Management planning advice - Grazing, Haast Valley

Assyst request R138405

Context

The Department has received an application (Permission 63919-GRA) to continue to graze 736ha of land in the Haast River Valley.

Assyst request R138405, received from Rebecca Beaumont, Permissions/ SLM Advisor, requested comment on:

"The amenity and natural character effects of cattle grazing in the Haast River valley, with particular reference to whether this is appropriate within the Te Wahipounamu World Heritage Area and adjoining Mount Aspiring National Park".

The Assyst request provided background context to the proposal including the application (DOC 3239443), site plan (DOC 5451236) and further information (DOC 5450870 & 5450872). The advice below focuses on the amenity and natural character effects as expressed through the West Coast Conservation Management Strategy 2010-2020 (CMS), Mt Aspiring National Park Management Plan 2011 (NPMP), UNESCO World Heritage documentation and the Conservation General Policy 2005 (CGP).

Definitions

The CMS and CGP definitions of amenity and natural character are holistic and are as follows:

"Amenity values: Those natural or physical qualities and characteristics of an area than contribute to people's appreciations of its pleasantness, aesthetic coherence, and cultural and recreational attributes. (Section 2, Resource Management Act 1991). Can include open space, design features, vegetation, historical and cultural heritage, and intangible attributes such as character, landscape and 'sense of place'." (CMS Glossary, p. 295-296; Not defined in CGP)

"Natural character: The qualities of an area which are the result of natural processes and taken together give it a particular recognisable character. These qualities may be ecological, physical, spiritual or aesthetic in nature. (Conservation General Policy 2005)". (CMS Glossary, p. 309)

Critical issues

In relation to this application, there are four critical issues to be addressed, as follows:

- 1. How to give consideration to effects on Mt Aspiring National Park when assessing this application?
- 2. What direction does the CMS provide in relation to amenity, natural character and grazing effects?
- 3. How to ensure compliance with World Heritage requirements in relation to Te Wahipounamu World Heritage Site?
- 4. Whether the amenity and natural character effects of cattle grazing are consistent with the CMS and World Heritage requirements?

1 Consideration of effects on Mt Aspiring National Park

The first issue that needs to be determined is how to give consideration to effects on Mt Aspiring NP when assessing the application.

The site to which the application relates is part of the Cook River to Haast River Conservation Area that is held for conservation purposes under Section 25 of the Conservation Act 1987. It adjoins Mt Aspiring National Park.

Section 6.7.5 (p. 93) of the NPMP only provides for limited grazing with a clear expectation that grazing is to be phased out and that new concessions will not be permitted in recognition that grazing and farming are incompatible with the aim of preserving the value of national parks. Policy 1 states:

"No new concessions for stock grazing will be permitted in the park".

As a 'will' policy, there is no discretion for decision-making (refer Policy 1(d), CGP).

I have examined the NPMP and note that while there are general advocacy policies relating to the protection of indigenous biodiversity, indigenous species, landscape and geological features¹ and policy direction in relation to the Haast Pass Highway Place (Section 13), which adjoins the site subject to the application, there is no direction specific to the site (as you would expect given that it is not in the national park).

It is noted that the NPMP recognises (consistent with legislation and the CGP) that some activities not suitable to be undertaken on National Parks may be able to be undertaken on adjoining public conservation lands. I refer specifically to descriptive text in Section 2.4.2 (p. 19) which reads as follows:

"Many adjoining areas of conservation land have high conservation and recreation values complementary to the park. In some instances recreational and commercial activities that may not be appropriate within the park may be able to be provided for on adjoining conservation lands."

I note from the information provided that stock have encroached into the NP during the current licence term although the national park is not part of the licenced area. The NPMP provides no discretion in terms of providing for new grazing concessions in the national park so as to preserve natural values. Accordingly, I consider that any concession granted would need to contain enforceable conditions to ensure that stock encroachment into the national park did not continue to occur.

2 CMS provisions - amenity, natural character and grazing effects

As with other conservation management strategies, the CMS provides management direction at three levels – region-wide, Place-based and activity-based.

