



DRAFT REGIONAL POLICY STATEMENT

May 2016

Chapter 8

Biodiversity

Koiora

I.8 Significant Resource Management Issues: Biodiversity

Issue 8.1 Whakatū Nelson's significant biodiversity values have not been confirmed.

Whakatū Nelson's biodiversity has been shaped by its atmospheric and marine climate, its geology and topography and its environmental history. Cold adapted flora and fauna are found in the mountains, whereas those species adapted to warmer conditions occupy the lowlands. Native forest covers 34% of Whakatū Nelson's land area, with regenerating kanuka covering a further 8%. At high altitudes and around coastal margins are found areas of native grasslands (3%) where the extremes of weather suppress the growth of woody vegetation. The remainder of Whakatū Nelson's land area is occupied by farms, exotic forestry and urban development, featuring a mix of introduced and indigenous species.

Despite over 150 years of human modification, Whakatū Nelson still retains some significant tracts of coastal and lowland forest, special assemblages of matai – black beech and tanekaha – southern rata forest, and 17 species of nationally threatened plants. It also marks the southern limit for species such as pukatea and tawa and the western limit for ramarama and leafless lawyer. Whakatū Nelson is the national stronghold for special species including shovel mint and Mineral Belt endemics.

Collectively, Whakatū Nelson's significant river systems, the Maitai and Wakapuaka, together with the numerous smaller streams entering the Waimea, Haven, Delaware and Whangamoā estuaries, provide significant habitat for a range of native freshwater fish, birds, crustaceans, macroinvertebrates and plant species.

Whakatū Nelson's marine environment features:

- Four key estuaries supporting salt marshes, habitats for flatfish, wading and migratory birds, and spawning grounds for coastal fish
- A rocky coastline, islands, the Boulder Bank, undersea rocky reefs, offshore waters and sandy and muddy sediments; habitats for a diverse range of micro and macroinvertebrate species, shellfish, and inshore, reef and ocean-going species of fish, mammals and birds.

Initial work in relation to terrestrial biodiversity suggests that significant natural areas equate to 33% of Whakatū Nelson's land area. Approximately 14,000 hectares are held in public ownership and form part of the conservation estate. In addition, approximately 3,976 hectares may be located on private land. However, this figure is provisional because detailed ecological surveys have only been carried out that

confirm the significance in biodiversity terms of approximately 1,980 hectares of privately owned land (or 50% of the potential total area in private ownership). Surveys are only able to be undertaken with the permission of owners.

In comparison with its land area, more comprehensive information is held with respect to freshwater and marine biodiversity values in Whakatū Nelson, largely due to their location in publicly accessible areas.

Issue 8.2 Whakatū Nelson’s significant biodiversity values are being seriously compromised by unintended pest incursions, the effects of which may in turn be exacerbated by climate change.

Affording legal protection to significant natural areas in no way provides a guarantee of their retention or survival. In Whakatū Nelson, the most serious threat to significant biodiversity values is the damage caused by incursions of pest plants and animals. Such species as old man’s beard, Himalayan honeysuckle, banana passion fruit, wilding pines, pigs, possums and goats present serious risks of localised ecosystem collapse, especially in combination with land and vegetation disturbance.

A significant proportion of confirmed significant natural areas held in private ownership (refer Issue 8.1), are likely to be at risk from such pest incursions. The extent of terrestrial incursions has become so significant that many private (and public) landowners may be unable to undertake control work without support.

Pressures on significant natural areas may also arise through stock incursion, where such areas remain unfenced.

Pressure on freshwater biodiversity also comes from pest incursions, particularly didymo, coastal fish and aquatic plants. In the marine environment, exotic species such as pacific oysters and undaria seaweed have established large populations.

Whakatū Nelson’s temperate climate, featuring high annual sunshine hours and mild temperatures, is conducive to pest plant growth. Climate change may exacerbate the impacts of pest plant incursions, as well as other stressors (such as reductions in rainfall and stream flows and increasing temperature, storms and risk of fire) on already vulnerable indigenous biodiversity values.

Issue 8.3

Whakatū Nelson’s significant freshwater and marine biodiversity values can be compromised by sedimentation, discharges of contaminants, reclamation, and structures or works in, on, over or adjacent to the beds of rivers, streams and the coastal marine area.

Numerous activities threaten freshwater biodiversity values, whether they are located in, on or over the beds of rivers or streams, or in the broader catchments. They may directly affect habitats through structures and stream works (e.g. weirs, bridge aprons, channelling, culverts) or via sedimentation or discharges of contaminants associated with the use of land. Climate change is likely to lead to an increased frequency and intensity of storm events, exacerbating the effects of sedimentation in rivers, streams and the coastal marine area. The potential function of rivers and streams as biodiversity corridors, linking the hills to the coast may be compromised by urban development, fragmented ownership and a lack of reserves in the riparian margin.

