

21.22.9 Kawarau River ONF

General Description of the Area

Kawarau River PA ONF is the Kawarau River corridor stretching from the Frankton Arm of Whakatipu-wai-Māori (Lake Whakatipu) eastwards to Roaring Meg. The mapped PA ONF includes the upper edges of the landforms framing the river corridor. This takes in the river floodplains between Whakatipu-wai-Māori and the Kawarau Bridge.

Physical Attributes and Values

Geology and Geomorphology • Topography and Landforms • Climate and Soils • Hydrology • Vegetation • Ecology • Settlement • Development and Land Use • Archaeology and Heritage • Mana whenua

Important landforms and land types:

1. Spectacular steep scarps, gorges and cliffs where the river has cut through the underlying schist. The gorge from Gibbston to Ripponvale (outside the QLDC boundary) is identified as a Geopreservation Site of national importance and a landslide on the north bank of the river opposite Gibbston is identified as being of regional importance. The gorge is being continuously modified by landslides, some of extremely large scale.
2. Flat alluvial floodplains between the confluence with Kimi Ākau (Shotover River) and Chard Farm.
3. Confluence of the Kawarau and Kimiākau Shotover rivers and the dynamic changes in river braids and shoals in this area.
4. A number of large-scale landslides (e.g., the Gibbston landslide that is the most studied in the area and the K9 landslide that extends 4km between the Roaring Meg and Scrubby Stream) related to the interaction of the downcutting of the Kawarau River with the regolith overlying bedrock. Downstream of the Arrow River confluence is a suite of river terraces faulted and offset by the NW Cardrona Fault. These landforms are recognised in the NZ Geopreservation Inventory as nationally important.

Important hydrological features:

5. The Kawarau River, in the particular the following features and attributes:
 - a. Waterbody notable for its volume and fast flow, with a gravel and schist bed.
 - b. Clarity and distinctive turquoise colour of the waters.
 - c. Presence of white-water rapids.
 - d. Scientific rarity of the potential reverse flow of the river towards Whakatipu-wai-Māori (Lake Whakatipu) when the Kawarau and Kimi Ākau (Shotover) rivers are in flood. River training earthworks at the confluence of the rivers may prevent this occurring in the future.
 - e. The Water Conservation (Kawarau) Order 1997 requires the outstanding amenity and intrinsic values afforded by the river waters to be sustained and the water body preserved as far as possible in its natural state.

Important ecological features and vegetation types:

6. Particularly noteworthy indigenous vegetation features include:
 - a. Pockets of indigenous grey shrubland often mixed with sweet briar border the river along its entire length, particularly on scarps.

- b. Valued habitat for eel, kōaro and rare native fish, trout and salmon.
 - c. Numerous rocky outcrops and bluffs that characterise the river corridor are refugia for specialist indigenous plants.
7. Other distinctive vegetation types include:
- a. Crack willow lining the banks of the river along much of its length.
 - b. Stands of Lombardy poplar and Black poplar in places.
 - c. Rural shelter belts and woodlots on the alluvial floodplains.
8. The river corridor with its bordering rocky terrain and areas of shrubland provide favourable nesting habitat and hunting opportunities for New Zealand falcon. The grey shrubland is likely to support populations of grey warbler, fantail, silvereve and possibly geckos.
9. Plant pest species include wilding conifers, crack willow, sweet briar, buddleia, hawthorn, sycamore, broom and gorse.
10. Animal pest species include rabbits, possums, stoats, rats and mice.

Land use patterns and features:

11. Pastoral land use dominates the floodplain areas between Whakatipu-wai-Māori (Lake Whakatipu) and the Kawarau Bridge Bungy. Nearly all the vegetation immediately flanking this section of the river is exotic, including, extensive willows, stands of poplars, pine woodlots and shelterbelts, and pockets of broom and gorse. The National Grid Transmission lines are parallel to the river between the Kawarau Bridge and Lake Hayes Estate and are in or over the ONF at some points.
12. Between the Kawarau Bridge Bungy and Roaring Meg, the river scarps and slopes are largely covered in rosehip, matagouri, weed species and coarse grasses, with land uses limited to low intensity grazing, public access on Gibbston walking/cycling trail, the Kawarau Bungy commercial recreation facility, parts of the Gibbston Cromwell Highway (SH6) and the Roaring Meg hydro station.

Important archaeological and heritage features and their locations:

13. There are a number of scheduled historic heritage features along the river, including the Kawarau Falls Bridge (QLDC Ref. 40), the late 1880s Brunswick Flour Mill (QLDC ref. 49), the 1881 Kawarau Suspension Bridge (QLDC Ref. 41), the supports of the Victoria Bridge (QLDC Ref. 223), the 1936 Roaring Meg Power Station (QLDC Ref. 94), Chard Road (QLDC Ref. 216) and Rum Curries Hut at Rafters Road (QLDC Ref. 236).
14. Various ferry sites along the river and associated hotel remains, including Victoria Flat, Owens Ferry and Morven Ferry.
15. Various inter-related complexes of gold sluicings, tailings, water races, dams and associated domestic sites along the riverbanks.
16. Numerous pre-European archaeological sites along the river, including the Owens Ferry moa hunter site (archaeological sites F41/1 and F41/66) and the former natural bridge access across the river (now widened by floods) near Roaring Meg.