Region-wide

Region-wide objectives and policies are set out in Section 3. The most relevant provisions related to amenity and natural character effects of grazing and farming are:

¹ Refer for example Policy 5 (p. 31), Policy 2 (p. 32), Policy 7 (p. 39) and Policy 13 (p. 39).

Relationships with people and organisations (Section 3.2)

"Areas where people and organisations may be able to contribute towards conservation objectives and outcomes (e.g. by raising public awareness of conservation or undertaking restoration work) should be identified" (Policy 9, p. 49).

Biodiversity values and threats (Section 3.3.1)

"Integrated management should be undertaken for the following priority sites for biodiversity management ... x) Haast Valley" (Policy 2, pp. 79-80).

"Ecological restoration initiatives ... may be supported – particularly at priority sites for biodiversity management" (Policy 6, p. 80).

"The Department should encourage restoration of the natural character of waterbody margins, through fencing to exclude livestock, removal of invasive weeds and revegetation using indigenous species" (Policy 19, p. 81).

Descriptive text in the CMS provides additional context to these provisions and includes statements to the following effect:

- Recognition that while management can never achieve the pristine natural character of prehuman NZ, the aim is to prevent further loss of indigenous biodiversity by removing as many human-induced disturbances as possible and reducing the impacts of threats (pest control, revegetation), where possible by working cooperatively with land-occupiers (pp. 55-56).
- That many of the 130,000 hectares of land transferred to DOC around 2000 have been extensively modified by farming (p. 57).
- Domestic stock are considered 'animal pests' in terms of the CMS and can become a problem if introduced to areas where they do not currently exist (p. 61).
- Indigenous ecosystems have been fragmented by human activities, especially on lowland plains and terraces (p. 61).
- Maintenance of the natural character of waterways is critical for the survival of freshwater invertebrates/ ecosystems. Many human activities have the potential to adversely affect natural character, including draining/ diversion of waterways, discharges and grazing of stock (p. 66).

Maintenance and restoration of the indigenous natural character of ecosystems (Section 3.3.3.2)

"To maintain, and restore where practicable, the indigenous natural character of the full range of West Coast Te Tai o Poutini terrestrial, freshwater and marine ecosystems" (Objective 3.3.3.2, p 79).

This objective is given effect in Policies 1 to 27 (pp. 79-82) which identify criteria for prioritising management actions. The Haast Valley is identified as a priority site for integrated management (Policy 2(x), p. 80) but policies do not identify any specific management actions. These would most likely be identified in the prescriptions for the relevant Ecological Management Unit covering this area (assuming it is included in one) and I would suggest that this be consulted.

Biosecurity and pest management (Section 3.3.3.6)

Introduced species are a major threat to indigenous flora and fauna and therefore have the potential to adversely impact on natural character and amenity values (refer definitions above).

Objectives and policies relating to biosecurity and pest management are set out in Section 3.3.3.6, (pp. 87-89). As a Planner who is not familiar with the site, I am not in a position to comment on potential effects from introduced species but would suggest that ecological advice be sought with reference to the policy direction in Section 3.3.3.6.

Geodiversity and landscapes (Section 3.3.4)

Landform and landscape values are a component of natural character (see definition above).

"To protect geodiversity and landscapes from adverse effects of human use or management" (Objective 1, p. 95).

"The Department should seek to protect and preserve the natural character, integrity and values of landscapes, landforms, geological and soil features and processes in all aspects of conservation management" (Policy 1, p. 95).

"Landscape assessments should be conducted on an as-needed basis, e.g. when considering proposals to develop utilities on public conservation land" (Policy 2, p. 95).

"The development of landscape assessment methodologies to take account of viewfields and the mountainous backdrop of the Conservancy may be promoted, and this information made available for assessment of new proposals, particularly proposals for the construction of utilities, infrastructure or other buildings." (Policy 4, p. 95).

"The Department should advocate, through a combination of general advocacy and local authority planning processes, to ensure:

- a) significant geological features and soils are protected; and
- b) activities adjacent to public conservation lands will not compromise nor be incompatible with the natural landscape values of public conservation lands." (Policy 5, pp. 95-96).

