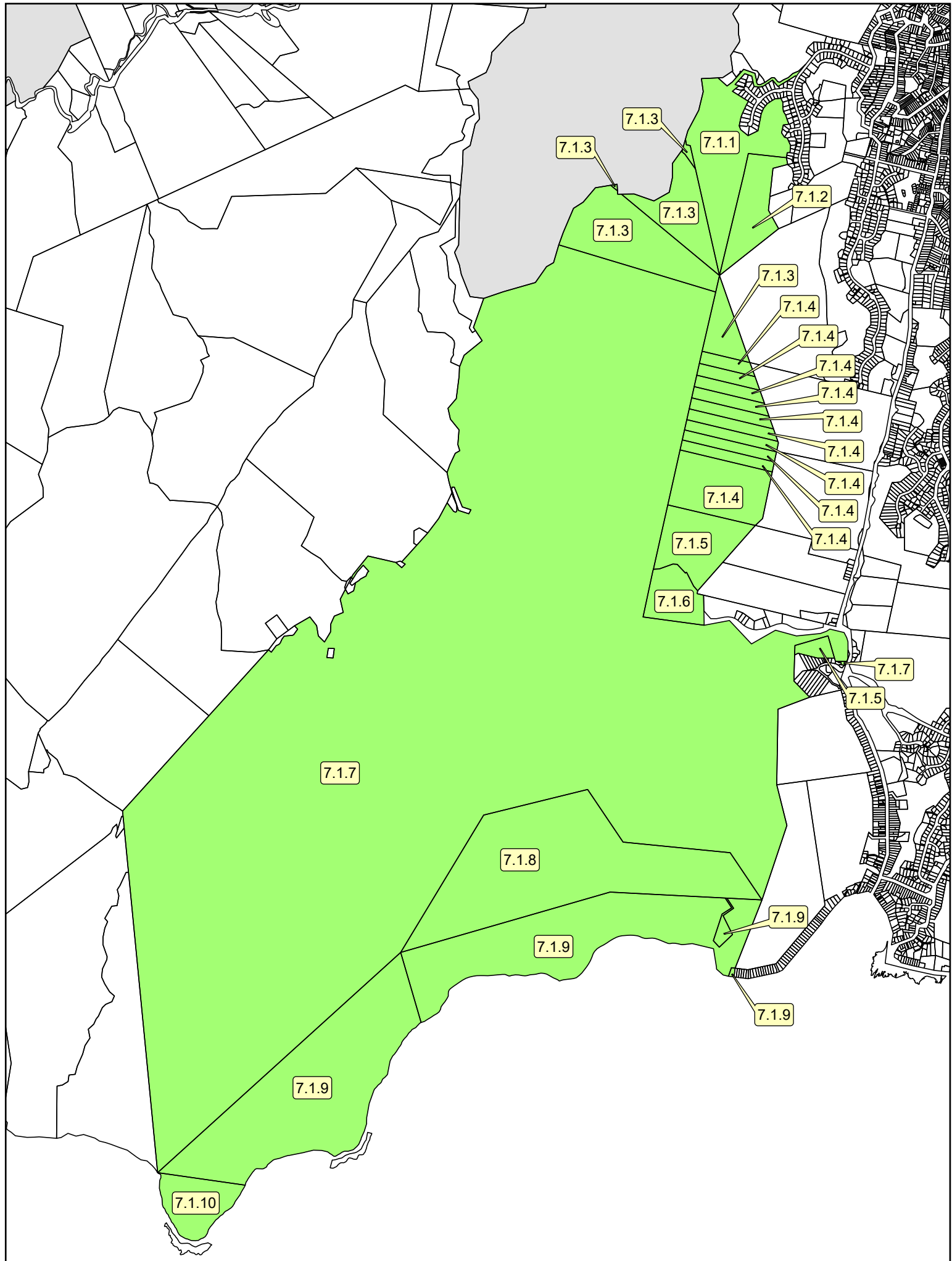


Sector 7: Te Kopahou - Future Initiatives

Scale: 1:24,000 0 0.25 0.5 1 KM







Sector 7: Te Kopahou

- OGB Parcel
- Other OGB Parcel

0 325 650 1,300 Metres

Scale: 1:25,000

Management Area	Site Name	Mapping Reference	WCC Site number	Legal Description	CT Reference /Parcel Id	Land Area	Reserve Description	Gazette Reference	District Plan Zoning	Notes	Actions needed
Sector 7 Te Kopahou	Carey's Gully	7.1.1	2350	Lot 197, DP 86200	53D/837	25.4755 ha	Scenic Purposes (b)	GN 9561291.3	Part Open Space B, Part Outer Residential	Subject to the Reserves Act 1977. Sewage Drainage easement in Easement Certificate B237420.6. Right of Way, Sewage and water drainage, gas, electricity, telephone and water supply in easement certificate B446147.5. Subject to Section 243(a) Resource Management Act 1991. Subject to rights of way created by Proclamation 517033. Subject to Transfer B602156.5. Subject to right of way in Easement Certificate B698354.11. Subject to electricity conveyance, telecommunications and gas supply easements in gross in Transfers B698354.19, 21 & 23, subject to Section 243(a) Resource Management Act 1991.	
		7.1.2	2350	Lot 2 DP 83822	50D/883	10.4550 ha	Scenic Purposes (b)	GN 9561291.3	Open Space B	Subject to the Reserves Act 1977 B614527.1 Resolution under Section 321(9)(c) Local Govt Act 1974. Appurtenant hereto are a ROW, sewage and water drainage, gas, electricity, telephone and water supply easement in Transfer B446147.5, subject to Section 243(a) Resource Management Act 1991. Fencing Agreement in transfer B602156.8 and land covenant in Transfer B602156.8.	
	Southern Landfill	7.1.3	1081	Pt Sec 4, 5, and 6 Upper Kaiwharwhara District and Pt Sec 17 Owhiro District	20C/479	37.3846 ha	Sanitary Works (disposal of refuse).		Open Space B, Conservation, part Outer Residential	WCC Land held for Sanitary Works (Disposal of Refuse). NZ Gazette 1979/3769. Designated for Refuse Disposal and Associated Works (Designation 61, map ref 2). Subject to a ROW easement created by Proclamation 517033. B544225.3 Transfer grant of ROW	Propose protecting northern section as local purpose reserve for scenery and landfill buffer purposes.
		7.1.4	1081	Pt Subdivisions 8,9,10,11, and 13 of Sec 19 Owhiro District, Pt Subdivisions 15,16, and 17 of Sec 21 Owhiro District and Pt 14 of Sec 19 and 21 Owhiro District.	12D/875	37.6584 ha	Sanitary Works (disposal of refuse).		Open Space B	WCC Land held for Sanitary Works. NZ Gazette 1976/2765. Designated for Refuse Disposal and Associated Works (Designation 61, map ref 2). The land has no frontage to a public road. B.496009.1 Transfer grant of a profit a prendre to take Landfill Gas over part in favour of Nova Gas Limited, for 20 years from 1995.	Propose protecting as local purpose reserve for landfill and related purposes to reflect the long term strategic importance of this land for the Council and the city.