Ultimately, sources of sedimentation and contamination in waterways can impact on marine biodiversity values.

Issue 8.4

Whakatū Nelson’s significant natural areas could be compromised by inappropriate clearance of vegetation, or through the drainage or infilling of wetlands.

Whakatū Nelson’s remaining terrestrial biodiversity represents a fraction of that existing prior to human settlement. The wholesale loss of significant natural areas through clearance (or drainage and/or infilling, in the case of wetlands) has not been a significant issue in Whakatū Nelson in the recent past, as a result of a number of factors, including the physical challenges in accessing and bringing into production remaining areas, the value increasingly placed on biodiversity by owners, and the effect of current planning controls. However, while the risk of wholesale loss may now be lower, the consequences of any such loss, were it to occur, would be significant.

Indigenous upland forest and mineral belt ecosystems are reasonably well-represented and protected by virtue of their inclusion in the publicly-owned conservation estate or being valued and retained by private owners.

Acutely or chronically threatened ecosystems in Whakatū Nelson generally comprise coastal and lowland ecosystems, and are based around estuaries, coastal and lowland flats and coastal hill country. They are generally under-represented in the conservation estate, and the few

remaining areas may be vulnerable to clearance, drainage or infilling associated with current land use and potential development.

Issue 8.5 The release of genetically modified organisms into the environment could have an adverse effect on Whakatū Nelson’s biodiversity values.

Nelson City Council declared itself ‘genetic engineering free’ in 2001. In 2004, the Council further resolved not to plant, grow or release genetic modified organisms (GMOs), or to provide genetically engineered foods, as part of its own operations.

The Hazardous Substances and New Organisms Act 1996 regulates GMOs in New Zealand. Applications to import, develop, field test or release GMOs are assessed by the Environmental Protection Authority. Some councils are currently seeking to control the field trialling and release of GMOs under the RMA to, in part, brand their locally grown produce as being GM-free.

In terms of potential controls, this Council could seek to distinguish between lab-based development and testing, and field-based trialling and release. Council would like to canvas the views of the Whakatū Nelson community on the matter of its potential role in controlling GMOs under the RMA. Subject to the outcomes of this community engagement, developing case law and potential changes to legislation, appropriate objectives, policies and methods could be developed for inclusion in this section of the RPS and in the Nelson Plan.

**R.8 Resource Management Responses:
Biodiversity**

Objectives

- Objective 8.1 Confirm Whakatū Nelson’s significant terrestrial biodiversity values.**
- Objective 8.2 Protect Whakatū Nelson’s significant biodiversity values from unintended incursions.**
- Objective 8.3 Protect Whakatū Nelson’s significant freshwater and marine biodiversity values from the effects of sedimentation, discharges of contaminants, reclamation, and structures or works in, on, over or adjacent to the beds of rivers, streams and the coastal marine area.**

Objective 8.4 Protect Whakatū Nelson’s significant terrestrial natural areas from loss through clearance, drainage or infilling.

Policies

Policy 8.1 Whakatū Nelson’s terrestrial natural areas will be identified and protected where:

- **They are representative of the original vegetation or habitat and of what remains**
- **There are rare species, communities or habitats present or other features that make them distinctive in local, regional or national terms**
- **There are a notable range of species, communities or habitats and complex patterns or gradients present**
- **They are large and compact**
- **They are well connected to other natural areas, buffer or are buffered by adjoining areas, and provide critical resources to mobile species**

Explanation

As indicated in Issue 8.1, ecological surveys have confirmed the significance of a portion of Whakatū Nelson’s terrestrial natural areas. Work to confirm remaining significant biodiversity values is still to be completed. Means to identify and protect terrestrial significant natural areas may need to be developed in advance and in the absence of comprehensive information about the location of those areas. The criteria for identifying ‘significance’ set out in Policy 8.1 are nationally recognised and have been widely adopted by local authorities.

Policy 8.2 The Council will support the efforts of private landowners and work with other public agencies in controlling pest animal, pest plant and stock incursions that result in risk to Whakatū Nelson’s significant biodiversity values.

Explanation

As indicated in Issue 8.2, pest animal and plant incursions represent the greatest risk to Whakatū Nelson’s biodiversity values, particularly on land. The Council seeks to address these risks via the following means:

- Identifying specific pest problems that landowners have obligations to address under the Tasman-Nelson Regional Pest Management Strategy

- Actively supporting pest control efforts by assisting private landowners with advice, funding and the like
- Working with other public agencies (such as the Department of Conservation) to co-ordinate pest control efforts

Damage by stock incursion can also be averted through the Council's support of fencing efforts by owners.

In the freshwater and marine environments, the Council can also support the pest control efforts of other agencies.