"The Department may undertake monitoring of, and encourage and/or participate in research aimed at an increased understanding of, landscape values and human impacts on vulnerable geologically significant sites" (Policy 6, p. 96).

Descriptive text in the CMS provides additional context to these provisions and includes statements to the following effect:

- Geodiversity (encompassing minerals, rocks, soils, landforms and all the processes that have formed these) is an inherent component of natural landscapes (p. 91).
- The West Coast contains landscapes which are recognised for their distinctive character and underlying processes, their intrinsic values and their contribution to the natural character of the region (p. 93).
- Protecting landscape involves considering rates of change in land and waters (pp. 94-95).
- Grazing and other farming activities may be a threat to landscapes (p. 94).
- The destruction of geological features, landforms and their underlying processes can impact on the character of natural landscapes (p. 94).

Activities on or in beds of rivers or lakes (Section 3.7.2)

Descriptive text in this section recognises that activities carried out on or in the beds of rivers have the potential for adverse effects and as a consequence such activities need to be managed in order to protect natural character (amongst other values) (p. 149). Although the section tends to emphasise gravel extraction/ quarrying, the policies would also apply to grazing/ farming activities.

"When assessing applications for any activity on or in the bed of a river or lake, consideration should be given to (but not limited to) the following quidelines:

- a) Adverse effects on freshwater and terrestrial species, habitats and ecosystems, historical and cultural heritage values, public access, recreation opportunities and amenity values should be avoided or otherwise minimised;
- b) Riparian vegetation should be maintained or enhanced;
- c) Activities should not damage riverbanks;
- d) No pests, weeds or other unwanted organisms (e.g. Didymo) should be likely to be introduced to, or become established within, the area as a result of the activity; and
- e) The natural character within the setting of the activity should be maintained." (Policy 1, p. 150).

"Biological communities, physical habitat, channel profiles and substrate may be monitored, in order to evaluate and manage the long-term impacts of activities occurring on or in the beds of rivers or lakes." (Policy 2, p. 150).

Place-based

The site is located within the Te Wahi Pounamu Place (Section 4.2.7, pp 249-267).

The desired outcomes for the Place focus on:

- Retaining those values which contributed to Te Wahipounamu South West New Zealand becoming a World Heritage Site (see Section 4.2.7.2, p. 250).
- Maintaining geodiversity, landforms and landscapes in 2010 condition (Section 4.2.7.6, pp. 256-257).
- Retaining indigenous biodiversity and managing threats (Section 4.2.7.7, pp. 257-263). The site is located within a priority site for the management of biodiversity (Map 18).
- Active management of historic places, providing increased emphasis on interpretation of heritage and undertaking research into a range of activities, including farming, and making this available to the public (Section 4.2.7.8, pp. 263-266).
- Protecting cultural values of significance to Ngai Tahu (Section 4.2.7.9, pp. 266-267).
- Provision for a range of recreation activities consistent with the visitor management zones (Section 4.2.7.10, pp. 267-274). The site is within the 'backcountry-remote' zone.

There are no objectives or policies within Section 4.2.7.

Activity-based

Section 3.7.6 (pp. 154-155) of the CMS sets out the region-wide policy direction in relation to grazing and farming. Aside from requiring concessionaires to provide access to hunters (Policy 3, p. 155) and stating that grazing licences may be issued for up to 15 years if consistent with outcomes and objectives in the CMS (Policy 1, p. 155), there is no policy direction specific to the site.

Region-wide objectives and policies in Section 3.5 must also be considered in relation to all concession applications in addition to those specifically related to grazing. Amongst other things, these require consideration of the Conservation General Policy 2005 (CGP) and Section 3.7.6 cross-references to Policies 11.1 (a)-(e), and 11.2 (a)-(b) in the CGP in particular. These policies should be

considered by the decision maker although it is noted that there are no specific references to amenity and landscape effects.

In addition, the CMS contains provisions to manage aircraft use. The notion of protecting the value of 'natural quiet' underpins DOCs aircraft management approach. The definition of 'natural quiet' in the Glossary of the CMS ("Natural ambient conditions in a natural area; the sounds of nature", p. 309) comes from the CGP and is a component of natural character (also defined in the Glossary). If aircraft are proposed to be used as part of farming operations, I would suggest that the amenity effects of this use be assessed.

