

Christchurch City Council

Misty Peaks Reserve Management Plan 2018 DRAFT

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Acknowledgments

This draft management plan has been prepared with input from a number of people, including:

- Kaitiaki representatives of Ōnuku Rūnanga, and Mahaanui Kurataiao staff.
- Members of the public, adjoining landowners and organisations who made comments and suggestions during the initial public notification of the intention to prepare the draft plan.
- Christchurch City Council staff.

About this draft management plan

It is needed because:

- As a new park and reserve subject to the Reserves Act 1977 (Act) the Council is required to prepare a reserve management plan in accordance with the Act.
- There needs to be good direction to the park managers as to the best and optimum management for the park.
- It can serve to inform the public of the values and needs of the park and of how they can use it.

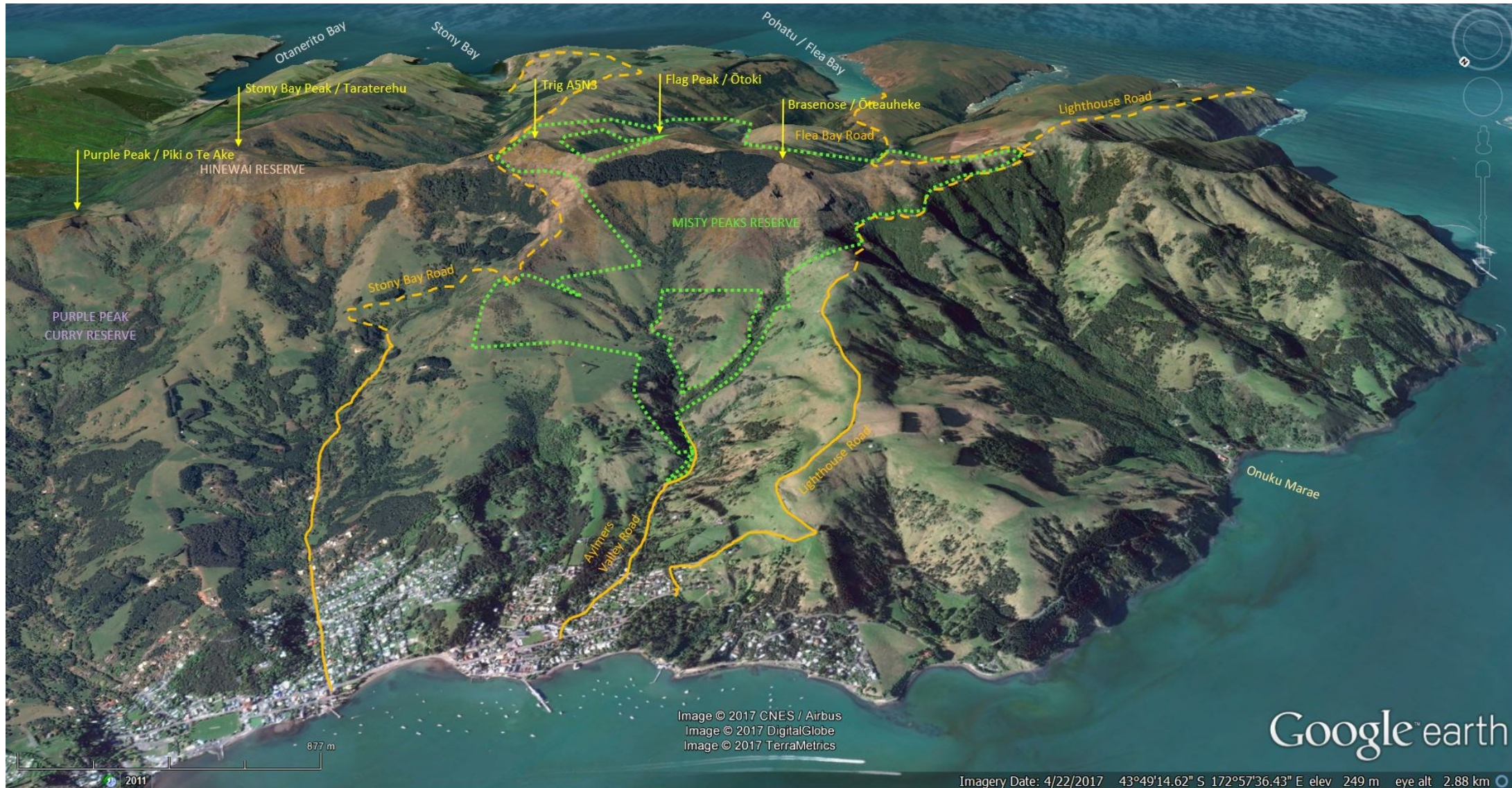
Who will it benefit?

- The park managers, in terms of how the park should be managed and used.
- The public, in terms of information about the park and what they can do there.

What is the status of the park?

- Held by the Council on behalf of the ratepayers of Christchurch in fee simple title.
- Mostly classified as a scenic reserve subject to s.19 of the Reserves Act.
- Managed by the Council's Regional Parks Team as a regional park.

Figure 1 View south-west over Akaroa



KEY: Solid yellow line – sealed road; dashed yellow line – unsealed road.

NOTE: Lines, in particular for reserve boundaries, are approximate only. Not all roads are shown.

Plan structure

INTRODUCTION

Describes the key features of the park

ISSUES

Matters of state and condition of the park that need to be addressed

VISION

General direction for the park in terms of park purpose, management aims, goals and objectives

MANAGEMENT OBJECTIVES AND POLICIES

Specific directions for the management of the park and its values, including to address identified issues

BACKGROUND INFORMATION

Supporting information on the attributes and elements of the park

FURTHER READING

Documents of relevance to the park

APPENDICES

Additional information on the park

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1 INTRODUCTION

1.1 Location and access

Misty Peaks Reserve is located between Stony Bay Road and Lighthouse Road (the latter road continuing on to the Akaroa Heads lighthouse reserve) and also has a short boundary with Flea Bay Road that runs down to the Flea Bay marine reserve and Banks Peninsula / Te Pātaka o Rākaihautū largest penguin colony.

The name Misty Peaks is derived from a Māori name (Ōteauheke, translating as ‘the place where the mist comes down’) for the Brasenose/Flag Peak area. This area contains two of the highest peaks in the park. These are Brasenose (785 metres) and Flag Peak (809 metres).

The park comprises 489 hectares. About 200 hectares of it lie on the Akaroa (north-western) side of the Brasenose/Ōteauheke – Flag Peak/Ōtoki – Trig A5N3 summit ridge and about 280 hectares are on the south-eastern side of the summit ridge.

It rises from an elevation of about 140 metres at the top of the Aylmers Valley Road in the lower reaches of the Aylmers Valley behind Akaroa, up over the summit ridge and then down to an elevation of about 200 metres on the south-eastern side of the summit ridge.

Misty Peaks Reserve adjoins a range of land tenures, including small to moderately sized properties adjacent to the lower reaches of the park near Akaroa. The remaining portion of the former Mt Desmond Station, the farming property that the park’s land was originally mostly part of, is flanked by the two branches of Aylmers Stream that are included in the park’s extent.

Another area that is wholly surrounded by the park is the Department of Conservation (DoC) administered Armstrong Scenic Reserve lying in the headwaters of the catchment on the south-eastern side of the summit ridge.

Akaroa is the nearest town. This is a historic and popular tourist centre with a resident population of around 1,000 people, swelling to 10,000 in the peak of summer. A high proportion of the houses in the town are holiday homes.

Effort is required for visitors to experience and enjoy the park. Due to its distance from, and elevation above, Akaroa, access to the majority of the park by vehicle is initially required. For the energetic, access to the higher and more distant parts of the park can be achieved by, for example, walking and biking.

1.2 Notable topographic features

Aylmers Valley contains an attractive boulder stream that runs year-round. There is a notable waterfall (Newton's Waterfall) in the stream's true left fork about 250 metres upstream from the Akaroa water supply intake located at the mouth of the valley. This used to be a popular Akaroa walking destination in the early part of last century, and still is to an extent.

1.3 Landscape

Misty Peaks Reserve provides the scenic backdrop for much of the Akaroa skyline. It is in a prominent location straddling the eroded crater rim of the ancient, now extinct, Akaroa shield volcano.