		7.1.5	1081	Pt Sec 22 Owhiro District	46B/601	13.3404 ha	Sanitary Works (disposal of refuse).		Open Space B	WCC Land held for Sanitary Works. NZ Gazette 1975/1015. Designated for Refuse Disposal and Associated Works (Designation 61, map ref 2). Appurtenant hereto are water and pipeline rights over Lease A031941 (CT 515/31). B.496009.1 Transfer rights of a profit a prendre to take Landfill Gas over part in favour of Nova Gas Limited, for 20 years from 1995.	Propose protecting as local purpose reserve for landfill and related purposes to reflect the long term strategic importance of this land for the Council and the city.
		7.1.6	1081	Lot 4 DP 26908	No CT	7.3576 ha	Not a reserve		Business 2	Designated for Refuse Disposal and Associated Works (Designation 61, map ref 2). NZ Gazette 1976/639	Propose protecting as local purpose reserve for landfill and related purposes to reflect the long term strategic importance of this land for the Council and the city.

Management Area	Site Name	Mapping Reference	WCC Site number	Legal Description	CT Reference / Parcel Id	Land Area	Reserve Description	Gazette Reference	District Plan Zoning	Notes	Actions needed
		7.1.7	1081	Lot 1 DP 29398 and Lots 1 and 2 DP 29742	21D/612 Pt	789.6713 ha	For Sanitary Works (disposal of refuse).		Open Space B and Part Outer Residential	WCC Land held for Sanitary Works (disposal of refuse). NZ Gazette 1972/733, 1978/199. Part of this land is designated for Refuse Disposal and Associated Works (Designation 61. map ref 2). The southern portion of the land in this CT (the area to the south of the broken red line on the sector maps) is mostly within the Outer Green Belt concept area but is managed under the South Coast Management Plan.	Propose survey the area and protect the southern portion as scenic reserve – south of the 'Tip Track'. Consider whether the upper slopes of the northern part should also be surveyed and protected as local purpose reserve for scenery and landfill buffer purposes, or protect all of the northern part as local purpose reserve for landfill and related purposes.
		7.1.8	2327	Lot DP 61218		71.635 ha	Scenic Reserve		Conservation 3A	Includes Maori Heritage Site M41	Consider re Zoning the southern area conservation
		7.1.9	2327	Lot 1 26786, Pt Lot 1 DP 26908 and Lots 1 and 2 DP 10394		55.33 ha	Scenic Reserve		Conservation 3A, Open Space B and Part Outer Residential	Includes Rimurapa Landscape Feature Precinct and Maori Heritage Sites M43	Re zone all Conservation
		7.1.10	1945	Lot 1 DP 288121		65.5085 ha	Historic Reserve		Conservation 3A	Includes Rimurapa Landscape Feature Precinct and Maori Heritage Sites M44 and 45	
		7.1.11	1086	Sec 100 Terawhiti District		10.472 ha	Historic Reserve		Conservation 3A	Includes Rimurapa Landscape Feature Precinct and Maori Heritage Sites M43	