3 World Heritage requirements

The site on which the grazing/ farming is proposed is encompassed within the boundaries of Te Wahipounamu – South West New Zealand² World Heritage Site (Te Wahipounamu). This part of the site was inscribed in 1990.³

The criteria for which Te Wahipounamu was nominated as a site of Outstanding Universal Value were (vii), (viii), (ix) and (x) – see below.

(vii) to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

(viii) to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;

(ix) to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;

(x) to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of Outstanding Universal Value from the point of view of science or conservation.

(Paragraph 77, Operational Guidelines for the Implementation of the World Heritage Convention)

As well as meeting these criteria, to be added to the World Heritage list the site needed to meet the conditions of integrity⁴ and have adequate protection and management systems to ensure the values are safeguarded. Paragraphs 87-95 of the Operational Guidelines for the Implementation of the World Heritage Convention (Operational Guidelines) sets out conditions that must be met in terms of integrity.

DOC, as the party responsible for the site, has ongoing management obligations under the Operational Guidelines as follows:

- Ensuring that the site's Outstanding Universal Value, including the conditions of integrity at the time of inscription, are sustained or enhanced over time (paragraph 96, Operational Guidelines).
- Advising UNESCO of any proposals that may have an impact on the Outstanding Universal Value of the site or its state of conservation (paragraph 169, Operational Guidelines).

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² This is the official UNESCO site name

³ Fiordland National Park and Westlands/ Mt Cook National Parks had previously been separate sites, inscribed in 1986.

⁴ Only cultural sites (nominated under criteria (i) to (vi) need to meet criteria for authenticity.

 Reporting periodically on the state of Te Wahipounamu – South West New Zealand (Part V, paragraphs 199-207 Operational Guidelines).

Appendix 1 contains a summary of the Statement of Outstanding Universal Value (SOUV) for Te Wahipounamu.

DOC has made periodic reports to UNESCO in 1991, 1994, 1999, 2000 and 2004. These are reported on the UNESCO website at http://whc.unesco.org/en/soc/2315. The effects of livestock farming/grazing of domesticated animals was raised in 1994 however this issue was specific to grazing in Mt Aspiring National Park.

4 Consistency with CMS and World Heritage requirements

CMS

Policy direction provided in the CMS concerning amenity and natural character effects is primarily provided at region-wide or Place-based levels rather than at site or activity level.

Descriptive text in Part 3 of the CMS recognises that component activities that may be associated with cattle grazing/ farming have the potential to adversely affect the following in particular:

- Biodiversity values particularly through introducing weeds and pests and habitat modification and fragmentation
- Waterbodies
- Indigenous flora and fauna
- Geological features, landforms and landscapes

and that as a consequence some activities need to be managed in order to protect amenity values and natural character.

It is noted that the CMS is silent with respect to the effects of grazing/ farming at an individual site level, nor does it refer to any potential effects which may arise from seeing any animals, whether indigenous or introduced.

At the policy level (objectives and policies), the CMS provides management direction in two main ways:

- Firstly, it contains effects-based direction, through objectives and policies, to manage potential adverse effects listed above; and
- Secondly, it seeks to ensure that the values that contributed to Te Wahipounamu becoming a World Heritage site are maintained and that geodiversity, landforms and landscapes are maintained in 2010 condition.

In terms of effects, there are no Place or activity-based objectives, policies or associated descriptive text that signal any intention to phase out grazing/ farming within the West Coast region generally or the Haast River Valley specifically.

While the provisions in Part 3 signal a range of adverse effects to be considered (and values to be retained), they contain no thresholds or standards to be applied. Rather Part 3 of the CMS, and particularly Sections 3.3.4 (in relation to geodiversity and landscapes) and 3.7.2 (activities on or in the beds of rivers or lakes), tends to rely on site specific assessments or research led by DOC (at a regional/ wider level) to define where intervention/ management controls should be applied. To my knowledge no research has been undertaken on amenity values and natural character of grazing/ farming, although local staff may be able to comment on this. Similarly, local staff may be able to advise whether any site specific assessments have been undertaken or whether the site has been

identified as a priority Ecological Management Unit. Any information held by local or other staff should be provided to the decision maker.