1.4 History of use

The former Mt Desmond Station, the majority proportion of the land of which now makes up Misty Peaks Reserve, was possibly first named as such by the property owners in the 1980s or earlier. It was extensively grazed. The last owner before the Council took over let the land out for the purpose of farming sheep, cattle and deer.

A prominent block of pine trees (*Pinus radiata*) was established on very steep land with frequent rocky outcrops just below the summit ridgeline on the north-western side of the park, this being a very noticeable site when viewing from many points throughout the Akaroa Harbour catchment. These trees had been planted to a medium to high density and have not been attended. They have not grown well and currently are not a marketable asset.

Following purchase of the land by the Christchurch City Council in 2007 for the purpose of creating a public park the majority of the 489 hectares purchased was retired from grazing by stock. At the time of preparation of this management plan, approximately 34 hectares of pasture and native woodland on the Akaroa side of the park is subject to a grazing licence. This licence only allows for grazing by sheep.

1.5 Tangata whenua values

Misty Peaks Reserve lies within the ancestral lands of Ngāi Tahu (the mana whenua), and in the contemporary takiwā (tribal area) of Ōnuku Rūnanga, whose marae and land are not far to the west of the park but not adjoining.

The Misty Peaks area (and particularly Ōteauheke) is culturally important to the Rūnanga. The area provides important habitats for a variety of taonga species, including trees, birds and aquatic species, many of which are currently, or could be in the future, important mahinga kai species from the mana whenua's perspective.

Several Māori names are associated with the Misty Peaks Reserve locality. These include Ōteauheke for Brasenose, Ōtoki for Flag Peak, and Pākaiariki for the creek that runs down the Aylmers Valley into Akaroa.

The native vegetation, waterways, springs, waterfalls and places of ancestral and contemporary cultural interaction within the park area are considered by the mana whenua as wāhi taonga (treasured sites) and/or wāhi tapu (sacred places).

A wāhi tapu based on the peak of Ōteauheke (Brasenose) has been registered with Heritage New Zealand under the Heritage New Zealand Pouhere Taonga Act 2014 (listing number 9507). See Figure 11.

Many native taonga species are known to inhabit the adjacent Hinewai Reserve. Some of these species are consequently also likely to be present in the Misty Peaks area. These include many species of geckos and skinks, moths and other insects, including weta, giant earthworms and stick insects.

1.6 Vegetation

Misty Peaks Reserve contains a mixture of steep shrub (including regenerating native and exotic species) and tussock lands, and bushed gullies. On the north-western side of the park, pasture land extends down into the Aylmers valley. Most of the stream corridor here is wooded with a mixture of native trees, including titoki, totara and kahikatea.

The south-eastern side of the park is heavily shrub covered with a mixture of gorse, regenerating bush and small blocks of 'old growth' red beech forest.

There are six plant species found in the park that are on the New Zealand threatened plant list, as well as nine species that are rare or uncommon on Banks Peninsula.

1.7 Fauna

20 native birds have been recorded in the area, all five peninsula lizards are likely to occur and the Banded Kokopu fish has been noted from the streams in the park.

1.8 Recreation use

Misty Peaks Reserve has attributes that lend to it being a good provider of opportunities for visitors to experience, mainly through walking and mountain biking, wonderful views from what is a prominent ridge crest and natural areas.

The park is primarily an undeveloped and natural area with an emphasis on informal and free public access. There is the potential, though, for formal occupations to be granted to individuals or companies that provide non-exclusive tourism/recreation guided experiences through the park.

It is part of a network of connected or nearby publically accessible private (such as Hinewai Reserve), and other public, natural open space areas that can be visited by the public.

1.9 Akaroa water supply

The Aylmers Stream catchment holds the supplementary summer water supply for Akaroa. There is no cattle grazing allowed in the catchment (as well as in the rest of the park) in order to reduce stock contamination of the water supply.

2 ISSUES

2.1 Flora and fauna

The focus for the future of Misty Peaks Reserve is on the regeneration of native (that is, occurring naturally in the Misty Peaks Reserve area) vegetation throughout the park, with acknowledgement of the necessity for a time for the management of modified areas, such as of former pastureland and exotic tree plantings.

Issues for the park revolves around pest plants and animal pests, and the resourcing and practical implementation of native species regeneration, in addition to planning for the expected growth of public access and possible demand for facilities that this may bring.

Gorse, in particular, is the main pest plant of concern for the park. However, it could be considered an ally rather than a problem. Minimum interference management on the adjoining Hinewai Reserve has demonstrated the effectiveness of gorse as a nurse crop in the restoration of native forest in the wetter parts of Banks Peninsula.

Long term, it is desirable that corridors of boundaries with other properties are allowed to become filled with native shrubs and trees so as to prevent future gorse invasion through the shading out of native plant seedlings. This approach, however, will only be possible if adjoining land owners follow a similar path.

It is desirable that scattered gorse is controlled in the higher altitude snow tussock areas in the short term, at least until management options are determined more precisely.

From a conservation perspective, both Douglas Fir (the previous plantation of which has now been removed) and wilding pines (*Pinus radiata*), covering approximately 24 hectares along the skyline above Akaroa, are more of a problem in high rainfall areas, with the upper reaches of Misty Peaks Reserve being one of these. Rainfall is one of the more important factors influencing growth rates with trees growing significantly more in higher rainfall areas.

Ongoing monitoring to catch any re-establishment of Douglas Fir, and control of it if there is, is necessary.

In the case of the wilding pines in Misty Peaks Reserve, it is unlikely that timber merchants would attempt to remove them as they are generally in poor condition, and road access for logging trucks off Stony Bay Road is difficult. If wood prices are sufficiently high the option of progressive removal may be an option. However, on consideration, strategic felling of some of the skyline trees, and those in clearings, may be all that is necessary. Native forest will grow up and around the pines and eventually replace them.

As already mentioned, an issue for the park is around animal pests, with possums being one. Possum control is currently managed under a Banks Peninsula wide scheme with a rate gathered on all private rural properties. The level of control anticipated will be sufficient to reduce possum numbers to levels that reduce impacts on biodiversity and aid regeneration.

Other animal pests that at some stage may require some level of control include deer, goats, feral livestock, pigs, mustelids, rats, hedgehogs and hares.

Current animal pest control is focused on mustelids and rats to support the Wildside Project's¹ objectives of improved penguin breeding success down on the eastern coastline of the Peninsula. Improved wide-ranging animal pest control would support both the park's and the Wildside Project's objectives.

¹ A large scale collaboration of landowners, Christchurch City Council, Department of Conservation, Environment Canterbury and the Banks Peninsula Conservation Trust focusing on habitat protection for a variety of endemic, threatened and iconic species in a 13,500 hectare area on the eastern side of Akaroa Harbour.

The Department of Conservation administered Armstrong Scenic Reserve is of considerable importance due to it containing rare native vegetation (see Sub-section 7.3). It needs to be managed in an integrated way with Misty Peaks Reserve.

2.2 Transitioning from a pastoral past

There has been in and around the park a history of logging and clearance for pastoralism. The potential now is for restoration of the park's natural values, along with acknowledgement of the history of human presence.

Overall, the Misty Peaks Reserve landscape and environment is one that is semi-natural – that is, it has a degree of naturalness but much of it has been modified by human activities over a period of time. The natural elements in the park require, in particular, to be protected and enhanced.

The goal is to ultimately de-stock the park in its entirety.

2.3 Catchment integrity and water quality

The retention of the remaining bush and the retirement of much of the land from grazing will potentially reduce soil erosion within the area.

A priority is to maximize waterway health for ecological reasons. There is also a critical role to protect and manage the catchment feeding into the Aylmers Stream, and the stream itself, on the Akaroa side, to ensure a constant supply and quality of water from this stream to the town.²

2.4 Holistic environmental management approach

The mana whenua reinforces the position that management of the different environments (land, fresh water and marine water) should be considered using a holistic approach - ki uta ki tai (from mountains to sea) - rather than compartmentalising and considering them in isolation. This approach acknowledges that any changes to land use have the potential to create effects on freshwater and marine environments.

² The Christchurch City Council needs to comply with Environment Canterbury's Natural Resources Regional Plan (NRRP) requirements for drinking water quality, such as through the eventual removal of grazing animals from the catchment.

2.5 Wāhi taonga and wāhi tapu

The presence of wāhi taonga (treasured sites) and/or wāhi tapu (sacred places) are an important consideration for the park's management and use.

