

4.4 Canterbury High Country Braided Rivers and Lakes (Rangitata River, Rakaia River, Ashburton Lakes-Hakaterere, Upper Ashburton River)

SITE LOCATION

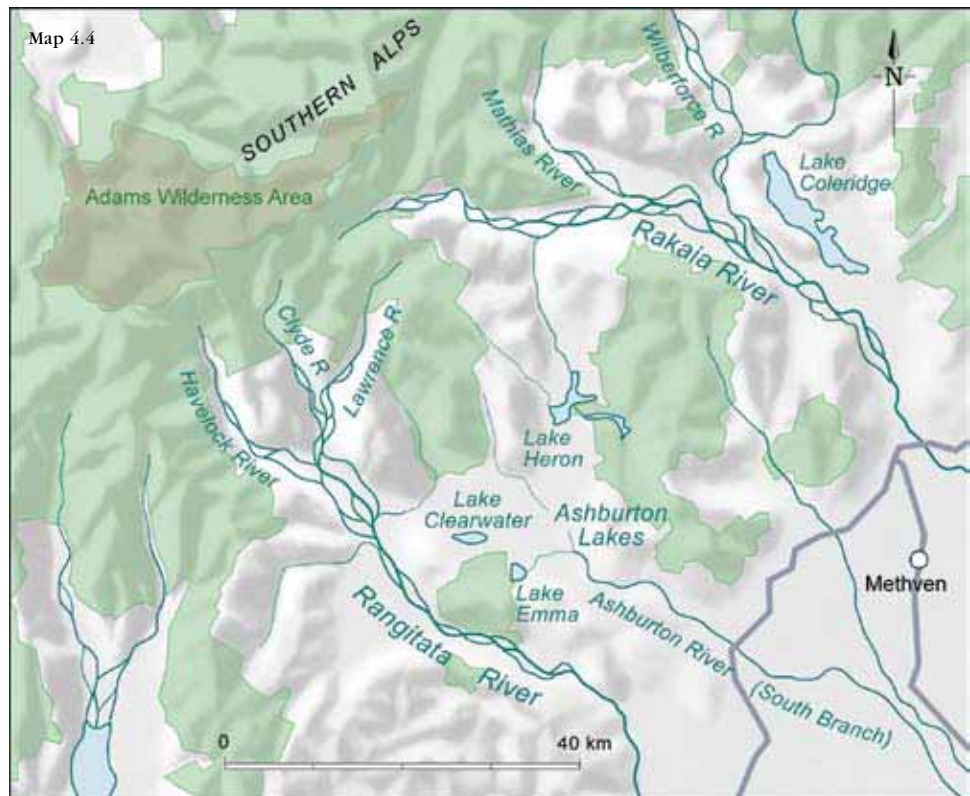
The Rangitata and Rakaia Rivers each flow for more than 100 km from their headwaters in the Southern Alps/Ka Tiritiri o te Moana in Canterbury, past the inland basin of the Ashburton Lakes and upper Ashburton River, through gorges and across the outwash gravels of the Canterbury Plains, before entering the sea in the Canterbury Bight. The headwaters of these two rivers originate in the ice fields of the central Alps, including the Garden of Eden, Lyell and Ramsay Glaciers (all within the Adams Wilderness Area). Major tributaries include the Wilberforce, Mathias, Clyde and Havelock Rivers. Headwater mountain ranges include the Rolleston, Rugged, Armoury, Potts, Cloudy Peak, Two Thumb and Jollie Ranges (see Map 4.4).

SITE DESCRIPTION

This riverine-wetland network is characteristic of New Zealand's braided river and high country lake systems lying to the east of the crest of the Southern Alps/Ka Tiritiri o te Moana. The Rangitata River (>20,000 ha), Rakaia River (>30,000 ha) and Ashburton Lakes and associated wetlands (>10,000 ha) are habitats of outstanding value to wildlife, particularly indigenous freshwater birds and fish. The Rangitata and Rakaia Rivers represent the largest habitats for aquatic birdlife in New Zealand. Outwash gravels of the upper Rangitata are the most extensive in New Zealand, spanning a width of 5-8 km in some places. The site's headwaters lie within the Adams Wilderness Area (56,000 ha) and the Rangitata-Rakaia Headwaters Conservation Area (97,000 ha), all of which is completely undeveloped wilderness.

Lake Coleridge (centre, left),
upper Rakaia River (far left),
and Wilberforce River (centre,
distance), in winter, looking
north-west to the Southern Alps
(Ka Tiritiri o te Moana)
Lloyd Homer, GNS





The Ashburton Lakes basin, an ancient convergence zone of the Rangitata and Rakaia glaciers, has one of the richest visually-apparent glacial histories etched in the landscape. There are 15 sizeable lakes with associated wetlands (c.6,000 ha) and literally hundreds of small kettle holes, wetland turfs, and seepages on old moraine terraces (>4,000 ha). There is a particularly high diversity of palustrine, lacustrine and riverine wetlands, including alpine tarns and bogs, fellfield and basin wetlands.



The braided upper Ashburton River (above its gorge) crosses the basin. The network of wetlands is also linked to the Rakaia River system via Lake Heron, the Cameron River and Lake Stream.