Mana whenua features and their locations:

17. The entire area is ancestral land to Kāi Tahu whānui and, as such, all landscape is significant, given that whakapapa, whenua and wai are all intertwined in te ao Māori.

18. The Kawarau River is mapped as a wāhi tūpuna. The ONF also overlaps with the mapped wāhi tūpuna Tititea. Tititea was a pā located on the south side of the Kawarau River near Whakatipu-wai-Māori.
19. Ōterotu is the traditional Māori name for the Kawarau Falls.
20. Potiki-whata-rumaki-nao is the name for the former natural bridge over the Kawarau, which was a major crossing point for Kāi Tahu whānui.

Associative Attributes and Values

Mana whenua creation and origin traditions • Mana whenua associations and experience • Mana whenua metaphysical aspects such as mauri and wairua • Historic values • Shared and recognised values • Recreation and scenic values

Mana whenua associations and experience:

21. Kāi Tahu whakapapa connections to whenua and wai generate a kaitiaki duty to uphold the mauri of all important landscape areas.
22. The Kawarau River was a traditional travel route that provided direct access between Whakatipu-wai-māori (Lake Whakatipu) and Mata-au (the Clutha River).
23. The Kawarau is a significant kāika mahika kai where weka, kākāpō, kea and tuna (eel) were gathered.
24. Kāi Tahu tradition tells of an incident where a 280 strong war party was repelled from the Tititea area and chased to the top of the Crown Range, which is now named Tititea in memory of this incident.
25. The mana whenua values associated with the Kawarau ONF include, but may not be limited to, ara tawhito, mahika kai, nohoaka, kāika and tauraka waka.

Important historic attributes and values:

26. The historic and contextual values of gold mining in and alongside the river and associated physical remnants.
27. The historic and contextual values of the feature as a factor shaping early European transport in the District, including historic roads, bridges, ferry sites, and associated infrastructure.
28. The historic significance of the river and its tributaries as a source of water and power.

Important shared and recognised values:

29. Nationally recognised values set out in the Water Conservation Order that applies to the river (with its wild and scenic characteristics; natural characteristics; scientific values and recreational purposes specifically identified).
30. Very strong shared and recognised values as a popular recreational destination.

Important recreation attributes and values:

31. Kayaking, jetboating (both commercial and private), rafting, swimming and fishing on the river.
32. Walking and cycling on the popular Twin Rivers and Gibbston trails alongside the river, and occasional recreational events on the southern side of the river between Whakatipu-wai-Māori (Lake Whakatipu) and Chard Farm.
33. Bungy jumping and zip lining at the Kawarau Bridge Bungy.

Perceptual (Sensory) Attributes and Values

Legibility and Expressiveness • Coherence • Views to the area • Views from the area • Naturalness • Memorability • Transient values • Remoteness / Wildness • Aesthetic qualities and values

Legibility and expressiveness attributes and values:

34. Clearly legible, glacial and alluvial / hydrological processes that have shaped the river valley landscape and which continue to add to its dynamic qualities. These are evident in the scarps, floodplains and the changing patterns of channels and gravel banks at the confluence with the Kimi Ākau (Shotover) and along the river course.

Particularly important views to and from the area:

35. Highly attractive close, mid and long-range views along the predominantly vegetation clad river corridor. Vegetation and landform patterns together with the winding corridor contain and frame views, contributing a highly variable albeit generally relatively enclosed character to the outlook. In places, the roche moutonnée of Morven Hill and/or the mountain slopes of the Remarkables add a sense of drama and grandeur. The dynamic river waters are a dominant visual element. The mixing of different water colours at the Kimi Ākau (Shotover) confluence, particularly when the Kimi Ākau is in flood, adds to the appeal and interest of the views in this section of the Kawarau.
36. Appealing mid and long-range views from Remarkables Park, Shotover Country, Lake Hayes Estate, Bridesdale, SH6 and the Queenstown Trail to discrete sections of the Kawarau River and its predominantly vegetation clad banks and floodplains. In such views, the rugged mountain backdrop of the Remarkables and other enclosing mountains adds to the appeal of the outlook.
37. From some proximate vantage points, the vegetation fringed, dynamic waters of the Kawarau River are seen alongside the more domesticated pastoral flood plains and terraces.

Naturalness attributes and values:

38. Generally, there is a high perception of naturalness throughout the river corridor due to the dominance of the waterbody and its vegetated margins. Whilst boating activity and trails are evident in the corridor, these activities indicate the high recreational values of the ONF. Where evident, structures are modest in scale and/or sympathetic character and remain subservient to the natural landscape.
39. Between Whakatipu-wai-Māori (Lake Whakatipu) and the Kawarau Bridge Bungy, pastoral land use dominates the floodplain areas and nearly all the vegetation flanking the river is exotic. Even so, there remains a perception of significant naturalness within the river landscape. The very limited visibility of built development on the Remarkables side of the river is important in this regard, even if pasture, farm tracks, fencing, power lines and the margins of the Kawarau Heights, Lake Hayes Estate and Bridesdale settlements are evident. However, the confined, often intimate nature of the river corridor limits exposure to such elements.
40. For the stretch of river corridor between the Kawarau Bridge Bungy and Roaring Meg, dramatic gorges with exposed schist outcrops frame the river to form a contained and intimate river character. Whilst exotic vegetation is apparent, grey shrubland is dominant and there is generally an increased perception of naturalness due to very limited exposure to development. The exception to this is visibility of SH6 within the corridor between Victoria Flats and Roaring Meg.