2.6 Threat of fire

Wildfire in the park's forest and tussock land areas is always a threat, especially following long periods of dry conditions.

2.7 Access and use

Being a relatively challenging park to access due to its steep topography, and also because it is not yet widely known, Misty Peaks Reserve has not to date faced the pressures of high public use.

A network of walking and biking tracks is needed to provide enhanced, though appropriate, public access and recreational use. It is expected there will be an increased demand for access by a range of users and, in particular, for mountain biking. Careful management of potential conflicting uses and overuse is important.

There is an excellent prospect for a loop track along the forks of Aylmers Stream, including past Newton's Waterfall.

There is a need to consider opportunities for potential connections between Misty Peaks Reserve and other publicly accessible areas by way of walking routes and tracks; for example, with Hinewai Reserve and properties that have the Banks Track³ crossing them.

A recreation issue for the park is how much development there should be on recreational tracks in the park itself, to what standard/quality they should be, and to what use or uses they can be put to.

2.8 Facilities and utilities

An issue is around the resourcing, and provision of, facilities required or demanded as the consequence of an expected growth in public access to the park.

Generally, the aim for Misty Peaks Reserve is for it to be building free. However, if a building is required to enable the best management and use of the park, then it may be considered if it has merit and supports the direction, values and objectives for the park.

³ A private two to three day walk.

Figure 2 North-western (Akaroa) side of the park

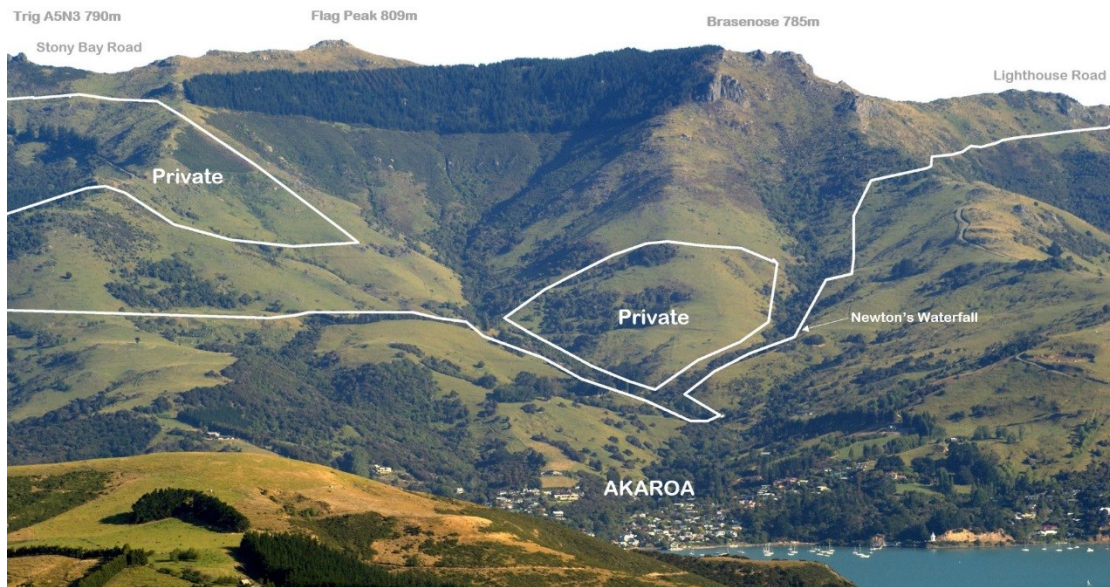
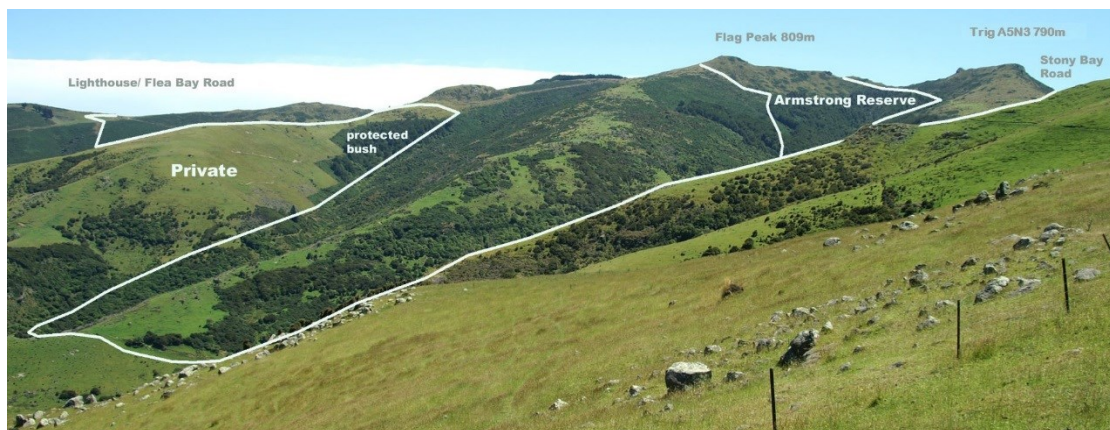


Figure 3 South-eastern side of the park



Note: Boundaries shown are approximate only.

3 VISION

3.1 Park Purpose

To protect and foster the environmental, landscape, biodiversity, historic and cultural values of Misty Peaks Reserve and provide for an outdoor recreation experience for visitors

3.2 Management Aims

- Protect and enhance natural values.
- Maintain and promote the historic features and cultural values.
- Facilitate appropriate access for people to experience and appreciate a natural environment.

4 MANAGEMENT OBJECTIVES AND POLICIES

4.1 Landscape and Environment

OBJECTIVE: 1 Protection and enhancement of the natural elements of the park's landscape and environment

POLICIES: 1.1 The natural elements of the Misty Peaks Reserve landscape shall be protected and enhanced.

Comment: Natural landscape values include native forest, tussock land, rocky outcrop and other naturally occurring vegetation communities.

1.2 Waterways, including their riparian margins, shall be planted, protected or managed as appropriate to maintain or enhance water quality.

Comment: Protection of waterways will enhance their value as taonga and increase habitat values.

1.3 Structures in visually prominent locations shall be avoided.

Comment: An example of a visually prominent location is a ridge crest.

4.2 Tangata whenua

OBJECTIVE: 2 Tangata whenua values are recognised

POLICY: 2.1 There shall be consultation or engagement, as required, with representatives of the Ōnuku Runanga around issues and needs regarding the management of Misty Peaks Reserve.

2.2 An Accidental Discovery Protocol (ADP) shall be adopted, whereby, if any archaeological or cultural material, kōiwi (human remains) or taonga tuturū (protected Māori object) are found during work programmes on the Park, work should be stopped and Ōnuku Rūnanga and Heritage New Zealand contacted immediately for advice.

2.3 The business of protection, management and development of the park and its values shall take into account, recognise and support taonga species.

2.4 The harvesting of native vegetation or fauna by mana whenua, in accordance with tikanga, for traditional uses shall be supported but requires the prior written permission of the Parks Manager in his or her full discretion, and following the receipt and consideration of advice from Council Parks staff, with the right to set any conditions of use.

Comment: Parks staff are able to advise the nature, frequency and location of any such harvest.

4.3 European history

OBJECTIVE: 3 Farming history is recognised

POLICY: 3.1 The European history of settlement, native tree extraction, exotic plantation planting and extensive pastoral farming of the land, including that in the park, shall be recorded and promoted.

Comment: This human history acknowledgement may be by way of a variety of means, including through interpretation (see Policy Section 4.14 Interpretation).

4.4 Vegetation

OBJECTIVE: 4a Native vegetation is encouraged

POLICIES: 4.1 The native vegetation shall be actively protected, managed and enhanced.

Comment: Native vegetation protection, management and enhancement may be achieved in a number of ways, including the establishment of native species, removal of pest plants, reduction in stock grazing, management to reduce the risk of fire, and the allowance of natural processes, such as gorse being retained as a nursery plant for native species.

4.2 Allowance of natural regeneration shall be the primary method to restore native vegetation in the park.

4.3 Vegetation that provides habitat for native wildlife shall be encouraged.

4.4 Pest plant and animal pest control programmes shall be planned and implemented in accordance with the Christchurch City Council Pest Plan and Environment Canterbury's Regional Pest Management Plan (RPMP).