VALUES THAT MAY JUSTIFY WORLD HERITAGE LISTING

The Natural Heritage Advisory Group consider that the proposed site probably meets all four natural criteria (*vii* to *x*).

Key features attesting to the site's outstanding universal value for superlative natural phenomena and areas of exceptional natural beauty and aesthetic importance (criterion *vii*) include:

- A diversity of spectacular glacial and fluvio-glacial landforms, including: U-shaped alpine valleys, lateral moraines, hummock fields, truncated benches and spurs, incised side-streams, outwash plains, and roche moutonnées.
- Extensive and constantly-evolving braided river systems extending across the outwash plains from the mountains to the sea.
- The panoramic views of both the surrounding mountains and river outwash plain, which encompass much of the natural processes that are an integral part of the Canterbury high country landscape.
- That together, the upper Rangitata and Rakaia Rivers represent outstanding international examples of braided river systems. They are iconic landscape features of the east coast of the South Island of New Zealand.
- That the mountainous headwaters have outstanding wilderness character, with large size and landscape features with a high degree of naturalness.

Key features demonstrating the site's outstanding universal value for representing the earth's geological history and significant ongoing geological processes (criterion *viii*), especially in respect to their contribution to the development and maintenance of dynamic habitats for distinctive, rare and threatened wildlife and plant communities, include:

- That no other area in New Zealand has such a diversity of wetland types and associated wildlife and plant communities that are a fundamental expression of the complex glacial history of the area and the ongoing geological processes associated with braided rivers.

Lake Heron in winter, reflecting
Sugarloaf and the Taylor Range.
Donald Geddes





Braided bed of the Rakaia River,
looking NE from Glenfalloch
towards Manuka Point and
the confluence with the
Mathias River.
Jane Sedgeley, DOC

- That the distinctive water source, slope, altitude and catchment cover all combine to create dynamic erosion and deposition events that contribute to hydrologically and physically unstable systems. Thus, the braided rivers are characterised by comparatively high levels of instability and multiple channels, high ratios of bed-material to total sediment load, high gradients, high levels of sediment supply, and low levels of channel sinuosity and stability. It is this very instability that creates the rich diversity of wildlife habitats.
- The distinctiveness of the Rakaia and Rangitata Rivers in being the only two rivers whose flows both originate from high altitude glacier-dominated mountain sources and run across the Canterbury Plains to the sea.



Key features attesting to the site's outstanding universal value for significant ongoing ecological and biological processes in the evolution and development of terrestrial, fresh-water, and coastal ecosystems (criterion ix) include that:

- The Rangitata River-Ashburton Lakes Basin-Rakaia River represents the largest habitat for aquatic birdlife in New Zealand, supporting approximately 30% of indigenous New Zealand species. Its aquatic habitats cover >70,000 ha and support around 40,000 water and wading birds at any time.
- The system is outstanding in terms of its natural diversity, distinctiveness, intactness, and long-term viability for wildlife.
- Its importance for wildlife arises from the large area and high degree of naturalness or intactness of the habitats. Particularly notable are the largely natural river flows, the extent of braiding, and the high percentage of substantially bare terrestrial habitat on the riverbed.

It is worth noting that the system fulfils all criteria for designation as a Wetland of International Importance under the UN 'Ramsar' Convention because of its significance for endemic wading and water birds.

Key features illustrating the site's outstanding universal value for the importance of the conservation of significant biological diversity, including threatened species of universal value (criterion x) include that:

- The Rangitata River-Ashburton Lakes-Rakaia River complex contains all the water and wading bird species representative of New Zealand's braided rivers, coastal bar-type lagoons and South Island lacustrine and palustrine wetlands (>80 species).

Red tussock landscape,
Lake Heron.
Colin O'Donnell, DOC



Wrybill, with nest
containing a chick.
M.F Soper



- The system is of outstanding value for threatened animal species. At least 16 threatened bird species, one bat species and four lizard species are present. More than 20 threatened plant species, with habit forms especially adapted to braided rivers, are present.
- Site habitats support the following national totals of breeding birds: >80% of wrybill plover, 20% each of Australasian crested grebe and New Zealand scaup, and >10% of black-fronted terns.

It is generally accepted that over 90% of wetlands have been lost in New Zealand. However, overall wetland loss in the Rangitata-Ashburton Lakes Basin has been remarkably low at only 1.5%.

INTEGRITY, MANAGEMENT, AND RISK ISSUES

Time constraints meant that the Advisory Group were unable to determine exact boundaries for the site. Nevertheless, the group are confident that a core site with a high level of geophysical and biological integrity could be identified. Virtually all the area is under some form of Crown administration. Although legal protection is not complete, it is achievable in the near future. The area contains more than 100,000 ha of land and freshwater managed by the Department of Conservation as a Wilderness Area, Conservation Areas, Stewardship Land, Nature Reserves, and Wildlife Management Reserves. The Rangitata River bed (c.18,000 ha) and Rakaia River bed (32,000 ha) are classed as Unoccupied Crown Land. The waters of the Rangitata River and Rakaia River are protected by Water Conservation Order legislation. Numerous Crown Pastoral Leases in the rivers' catchments have been assessed under the Tenure Review process, with the result that more than 10,000 ha are now designated as conservation land. Tenure Review negotiations are under way for several other pastoral leases, which could lead to increased integrity for the proposed site.