The other way in which the CMS provides direction is through describing the Outcomes for the Te Wahi Pounamu Place (Section 4.2.7). Essentially this direction is to retain the values described in Section 2.2.1.3, however the values relate to the entire West Coast region, not just the Te Wahi Pounamu Place. Given this, and the requirements set out in Section 4 of this advice for assessment against the Statement of Outstanding Universal Value (SOUV) and criteria for integrity, I would suggest that DOC should consider the World Heritage requirements as providing the primary assessment framework. Unless the site has been significantly enhanced between inscription in 1990 and 2010 when the CMS became operative. I consider that, rather than 2010, 1990 should be used as the baseline for assessment, for consistency with the UNESCO Operational Guidelines which require proposals to be assessed against the values at the time on inscription.

World Heritage requirements

The application notes that grazing/ farming has occurred on the site for over 150 years. The activity was therefore present in 1990 when the area containing the site was amalgamated into the reconfigured World Heritage Site. This would not have occurred if grazing/ farming was considered to have diminished values to the extent that the criteria for assessment of Outstanding Universal Value were not met. However, the SOUV states: '...short-term pastoral leases are closely regulated and do not result in significant impacts'. Given this, DOC needs to be able to report that close regulation is undertaken and that grazing has no significant impacts/ effects.

Assessment of the concession application requires consideration of the potential effects of grazing/ farming against the SOUV and criteria for integrity. Given that the values in the SOUV (See Appendix 1 to this advice) are expressed at a very large scale, any changes in grazing/ farming activity on the site would need to be significant in terms of nature, scale, intensity and effects before they would be likely to impact on the SOUV of Te Wahipounamu. However, if monitoring by local or other staff shows that the grazing/ farming activity is significantly different from 1990, it may be prudent to obtain advice from a suitably qualified landscape architect or similar. If values have declined then remedial action would need to be taken, including the possibility of ceasing to graze/ farm. Local staff may need to consider the cost implications of this.

While, as noted in Section 4 above, DOC is required to notify UNESCO of any proposals that may affect the SOUV of Te Wahipounamu, in practice, UNESCO are not typically interested in being notified of all proposals. Sarah Bagnall, the Senior International Advisor at DOC who works on the World Heritage Convention, advises that notification may not be required in relation to this application given the application is a continuation of grazing that was occurring at the time that Te Wahipounamu was inscribed on the World Heritage list. However if the nature, scale, intensity and effects of the activity has changed significantly since 1990, notification could be required.

Other considerations

If a decision is made to decline the application and retire the site from grazing/ farming then the responsibility for maintaining or enhancing amenity and natural character values as articulated in the CMS and SOUV will fall on DOC. DOC will need to plan and budget for this. Issuing a concession for a specified time could allow for a planned phase out period.

Summary

In summary I consider that:

The NPMP provides no discretion in terms of providing for new grazing concessions in the
national park. Although the application is not seeking to graze within the park, the outcome
sought by the NPMP is generally to ensure that grazing does not occur within the national
park so as to preserve natural values. Accordingly, I consider that any concession granted

- would need to contain enforceable conditions to ensure that stock encroachment into the national park did not continue to occur.
- While the CMS identifies that some component activities associated with cattle grazing/ farming may have indirect adverse effects on amenity values and natural character, the CMS does not signal any intention to phase out grazing/ farming within the West Coast region generally or the Haast River specifically.
- The effects-based approach adopted in the CMS to manage effects on these values contains no thresholds or standards and tends to rely on site specific assessments or research by DOC to define where intervention/ management controls should be applied. Unless research has been undertaken demonstrating that the effects of grazing/ farming in the locality are unacceptable, or a site assessment has been undertaken by a suitably qualified person suggesting the same, in my opinion it would be difficult to justify intervention/ controls based on the CMS provisions. If the decision-maker considers the application to be high risk or staff familiar with the site consider that farming may be having adverse effects on amenity values or natural character, then consideration should be given to commissioning a suitably qualified person to undertake a site assessment.
- Assessment of the concession application requires consideration of the potential effects of
 grazing/ farming against the SOUV and criteria for integrity under the World Heritage
 Operational Guidelines. Given that the values in the SOUV are expressed at a very large scale,
 any changes in grazing/ faming activity on the site would need to be significant in terms of
 nature, scale, intensity and effects before they would be likely to impact on the SOUV of Te
 Wahipounamu. However, if monitoring by local or other staff shows that the grazing/
 farming activity is significantly different from 1991, it may be prudent to obtain advice from a
 suitably qualified landscape architect or similar.
- There is no need to notify UNESCO of the proposal if the nature, scale and intensity of the activity has not changed since 1990.
- If aircraft are to be used as part of the grazing/ farming activities then the application will need to be assessed against the aircraft provisions in the CMS.