OBJECTIVE: 4b Trees are safe for visitors

POLICIES: 4.5 The management of trees in Misty Peaks Reserve shall be according to the Council's standard practices of management, including managing the health and safety implications of the trees.

4.5 Fauna

OBJECTIVE: 5 Natural habitat for native fauna is enhanced and protected

POLICY: 5.1 The presence of native fauna shall be supported and increased through complementary natural habitat management.

Comment: Effective maintenance and improvement of the occurrence of native fauna will be the consequence of implementing other management objectives and policies to improve and maintain natural habitat by, for example, expanding and protecting native plant species and controlling pest plants and animal pests.

4.6 Fire

OBJECTIVE: 6 **Wildfires are prevented or quickly suppressed if they occur**

POLICIES: 6.1 Fire breaks and set-backs shall be established where necessary and maintained.

6.2 Water supply ponds shall be considered and, where feasible, established and maintained.

6.3 No open fires shall be lit at any time in the park unless for authorised purposes by Council staff.

6.4 No camp stoves shall be used at any time in the park.

4.7 Grazing

OBJECTIVE: 7 **Stock grazing is progressively removed**

POLICY: 7.1 Stock grazing shall be confined to sheep only in the lower Aylmers Stream catchment pasture areas, and annual reviews made to determine if conservation aims are being met.

4.8 Recreation

OBJECTIVE: 8a **Public recreational activities are encouraged and facilitated where appropriate**

POLICIES: 8.1 Free public access for walking, and mountain biking on tracks identified for that use only, shall be provided.

Comment: Mountain biking is only permissible on certain tracks.

8.2 Walking tracks shall be developed, as needed and subject to an approved landscape plan, and maintained throughout the park.

Comment: Initially, track installation should be minimal and restricted to the summit traverse by linking existing four-wheel drive routes, and poling of potential routes through the grass land areas and along the ridge lines. A track already exists to Newton's Waterfall.

8.3 Visitor experience and recreation support facilities, including, for example but not limited to, information boards/signs, track markers, look-out points/platforms, seating, toilets and vehicle parking, shall be provided as required and appropriate.

8.4 Access for horse riding shall be allowed for on certain routes but only where it is appropriate and not impacting on the environment and other users.

Comment: It may be useful to identify through signage and maps suitable routes for horse riding.

8.5 Other activities, such as parapenting and rock climbing, shall be allowed in locations where it is appropriate.

Comment: It may be necessary to identify suitable locations where necessary facilities, such as car parking areas, are available.

OBJECTIVE: **8b** **Certain activities are controlled**

POLICIES: **8.6** Motorised vehicles, including but not limited to cars, four-wheel drives, motorbikes and farm bikes, shall not be allowed within the park area, unless they are on a formed road or in a car park identified for that use, with the exception of Council, or Council authorised, vehicles.

Comment: There is the matter of the unformed legal roads on the park to consider, including around the potential future stopping or forming of these, and regarding the question of rights or not of public access to these with motorised vehicles, including trail bikes and four-wheel drives (4WDs). The Traffic and Parking Bylaw 2017 enables the Council to, amongst other things, restrict access if deemed necessary.

- 8.7** Access to Misty Peaks Reserve with a dog shall be in accordance with the Council’s dog control policy and bylaw.

Comment: The Christchurch City Council Dog Control Policy 2016 identifies Misty Peaks Reserve as an area where dogs are prohibited to protect grazing stock, with the exception of the walking track to Newton’s Waterfall in the Aylmers Valley where dogs are allowed but with the proviso that they are on a leash.

- 8.8** Hunting shall not be permitted at any time, with the exception of Council authorised animal pest control.

- 8.9** Camping in Misty Peaks Reserve shall be in accordance with the Council’s Parks and Reserves Bylaw.

Comment: Clause 11 of the Christchurch City Council Parks and Reserves Bylaw 2016 states that “no person may camp in a reserve unless it is in an area specifically set aside by the Council for camping, and the person has paid any camping fees set by the Council from time to time; or that person has obtained the prior written permission of an Authorised Officer to do so.”

4.9 Commercial activities

OBJECTIVE: 9 Commercial activities on the park are compatible with the park purpose and do not limit public access

POLICY: 9.1 Commercial activities that are consistent with the park’s direction and reserve purpose shall be considered for approval for the commercial operator to occupy and/or operate on the park.

Comment: Examples are guided walking and provision of outdoor education opportunities.

4.10 Access

OBJECTIVE: 10 The park is readily accessed by the public

POLICIES: 10.1 Public formed roads shall provide continuous access to Misty Peaks Reserve.

Comment: The access roads include Stony Bay Road, Aylmers Valley Road and Lighthouse Road/Flea Bay Road. These fall outside the scope of this management plan in terms of their development, operation and maintenance. An alternative for visitors to access the park is to walk up from the Aylmers Valley Road end.

10.2 Vehicle parking/turning areas shall be provided, where practicable and there is sufficient park space, at key park entrance points such as at view points and walking track entrances.

Comment: These areas shall be minimal and relatively undeveloped, such as with a graveled surface only. Some, or part, may be on legal road and are therefore outside the jurisdiction of this management plan.

10.3 Attractive, adequate, clear and informative directional and destination signage that is in accordance with the Council's signage guidelines shall be provided.

4.11 Utilities

OBJECTIVE: 11 Necessary utilities are provided for in the park

POLICIES: 11.1 Utilities necessary to service the park's operation and use shall be provided as determined by Parks staff and where consistent with an approved landscape plan.

Comment: An example of utilities that may be provided are toilets.

- 11.2** Utilities shall be visually compatible with, and developed and managed to protect, the park's semi-natural environment.

Comment: This may be achieved, for example, with sympathetic colour schemes and screening plantings of built structures.

- 11.3** The Aylmers Stream catchment shall be managed to ensure there is no stock incursion, and native revegetation encouraged, in order to protect the quality of the water for the town water supply intake utility.

Comment: Although not a park benefiting utility this is an important water supply for Akaroa and therefore the water quality of this supply requires protection through stream riparian management within the park.

4.12 Buildings

OBJECTIVE: 12 Buildings exist only if necessary and do not impact on the park's natural environment

POLICY: 12.1 Buildings that are deemed necessary to service the park's operation and use shall be considered if consistent with an approved landscape plan.

Comment: This is to ensure minimal buildings or structures in the park.

4.13 Connections

OBJECTIVE: 13 Physical connection with neighbouring/nearby open space areas/uses is fostered

POLICIES: 13.1 Physical shared track connection points on the park boundary shall be considered.

Comment: These track crossing points can be jointly developed to provide seamless passage for walkers and mountain bikers.

- 13.2** Interpretation and information resource development shall be shared with neighbours providing public open space experiences.

Comment: Signage, interpretation, maps, brochures and environmental messaging are examples of such shared resources.

4.14 Interpretation

OBJECTIVE: 14 **The public are well informed on the values and attributes of, as well as threats to and other information about, Misty Peaks Reserve**

POLICY: 14.1 The interpretation of the park's values, attributes and threats shall be allowed and encouraged.

Comment: Such interpretation may cover landscape and environment, Māori values, European history, fire risk, visitor experience and park access. It may be in the form of, for example, signage, information boards, brochures, maps and website information.

4.15 Community involvement

OBJECTIVE: 15 **The community participate in the enhancement and promotion of Misty Peaks Reserve**

POLICY: 15.1 Public participation shall be encouraged by providing volunteer opportunities in Misty Peaks Reserve.