The direct impacts of climate change on biodiversity values are not something the Council can practically address, although it can enhance the resilience of those values through its support of pest control efforts.

Policy 8.3

The Council will:

- **Restrict inappropriate forms of development such as reclamation, structures or works in, on, over or adjacent to the beds of rivers, streams and the coastal marine area that would otherwise have a significant impact on the significant freshwater and marine biodiversity values of these areas**
- **Control sedimentation and discharges of contaminants associated with land-based activities that could otherwise have adverse effects on significant freshwater and marine biodiversity values**
- **Enhance the biodiversity corridor functioning of riparian areas associated with rivers and streams**

Explanation

Whakatū Nelson's rivers, streams and the coastal marine area are the ultimate receiving environments, where activities on land within the relevant catchments are concerned. Measures are required to ensure freshwater and marine biodiversity values are not adversely affected by land-based sources of sedimentation and contamination over time. Measures to sustain the environmental health of Tasman Bay, to restore the Maitai River and its riparian margins, and protect and restore the alluvial, riparian and coastal ecosystems of Wakapuaka Valley and Delaware Bay are identified as priorities for action in the Nelson Biodiversity Strategy. Methods to address the effects of land-based activities on freshwater and marine biodiversity values are outlined in the Freshwater, Coastal Environment and Land sections.

Activities located in, on or over the beds of rivers, streams and the coastal marine area may have a more direct, immediate impact on

biodiversity values by, for instance, disturbing or destroying habitat or altering currents and water flow. Measures are required to ensure works such as dredging, gravel extraction, damming or stream realignment, structures such as coastal protection works and bridge aprons, and reclamation, do not have a significant impact on biodiversity values in these environments. Methods to address the effects of these activities are outlined in the Freshwater and Coastal Environment sections.

The value of the riparian areas associated with Saxton, Jenkins and Sharlands Creeks, Orphanage, Poorman Valley and Brook Streams and the Maitai River as biodiversity corridors linking the hills to the coast can be enhanced by expanding the network of reserves and through planting and weed control.

Policy 8.4 The Council will restrict inappropriate activities such as clearance, drainage and infilling that would otherwise result in a loss of significant natural areas.

Explanation

The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna can only be achieved through the avoidance of activities that would compromise those values, which therefore necessitates controls on vegetation clearance (on land) and drainage or infilling (in the context of wetlands).

Any protective measures need to be developed within an understanding of the risk of actual loss. As indicated in Issue 8.4, Whakatū Nelson's remaining biodiversity values exist largely due to the ethic of stewardship exercised by public and private owners. Although the likelihood of wholesale destruction of those values through clearance, drainage or infilling is remote, the consequences, were it to occur, would be significant. Therefore, at the very least, provisions are needed to ensure that outcome, however unlikely, is avoided. Such provisions also help to protect the investments that owners and the Council make in controlling pest incursions, which represent the greatest and more immediate risk to biodiversity values (refer Policy 8.2).

Policy 8.5 The Council will provide for compatible activities in significant terrestrial natural areas, including cultural use, environmental restoration and low impact recreation.

Explanation

The cultural use of significant natural areas by tangata whenua Iwi needs to be provided for. Some activities associated with efforts to restore the environment such as fencing, baiting and weed control can generate their

own environmental effects. As the benefits are likely to outweigh any adverse effects, environmental restoration is also appropriately provided for in areas that are significant in biodiversity terms. Low impact recreational activities such as hiking or mountain biking may also be appropriate and can increase public awareness of and appreciation for biodiversity values.

Methods

Regulatory methods	Who	Policy link
Nelson Plan		
Based in part on the outcomes of the landowner survey referred to above, the Council will finalise provisions that are either based: <ul style="list-style-type: none"> on maps indicating the location of terrestrial significant natural areas where these have been confirmed through an ecological survey (undertaken only where the landowner's permission has been obtained), or on narrative descriptions of acutely or chronically threatened ecosystems, where these have not been able to be confirmed via ecological survey or some combination of the above. Controls on clearance, drainage and infilling would then apply where these provisions are triggered.	Council	Policy 8.1 Policy 8.4
Implement Joint Tasman-Nelson Regional Pest Management Strategy and Top of the South Marine Biosecurity Partnership	Council	Policy 8.2
Include performance standards that apply with respect to cultural use, environmental restoration and low impact recreational activities in terrestrial significant natural areas.	Council	Policy 8.5
Pursue a large property plan approach with interested landowners to identify development opportunities, values and constraints in a coordinated manner.	Council	Policy 8.5
Include controls on land disturbance and vegetation clearance to minimise the adverse effects of sedimentation on freshwater and marine biodiversity values.	Council	Policy 9.1 (Land Chapter)
Include controls on reclamation, structures, and works in, on or over the beds of rivers, streams, and the coastal marine area to avoid significant impacts on freshwater and marine biodiversity values.	Council	Policy 8.3
Requiring esplanade reserves or strips at the time of subdivision in priority stream and river riparian areas.	Council	Policy 8.3
Other Statutory Policies, Standards and Plans		
Once finalised, the National Environmental Standard for Plantation Forestry is expected to address adverse environmental effects (including discharges of slash and sediment, damage to riparian vegetation, restrictions on fish passage) associated with mechanical land preparation, afforestation, earthworks, quarrying, river crossings, pruning and harvesting spread.	Council	Policy 9.1 (Land Chapter)