This advice has been peer reviewed by Sarah Bagnall, Senior International Advisor, International Team, with respect to World Heritage matters.

Sarah Smylie Management Planner Hamilton Shared Services Team 27 July 2018

Appendix 1: Statement of Outstanding Universal Value for Te Wahipounamu – South West New Zealand

Property Te Wahipounamu – South West

New Zealand

State Party New Zealand

Id. N° 551

Date of inscription 1990

http://whc.unesco.org/document/117094 p 49 - 51.

Brief synthesis

Located in the south-west corner of New Zealand's' South Island, Te Wähipounamu – South West New Zealand covers 10% of New Zeland's landmass (2.6 million hectares) and is spread over a 450km strip extending inland 40 - 90km from the Tasman Sea. The property exhibits many classic examples of the tectonic, climatic, and glacial processes that have shaped the earth. The great Alpine Fault divides the region and marks the contact zone of the Indo-Australian and Pacific continental plates making it one of only three segments of the world's major plate boundaries on land. Collision between the two tectonic plates constructs the main mountain range, known as the Southern Alps/Kä Tiritiri o te Moana, which rise to nearly 4 000m altitude within a mere 30km from the sea.

Overwhelmingly a mountainous wilderness, including significant piedmont surfaces in the north-west glaciation, both historic and modern, is a dominant landscape feature. Spectacular landforms include: the 15 fiords which deeply indent the Fiordland coastline; a sequence of 13 forested marine terraces progressively uplifted more than 1000m along the Waitutu coastline over the past million years; a series of large lake-filled glacial troughs along the south-eastern margin; the Franz Josef and Fox Glaciers which descend into temperate rainforest; and spectacular moraines of ultramafic rock extending to the Tasman coastline.

As the largest and least modified area of New Zealand's natural ecosystems, the flora and fauna has become the world's best intact modern representation of the ancient biota of Gondwana. The distribution of these plants and animals is inextricably linked to the dynamic nature of the physical processes at work in the property. The region contains outstanding examples of plant succession after glaciation, with sequences along altitudinal (sea level to permanent snowline), latitudinal (wet west to the dry east), and chronological gradients (fresh post-glacial surfaces to old Pleistocene moraines).

It is the combination of geological and climatic processes, the resultant landforms, the unique biota displaying evolutionary adaptation over a diverse range of climatic and altitudinal gradients, all in a relatively pristine state, that give Te Wähipounamu – South West New Zealand its exceptional and outstanding natural characteristics.

Criterion (vii): Te Wähipounamu - South West New Zealand contains many of the natural features which contribute to New Zealand's international reputation for superlative landscapes: its highest mountains, longest glaciers, tallest forests, wildest rivers and gorges, most rugged coastlines and deepest fiords and lakes, as well as the remnant of an extinct volcano in Solander Island. The temperate rainforests of the property are unmatched in their composition, extent and intactness by any such forests anywhere in the world.

From the vast wilderness of Fiordland in the south to the spectacular upthrust of the Southern Alps in the north, the landscapes are world class for the sheer excellence of their scenic beauty. It is an area of magnificent primeval vistas: snow-capped mountains, glaciers, forests, tussock grasslands, lakes, rivers, wetlands and over 1000km of wilderness coastline. Only traces of human influence are evident and then mainly in peripheral areas.