4.16 Monitoring and research

OBJECTIVE: 16 **The park's effectiveness and condition, and needs, over time are well understood**

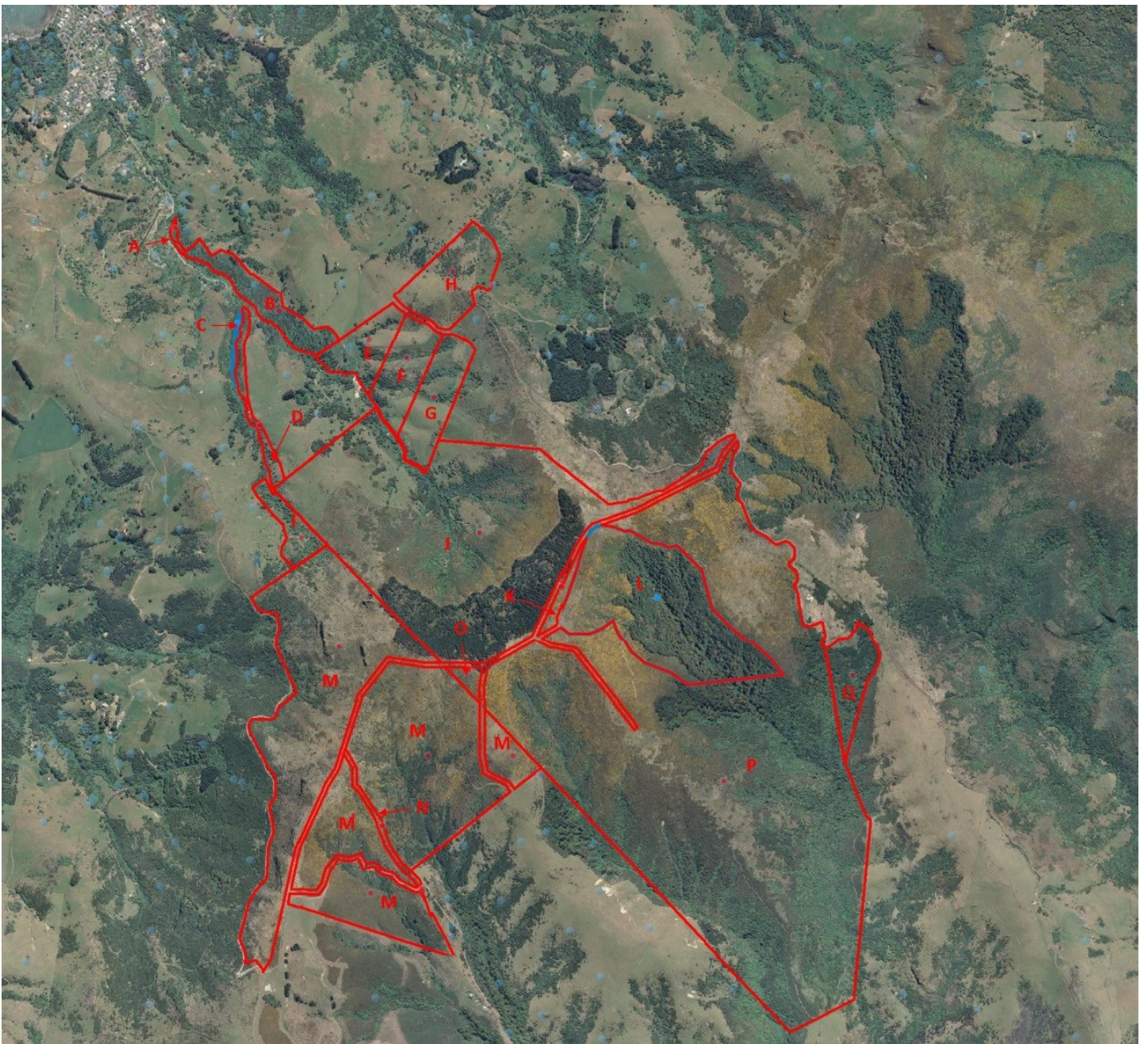
POLICY: 16.1 Appropriate monitoring and research programmes shall be allowed and encouraged.

5 BACKGROUND INFORMATION

5.1 Land status

This reserve management plan applies to the area covered by the parcels of land shown bound in red on the following aerial view. The accompanying letter for each parcel corresponds to the parcel description in the table following. The gaps between some of the parcels represent sections of unformed legal roads. Although not legally part of the park, these sections are, for practical reasons, managed as part of the park.

Figure 4 Land parcels



Map ref.	Legal description	Area CCC ⁴ owned (ha)	Area Other (ha)	Reserve	Owner	Certificate of title
A	Lot 12 DP 60276 (vested on deposit)	0.3611	0	Local Purpose (Esplanade) Reserve ⁵	CCC	-
B	Lot 3 DP 403579	7.9140	0	Local Purpose (Drainage) Reserve	CCC	423944
C	Crown land	0	0.3191	-	Crown	-
D	Lot 2 DP 403579	2.1980	0	Local Purpose (Drainage) Reserve	CCC	423943
E	RS 14771	8.0937	0	Scenic Reserve ⁶	CCC	Part of CB33K/148
F	RS 16892	8.0937	0	Scenic Reserve	CCC	Part of CB33K/148
G	RS 20539	9.3077	0	Scenic Reserve	CCC	Part of CB33K/148
H	Pt RS 18373	11.4404	0	Scenic Reserve	CCC	Part of CB33K/148
I	Lot 1 DP 403579	4.2700	0	Local Purpose (Drainage) Reserve	CCC	423942
J	Lot 1 DP 56126	96.2700	0	Scenic Reserve	CCC	Part of CB33K/148
K	Lot 4 DP 56126	1.4790	0	Scenic Reserve	CCC	Part of CB33K/148
L	Lot 1 Deposited Plan 28242	0	36.6619	Scenic Reserve (Armstrong Reserve) ⁷	Her Majesty the Queen (DoC)	CB10F/368
M	Part Rural Section 35338	124.5951	0	Scenic Reserve	CCC	CB3D/878
N	Rural Section 35338X	1.3886	0	Scenic Reserve	CCC	CB3D/877
O	Lot 3 DP 56126	1.2740	0	Scenic Reserve	CCC	Part of CB33K/148
P	Lot 2 DP 56126	203.3500	0	Scenic Reserve	CCC	CB33K/148
Q	Lot 1 DP 393210	7.2278	0	Scenic Reserve	CCC	373829
		487.2631	36.9810			

⁴ Christchurch City Council

⁵ Subject to Section 23 of the Reserves Act 1977

⁶ Subject to Section 19 of the Reserves Act 1977

⁷ Subject to Section 19 of the Reserves Act 1977 but administered and managed by the Department of Conservation (DoC)

5.2 District plan zoning

The land Misty Peaks Reserve is on is zoned Open Space Natural (ON) in the Christchurch District Plan. This zone recognises natural, ecological, scenic and outdoor recreation values. The zoning ensures that there is protection and enhancement of biodiversity, landscape, cultural and historic heritage values, and that the natural open space environment is accessible and can be experienced through a range of compatible recreation activities.

Most of the park falls within Outstanding Natural Landscape (ONL) 16.2. The qualities of the Banks Peninsula / Te Pātaka o Rākaihautū ONLs include, amongst other things, distinctive volcanic landforms with highly legible crater rims, prominent ridgelines and peaks extending down to a series of gullies, spurs and lower slopes, and the presence of important areas of indigenous vegetation.

5.3 Māori values

The noting of tangata whenua values has been informed through a Cultural Values Report and mandated by the Ōnuku Rūnanga.

The information contained within that assessment was based on available literature and conversations held with Ōnuku Rūnanga, Mahaanui Kurataiao Ltd staff and Christchurch City Council staff.

Wāhi ingoa (Place names)

Māori place names exemplify the Māori relationship with the landscape. Several names are associated with the Misty Peaks Reserve locality.

Māori name	Area covered
Te Pātaka o Rākaihautū	Banks Peninsula.
Ōteauheke	Ōteauheke is the Māori name for Brasenose (Andersen:1927).
Ōtoki	Ōtoki is the Māori name for Flag Peak, which was formerly known as Mount Berard (Andersen: 1927).
Pākai-ariki	Pākai-ariki is a stream located in Akaroa Township. Vangioni records that Hinepakarariki is the name of the creek that runs down Aylmers Valley past Bruce's Hotel. This may be the same name as Pakai-ariki (Andersen:1927).

Wāhi taonga / Wāhi tapu

Ōteauheke is the maunga (mountain) of the Ngāi Tārewa chief, Wiremu Harihona Karaweko Puhirere (Karaweko). After becoming chief of Ōnuku, Karaweko was a key leader for his hapū, Ngāi Tārewa, who were based at Ōnuku in the early period of colonial contact.

The maunga is often hidden in mist and is regarded by tangata whenua as a dwelling place for atua (gods) and as a place associated with tipuna (ancestors). The “heke” part of Ōteauheke references the fresh water springs that emerge from the outcrops of the peak, descending down the mountain into waterways such as Awaiti Stream, which flows beside Ōnuku Marae.

Ōteauheke is always referred in the whaikōrero (formal speech) on Ōnuku Marae when speakers mihi to the sea and hills.