Memorability attributes and values:

41. Views of the dramatic river scarps and gorges east of Morven Ferry Road are highly memorable, as is the distinctive turquoise colour of the water and notable volume and flow of the river through the gorges and rapids.

Transient attributes and values:

42. Transient attributes include the fluctuations and changing patterns of the river waters and flood plain gravel banks, flood-related changes in the confluence with the Kīmi Ākau (Shotover), and the seasonal changes evident in the vegetation – most notably in the stands of willows and poplars.

Remoteness and wildness attributes and values:

43. Visitors on the surface of the river east of the Kāwarau Bridge Bungy are enclosed within the gorge and experience a strong sense of remoteness. In addition, the river corridor east of the Gibbston Valley and Victoria Flats has a high level of wildness and remoteness, although SH6 and the historic Roaring Meg Power Station also influence the perception of this riverscape. Much of this river corridor comprises a steep V-shaped valley that is both deep and sinuous – winding its way eastward past Mt Allen and Mt Difficulty.

Aesthetic attributes and values:

44. The experience of the values identified above from a wide range of public viewpoints.
45. More specifically, this includes:
- Strong sense of enclosure within the river corridor, defined by escarpments or gorges and the surrounding mountain ranges and roches moutonnées.
 - Coherence and distinctiveness of the waterway as a feature.
 - Highly picturesque and aesthetically appealing views.
 - Ability to travel along the river on trails, roads, or the water itself and to be immersed in the scenic and remoteness attributes of the river corridor.

Summary of Landscape Values

Physical • Perceptual (Sensory) • Associative

Rating scale: seven-point scale ranging from **Very Low** to **Very High**.

very low	low	low-mod	moderate	mod-high	high	very high
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The physical, associative and perceptual attributes and values described above for the PA ONF Kāwarau River can be summarised as follows:

- Very high** physical values relating to the volume, flow and clarity of the waters, the dynamic attributes of the confluence with the Kīmi Ākau (Shotover), the scarps, gorges and floodplains shaped by the river, the habitat values for native and introduced fauna, the areas of indigenous vegetation, and the mana whenua features associated with the area.
- Very high** associative values relating to the Kāi Tahu associations with the river, the rich history of gold mining and early European settlement, the significant recreational attributes, and the strong shared and recognised values, as evidenced by the 2013 Water Conservation Order.
- Very high** perceptual values relating to the expressiveness of the river landforms, the memorability of the spectacular gorges and fast flowing turquoise waters, the high level of naturalness, the scenic views available to and within the corridor, and the sense of remoteness and wildness experienced east of the Kāwarau Bungy.

Landscape Capacity

The landscape capacity of the PA ONF Kawarau River for a range of activities is set out below.

- i. **commercial recreational activities** – **some** landscape capacity for activities that integrate with and complement/enhance existing recreation features; are located to optimise the screening and/or camouflaging benefit of existing natural landscape elements; designed to be of a sympathetic scale, appearance, and character; integrate appreciable landscape restoration and enhancement; enhance public access; and protect the area's ONF values.
- ii. **visitor accommodation and tourism related activities** - **no** landscape capacity.
- iii. **urban expansions** – **no** landscape capacity.
- iv. **intensive agriculture** – **very limited** landscape capacity on floodplains or terraces that are not subject to flood hazard.
- v. **earthworks** – **limited** landscape capacity for earthworks and trails that protect naturalness and expressiveness attributes and values, and are sympathetically designed to integrate with existing natural landform patterns.
- vi. **farm buildings** – in those areas of the ONF with pastoral land uses, **limited** landscape capacity for modestly scaled buildings that reinforce existing rural character.
- vii. **mineral extraction** – **limited** landscape capacity for small scale gravel extraction that protects the area's ONF values.
- viii. **transport infrastructure** – **very limited** landscape capacity for low key 'rural' roading infrastructure outside of the State Highway corridor. **Very limited** landscape capacity for wharfs, jetties or bridges that are located in more modified parts of the ONF between Lake Whakatipu and Morven Ferry and are designed to be of a sympathetic appearance and character; integrate landscape restoration and enhancement; enhance public access; and protect the area's ONF values.
- ix. **utilities and regionally significant infrastructure** – **limited** landscape capacity for infrastructure that is co-located with existing facilities. In the case of utilities such as overhead lines or cell phone towers which cannot be screened, these should be designed and located so that they are not visually prominent.
- x. **renewable energy generation** – **no** landscape capacity.
- xi. **production forestry** – **no** landscape capacity.
- xii. **rural living** – **no** landscape capacity.