Non-regulatory methods	Who	Policy link
Monitoring and information		
Survey owners of confirmed or potentially significant natural areas to understand their preferences with respect to the obtaining and use of information relating to biodiversity values on their properties, and their intentions regarding (potentially) significant natural areas.	Council	Policy 8.1 Policy 8.4 Policy 8.5
Funding and assistance		
Support landowner efforts at pest and stock control in areas regarded as outstanding in biodiversity terms through the auspices of such initiatives as Nelson Nature, a flagship non-regulatory biodiversity programme.	Council	Policy 8.2
Provide advice to prospective consent applicants in terms of the steps they can take to mitigate the effects of development proposals on recognised biodiversity values.		Policy 8.3 Policy 8.4
Provide incentives for the protection of significant natural areas (where the values associated with these areas have been confirmed).	Council	Policy 8.1
Proactively seek to improve access and incentivising planting and weed control in riparian areas with the agreement of owners.	Council	Policy 8.3
Advocacy and education		
Continue to promote Nelson as a fantastic place to live, work and play with reference to its biodiversity attributes.	Council	Policy 8.1 Policy 8.5

Anticipated environmental results

Anticipated Environmental Result	Link to policy	Indicator	Data Source
Whakatū Nelson's terrestrial significant natural areas are confirmed, protected and, where feasible, enhanced.	Policy 8.1	The comprehensive identification in the Nelson Plan of terrestrial significant natural areas (in either mapped or narrative form).	Provisions of the Nelson Plan
	Policy 8.1 Policy 8.4 Policy 8.5	No net loss of terrestrial significant natural areas through the granting of resource consent applications.	Monitored via GIS / aerial records and through an independent review of consent outcomes in biodiversity terms

Anticipated Environmental Result	Link to policy	Indicator	Data Source
Whakatū Nelson's significant freshwater and marine biodiversity values are protected and maintained.	Policy 8.1 Policy 8.4	No absolute loss of acutely or chronically threatened ecosystems.	Monitored through an independent review of consent outcomes, complaints and enforcement action
	Policy 8.3	Increase in coverage of esplanade reserves and strips along priority stream and river riparian areas.	Property records. Resource consent records. GIS / aerial records
	Policy 8.2	By 2025, owners of the top 50 significant natural areas identified through the auspices of Nelson Nature are being actively assisted in their management efforts by the Council.	Nelson Nature records
	Policy 8.2	By 2025, populations of pest plants and animals in the top 50 areas (and also in the Maitai and Roding catchments, and on Dun Mountain, the Mineral Belt and Limestone Outcrops) will be reduced.	Pest plant and pest animal surveys. Nelson Nature records
	Policy 8.2	By 2025, bird counts in the Nelson Halo areas will increase.	Bird surveys. Nelson Nature records
	Policy 8.3	By 2025, specific Nelson Nature objectives relating to Whakatū Nelson's rural and urban waterways (including rates of riparian fencing and planting, rectification of barriers to fish passage, and improvements to fish spawning habitat) will be achieved.	Review of specific Nelson Nature goals and monitoring data
	Policy 8.3	No decline in freshwater or marine biodiversity values attributable to sedimentation or contaminant discharges associated with land-based activities.	Fresh and coastal water ecological surveys. Reporting on recreational bathing water quality
	Policy 8.3	No decline in freshwater or marine biodiversity values attributable to activities in, on or over the beds of rivers, streams or the coastal marine area.	Fresh and coastal water ecological surveys

Anticipated Environmental Result	Link to policy	Indicator	Data Source
	Policy 8.2	Specific examples of the enhancement of freshwater and marine biodiversity values through Council support of pest control initiatives.	Review of biosecurity initiatives

Principal reasons

Significant biodiversity values are present in Whakatū Nelson in freshwater and marine environments, as well as on land (although the full significance of these values in a terrestrial sense remains to be confirmed). All such values must be identified and protected, with the greatest focus placed on controlling pest incursions. Through initial feedback on the potential direction of Whakamahere Whakatū, the community has indicated strong support for the control of pest incursions on both public and private land, and for broader initiatives intended to maintain and enhance biodiversity, such as Nelson Nature.