Ara tawhito

A network of Ngāi Tahu trails are known throughout the South Island (Te Waipounamu). These functioned as corridors for whānau and hapū travelling on seasonal migrating mahinga kai initiatives, enabling the maintenance of links between settled and frequently visited areas.

Wai māori / Freshwater

Māori see water (waitai/sea water and wai māori/freshwater) as central to all life. It is a taonga cared for and passed on by ancestors to provide and sustain life. It is the present generation's responsibility to ensure this taonga is in the same, or an improved state, for future generations.

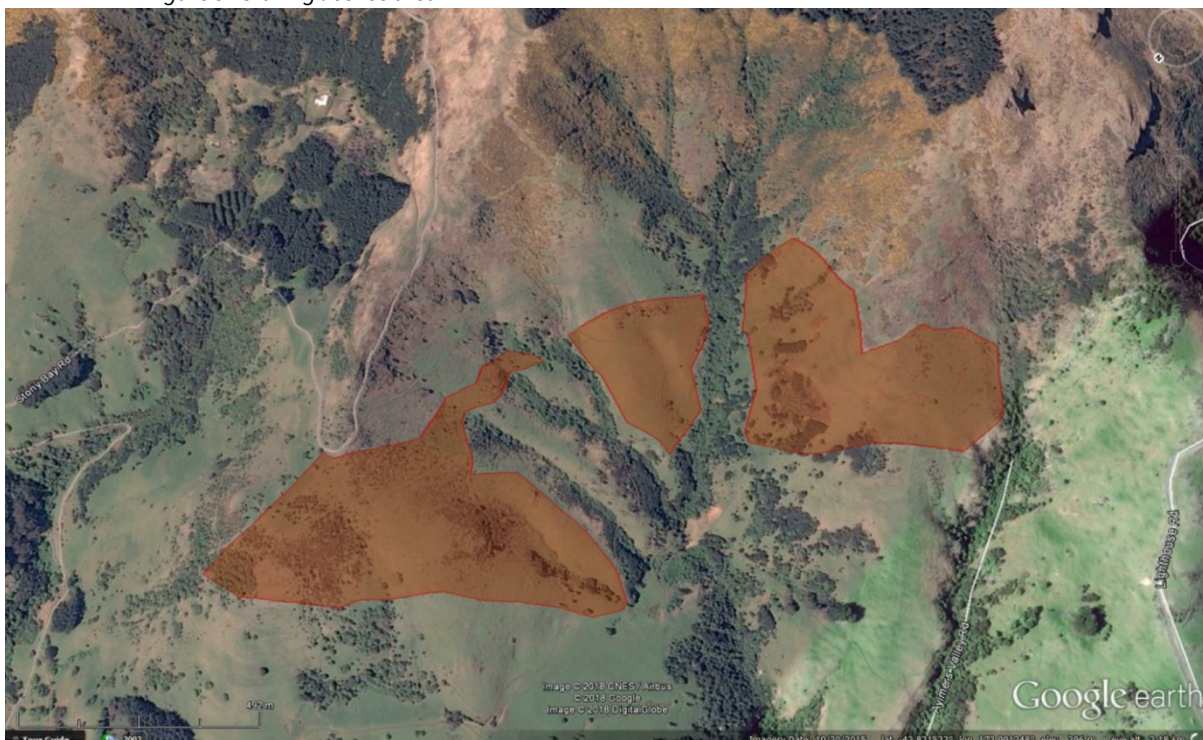
5.4 Weather

The rainfall on the south-east facing side of Misty Peaks Reserve is similar to that on the adjacent Hinewai Reserve, which has approximately 1,000 millimeters per year at its lowest elevations up to about 1,900 millimetres at the highest elevations. The high rainfall means that regeneration of native bush is rapid, varying from about ten years through gorse cover on good sites to around thirty years on the worst sites where soil depths are shallow. Dense un-grazed pasture grasses, such as cocksfoot, constrain regeneration of bush more than gorse in areas where rainfall is adequate.

5.5 Pastoral

At the time of preparation of this management plan approximately 34 hectares of pasture land on the Akaroa side of the park is subject to a grazing licence, as shown on the aerial view below. This is made up of three separate areas linked together via passageways through the stream areas that are required to remain shut off to grazing. The licence specifically excludes cattle grazing. Also, most gullies containing native vegetation have been fenced out from the grazing area. Public access is allowed through the area. Restriction of public access for a specified period of time may be considered upon written application by a licensee and dependent upon approval by the park manager.

Figure 5 Grazing licence area



Some controlled sheep grazing is needed for the maintenance of pasture areas to prevent them becoming over-run with grass and woody exotic species and thereby making it difficult for native species to become established.

It is expected that under a conservation-based sheep grazing regime the land will slowly wood over with kanuka and other non-palatable native trees and shrubs, with the eventual outcome that grazing can be removed from these areas.

Under a grazing regime regeneration of an area will be slower than if the area is retired from grazing, and palatable species will not be a part of the succession. There may be a slow kanuka regeneration but this will not include broadleaf species such as mahoe. The preference is for successive retirement from grazing, whereby just parts of the area are removed from grazing at a time allowing problem pest plants to be easily dealt with, and it means pest plant cohort regeneration will not occur over a large area.

5.6 Pest plants

Environment Canterbury's regional pest management plan requires that gorse is kept ten metres clear of boundaries where the occupier of the neighbouring property is eliminating gorse within ten metres of that common boundary to protect their economic well-being.

Misty Peaks Reserve did contain two exotic plantations, both of which appear to have been established in the mid 1980's. Douglas Fir covered one hectare on the Summit Ridge adjacent to the Stony Bay Road but this has now been removed, and pines (*Pinus radiata*) cover approximately 24 hectares along the skyline above Akaroa.

Douglas fir is potentially a very invasive species and able to germinate and grow in shade under bush canopies. In its previous position on what is a very exposed skyline it was capable of being transported into the adjoining reserves and creating an expensive pest plant control problem.

Wilding pines can also cause problems but not as severely as Douglas Fir due to the seedlings being less shade tolerant.

5.7 Recreation and tourism

Located close to Akaroa the area has good opportunities for walking with access available from Stony Bay, Lighthouse and Aylmers Valley Roads. This provides an important component of the variety of experiences available for tourists within the Akaroa area.

The Aylmers Valley Road connection allows low altitude access into the park.

Existing four-wheel drive tracks provide ready formed walkways over portions of the park.

Recreation experiences in Misty Peaks Reserve can be of a half to full day duration. This complements the longer duration added-value experience provided by the private Banks Track walk operation and, in itself, provides an added attraction for visitors to Akaroa.

5.8 Access and connections

The Banks Peninsula Track Company is a co-operative of neighbouring properties and operates a commercial two to three day walk eco-tourism experience business along a route that includes along Flea Bay Road where it passes through Misty Peaks Reserve enroute from the summit ridge down to Flea Bay.

The company holds concessions from the Department of Conservation (DoC) for its walkers to pass through DoC reserves.

5.9 Reserve land origins

The land that is now Misty Peaks Reserve is the majority part of what had been a relatively large extensive pastoral property – Mt Desmond Station. In 2007 the Christchurch City Council purchased this part of that property (comprising 489 hectares), it then being vested in the Council as a scenic reserve to protect the natural landscape contained therein and allow the public to experience and enjoy it.

A comprehensive botanical survey of the former Mt Desmond Station property, and recommendations for management, was carried out by Hugh Wilson (the manager of the adjoining Hinawai Reserve) in 2004. His assessment of the property states: *“...every inch of Mt Desmond Station (Misty Peaks) has conservation value or potential – that is, each bit of land with its own set of topographical, climatic, soil related and other environmental variables has its own actual or potential assemblage of native flora and fauna which will develop under a conservation orientated management regime”*.

The original area of land (36 hectares) for the Department of Conservation administered Armstrong Scenic Reserve that is surrounded by Misty Peaks Reserve was gifted to the nation by the Armstrong family in 1969, and then subsequently fenced and enlarged.