Criterion (viii): Te Wähipounamu - South West New Zealand is considered to be the best modern example of the primitive taxa of Gondwanaland seen in modern ecosystems – and as such the property is of global significance. The progressive break-up of the southern super-continent of Gondwanaland is considered one of the most important events in the earth's evolutionary history. New Zealand's separation before the appearance of marsupials and other mammals, and its long isolation since, were key factors enabling the survival of the ancient Gondwanan biota on the islands of New Zealand to a greater degree than elsewhere. The living representatives of this ancient biota include flightless kiwis, carnivorous land snails, 14 species of podocarp and genera or beech.

The South West is also an outstanding example of the impact of the Pleistocene epoch of earth history. Ice-carved landforms created by these "Ice Age" glaciers dominate the mountain lands, and are especially well-preserved in the harder, plutonic igneous rocks of Fiordland. Glacier-cut fiords, lakes, deep U-shaped valleys, hanging valleys, cirques, and ice-shorn spurs are graphic illustrations of the powerful influence of these glaciers on the landscape. Depositional landforms of Pleistocene glacial origin are also important, especially in Westland, west of the Alpine Fault. Chronological sequences of outwash gravels, and moraine ridges in elegant curves and loops, outline the shapes of both former piedmont glaciers and Holocene "post-glacial" valley glaciers.

Criterion (ix): A continuum of largely unmodified habitats, the property exhibits a high degree of geodiversity and biodiversity. Fresh-water, temperate rainforest and alpine ecosystems are all outstandingly well represented over an extensive array of landforms and across wide climatic and altitudinal gradients. Notable examples of on-going biological processes can be found in the large expanses of temperate rainforest, the plant succession after glacial retreat, soil/plant chronosequences on beach ridges, plant succession on alluvial terraces, vegetation gradients around the margins of glacial lakes and ecotypic differentiation of plants on ultramafic soils. The extensive and little modified freshwater habitats, the impressive diversity of alpine ecosystems, extensive alpine plant endemism, and on-going evolution associated with long-standing geographical isolation of animal populations, like the kiwi taxa of South-Westland, are further examples of on-going biological evolution.

While there is little permanent physical evidence of past human interaction with the natural environment, tangata whenua (the indigenous people who have customary authority in a place) have long associations with the area which was significant to them for natural resources, particularly pounamu (nephrite). European associations are more recent and initially based on natural resource exploitation. The predominant human uses today are associated with sustainable tourism.

Criterion (x): The habitats of Te Wähipounamu contain an extensive range of New Zealand's unusual endemic fauna, a fauna which reflects its long evolutionary isolation and absence of mammalian predators. The property contains the entire wild population of the rare and endangered takahë (Notornis mantelli), the entire population of the South Island subspecies of brown kiwi (Apteryx australis), New Zealands rarest Kiwi, the rowi (Apteryx rowi), the only significant remaining populations of the seriously declining mohua / yellowhead (Mohoua ochrocephala), the only large populations remaining of käkä and käkäriki / yellow-crowned parakeet, the only remaining population of pateke / Fiordland brown teal in the South Island.

The world's rarest and heaviest parrot, käkäpö (Strigops habroptilus) survived in Fiordland until the early 1980s. It is now thought to be extinct on the mainland and its survival depends on careful management of a limited number of offshore island populations.

Integrity

Te Wähipounamu encompasses many complete 'mountains-to-the-sea' or 'mountains-to-inland basins' landscape sequences. These landscapes cover the full range of erosion and deposition landforms of Pleistocene and modern glacial origin. The 2.6 million hectare property represents the 10 percent of New Zealand that is least disturbed or modified by human settlement, and is largely in its natural state giving it a high degree of integrity. The property

boundaries encompass all the values of the property which comprises a nearly contiguous network of reserved land covering much of the south-west of the South Island. The boundaries are closely and realistically aligned with the main features of the area. The property includes four national parks (Fiordland, Mount Aspiring, Mount Cook and Westland) covering 1,725,437 ha, two nature reserves, three scientific reserves, 13 scenic reserves, four wildlife management reserves, five ecological areas, conservation areas and one private reserve (20 ha). Bordered by other protected public conservation land the property has an effective buffer zone providing further protection for the natural values.