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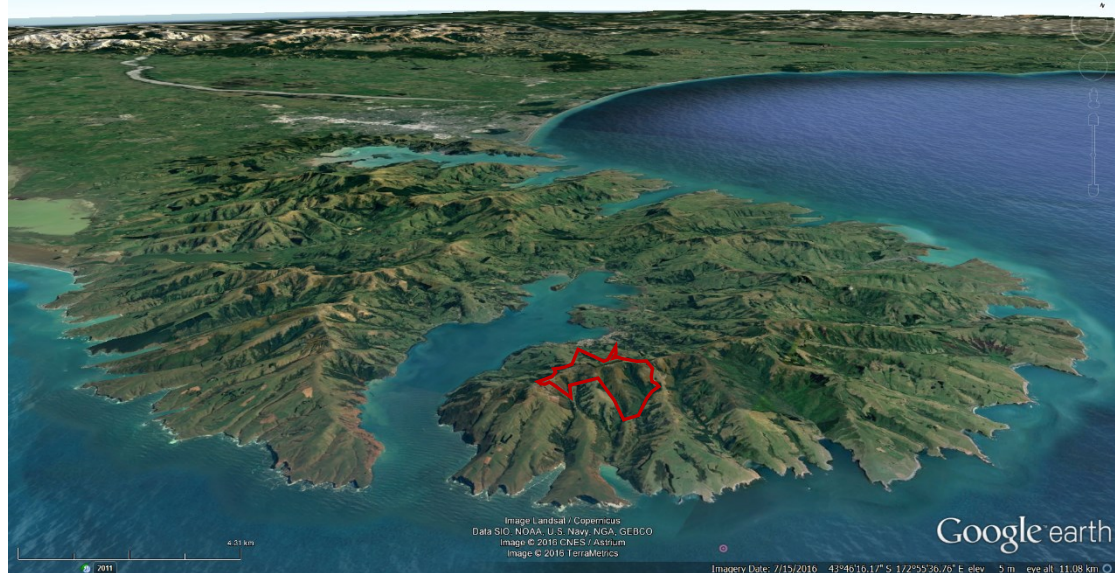
⁸ www.ecan.govt.nz/publications/Plans/ecological-significance-indigenous-vegetation-canterbury.pdf

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7 APPENDICES

7.1 Aerials and maps

Figure 6 Park locality on Banks Peninsula east of Christchurch



There are Department of Conservation administered reserves in the wider area around Misty Peaks Reserve (see Figure 7) but there is just one, other than Armstrong Scenic Reserve, more or less adjoining the park on the Flea Bay Road shared boundary. This is Tutakakahikura Scenic Reserve.

The one particularly significant adjoining land use is that of Hinewai Reserve, which shares with Misty Peaks Reserve a section of the Stony Bay Road on the north-eastern boundary of the park from the summit ridge down towards Stony Bay. Hinewai Reserve is a private nature reserve owned by the Maurice White Native Forest Trust. It has been managed for natural environment revegetation for 31 years (as at 2018).

Although across the Balguerie Stream Valley from Misty Peaks Reserve on the Akaroa side, there is a relatively recently (officially opened in February 2016) acquired nature reserve that has direct connections with Hinewai Reserve. This is the Purple Peak Curry Reserve, which is the result of a collaboration between the North Island-based New Zealand Native Forest Restoration Trust, the Christchurch City Council, Hinewai Reserve and the Rod Donald Banks Peninsula Trust. The reserve is owned by the Trust and managed by Hugh Wilson and staff of the Hinewai Reserve.

Figure 7 Nearby reserves



Figure 8 View north towards Akaroa

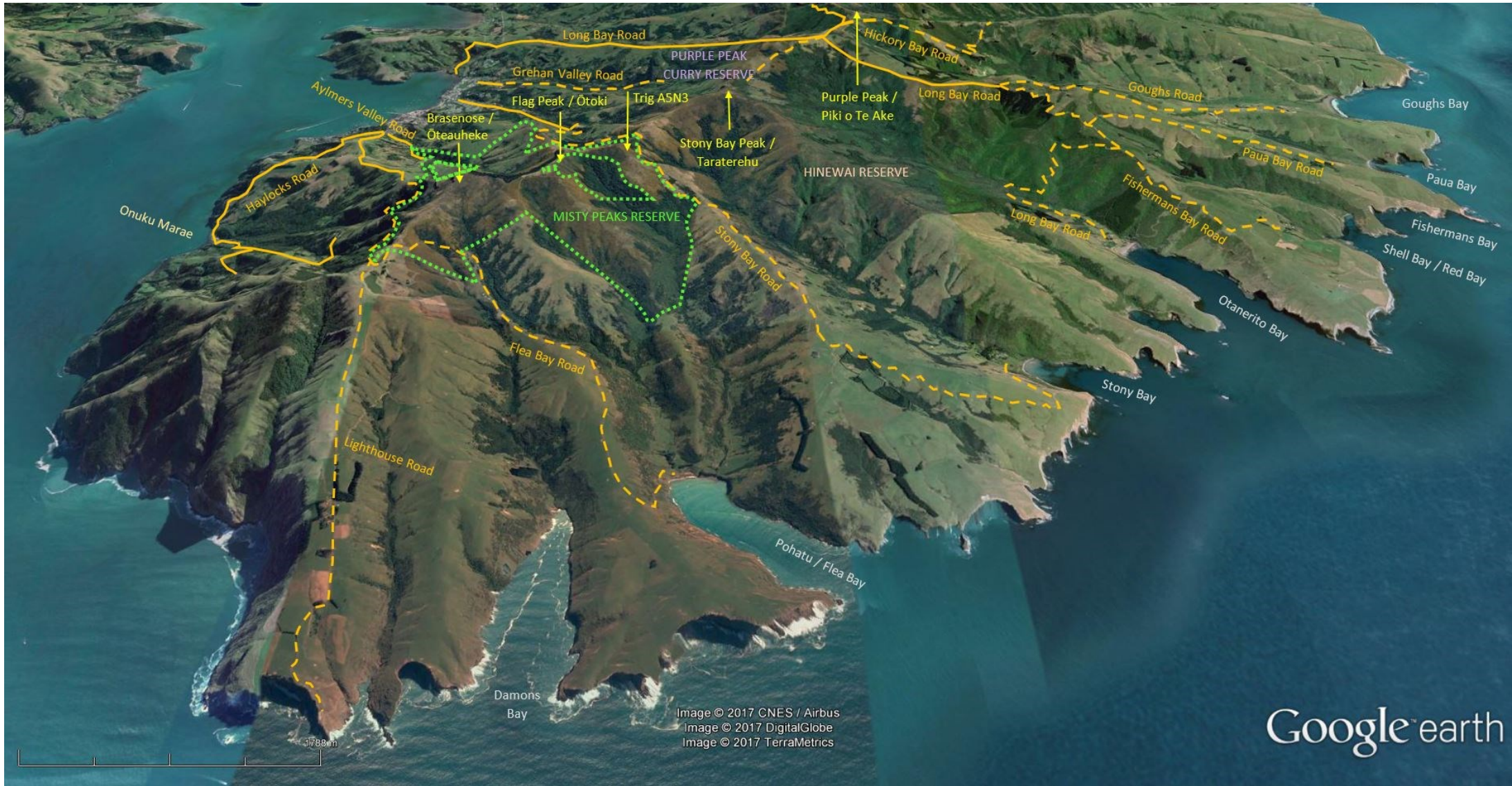


Figure 9 Misty Peaks Reserve park map (topographic)

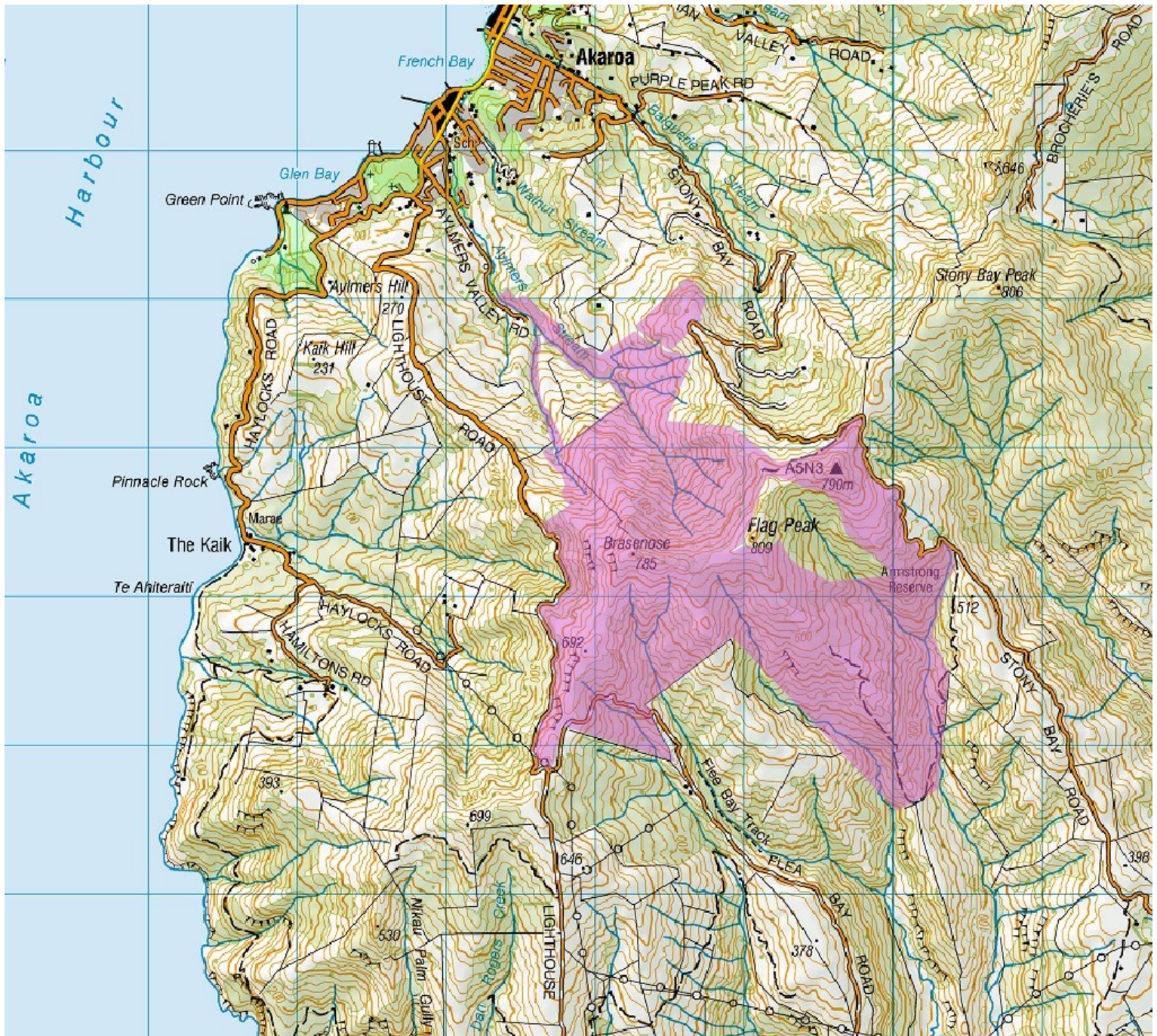
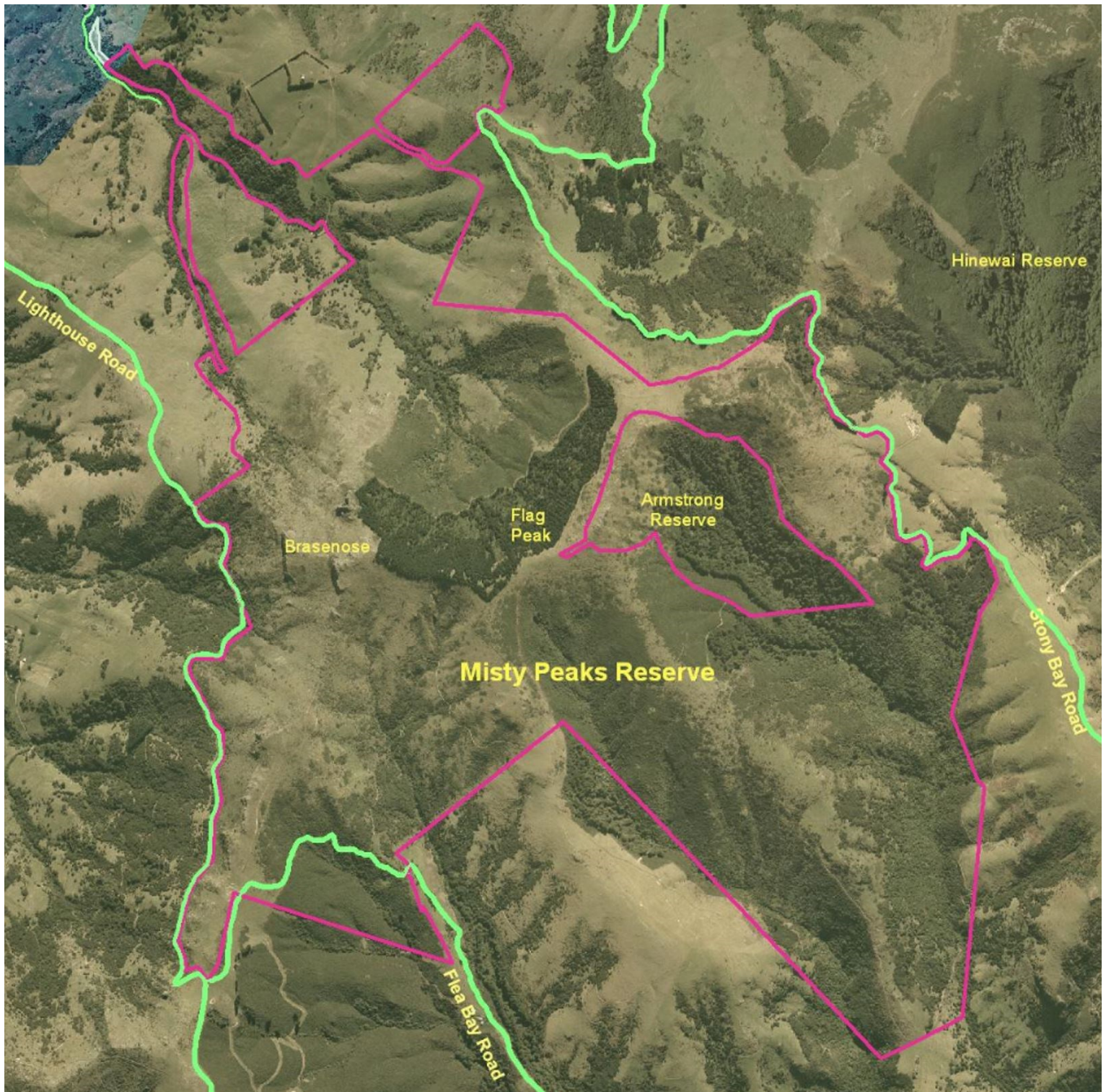


Figure 10 Misty Peaks Reserve park map (aerial)



7.2 Wāhi tapu area

Wāhi tapu registered with Heritage New Zealand under the Heritage New Zealand Pouhere Taonga Act 2014 (listing number 9507). See the map below for an approximate representation (red dashed line) of the listed area.

Figure 11 Ōteauheke wāhi tapu area



7.3 Armstrong Reserve

Armstrong Reserve, which is entirely surrounded by Misty Peaks Reserve, is a significant part of the continuum of landscape and ecology and so its specific reference here is warranted. It is to be emphasised, though, that this reserve is under the administration and management of the Department of Conservation and is not subject to this management plan.

The majority of the south-eastern side of the area that is now Misty Peaks Reserve was included in Recommended Area for Protection (RAP) 24⁹, this being listed in the Department of Conservation's Banks Ecological Region survey report for the New Zealand Protected Natural Areas (PNA) programme in 1992 as an important area for conservation on Banks Peninsula. About half of RAP 24 is situated in what has been previously described as a chronically threatened land environment, listed as having less than 20% of its previous native cover remaining.

⁹ Wilson, H.D. 1992

This RAP was situated around what is Armstrong Scenic Reserve today and includes the summit of Flag Peak. It contains red beech and mountain cabbage trees, which are very rare on Banks Peninsula, three species of tree ferns, totara and matai, and broadleaf forest regenerating through extensive block gorse. Flag Peak has a cover of snow tussock, and sub alpine plants, including the Akaroa mountain daisy (*Celmisia mackaui*). The north-west face of the mountain has an area of snow tussock shrubland, which is probably very similar to the original limited snow tussock vegetation occurring prior to Māori occupation of the area.

The really significant feature of the Armstrong Scenic Reserve is the presence there of the only stand of native cedar (*Libocedus bidwillii*) left on Banks Peninsula. The viability of that population has, however, been severely compromised by a fire in about 1984 from which recovery has been very slow.