The property contains nearly 2 million hectares of temperate rainforest on an extraordinary range of landforms and soils-including altitudinal, latitudinal, west-to east rainfall gradients, and age sequences associated with glacial retreat, prograding coastlines and marine terraces uplifted progressively over the last million years. In particular, the rainforest contains the best examples in the Southern Hemisphere of one of the most ancient groups of gymnosperms, the Podocarpaceae, which range from the densely-packed 50m-high rimus of the South Westland terraces to the world's smallest conifer, the prostrate pygmy pine.

The relatively recent introductions of alien browsing mammals and predators, such as rodents and mustelids, have resulted in localised extinctions, range reductions, and significant declines in abundance of some indigenous biota. These threats will remain, but with ongoing intervention can be managed and should not impact significantly on the integrity of the area. There is some evidence of the effects of global warming on the permanent icefields and glaciers in the region.

The international profile of the area as a visitor destination places pressure on some of the main tourist attractions within the wider site. These pressures are being managed to provide visitor access but only where the conservation values at these sites are protected.

Protection and management requirements

A comprehensive array of statutes and regulations protect the property, the most important being the National Parks Act 1980 and the Conservation Act 1987. These two pieces of legislation along with the Reserves Act 1977 are the principal means of ensuring legal protection for the property. The land encompassed by the boundaries of the property, with one small exception, is Crown (Government and the people of New Zealand) owned and it is administered by the Department of Conservation. The property is a reformulation of two previous property inscribed on the World Heritage List in 1986; Fiordland National Park and Westlands / Mt Cook National Park. This property adds 1.2 million ha of the intervening land, almost doubling the size of the area inscribed in 1986 and including almost 70% of the area under national park status, and greatly adding to the overall universal value, wilderness quality and integrity of the property.

The Department of Conservation has a legislative mandate for the preservation and protection of natural and historic resources for the purpose of maintaining their intrinsic values, providing for their appreciation and recreational enjoyment by the public, and safeguarding the options of future generations.

The Department of Conservation is obligated through its legislation to give effect to the principles of the Treaty of Waitangi. In practice this implies a partnership agreement with tangata whenua that have manawhenua (prestige, authority over the land) over the area. This involves an annual business planning process with the Ngäi Tahu iwi (the overarching tribal authority for tangata whenua). This process gives Ngäi Tahu the opportunity to engage in and contribute to the operational management of the property.

The particularly high natural values of the property, along with the World Heritage status, mean that this area is a priority area for ongoing management. The Area covers four separate Conservancies, although they all report to

one Manager. The Department's organisational structure therefore also provides for integrated management of the area.

There is no single management strategy for the area, although under the National Parks Act, each national park is required to have a national park management plan and there are also a number of conservancy conservation strategies that acknowledge the values of the regions comprising the large site, as well as the property's World Heritage status. Together these planning documents set strategic directions for the integrated management of this property. These are statutory documents formulated through a public consultation process. The national park management plans are prepared by the Department of Conservation (the administering authority for all national parks in NZ) and approved by the New Zealand Conservation Authority, in accordance with the General Policy for National Parks (a policy document that guides the implementation of the National Parks Act, also prepared and administered by the Department of Conservation).

The principal uses of the property are nature conservation, nature based recreation and tourism and sustainable small-scale natural resource utilisation. Impacts from tourism at key sites and introduced species are being addressed by management actions and continue to be a concern. Traditional use of vegetation by native Maori people, fishing for whitebait, recreational hunting and short-term pastoral leases are closely regulated and do not result in significant impacts.

Invasive species are the biggest impact on the property, despite their impacts being restricted to small areas of the property. Population increases of red deer as well as impacts from other browsing mammals such as wapiti, fallow deer, goat, chamois and tahr have caused severe damage in some parts of the property, in particular threatening the integrity of the forest and alpine ecosystems. Commercial hunting activities have assisted in reducing numbers and impacts from these species. Australian brush-tailed possum, rabbits, mustelids and rodents also impact habitats and indigenous birds. The Department of Conservation has control programmes in place and National Parks general policy seeks to eradicate new incursions and eradicate (where possible) or reduce the range of existing invasive species.