

Tukituki River



Key Values

Cultural

Recreation (angling, boating)

Ecology (wildlife, fisheries)

Natural Character

Table 1: List of documents reviewed

Year	Name	Author
1966	An Encyclopaedia of New Zealand	T.L Grant-Taylor
1979	64 New Zealand Rivers	Egarr, Egarr & Mackay
1981	New Zealand Recreational River Survey	G & J Egarr
1982	Submission on the Draft Inventory of Wild and Scenic Rivers of National Importance	Ministry of Agriculture and Fisheries
1984	The Relative Value of Hawke's Bay Rivers to New Zealand Anglers	Fisheries Research Division - N.Z. Ministry of Agriculture and Fisheries
1986	A List of Rivers and Lakes Deserving Inclusion in A Schedule of Protected Waters	Grindell & Guest
1988	Wildlife and Wildlife Habitat of Hawke's Bay Rivers	G.R. Parrish
1994	Conservation Management Strategy (volume II) for Hawke's Bay Conservancy 1994 – 2004.	Department of Conservation
2003	Hastings District Plan	Hastings District Council
2004	Potential Water Bodies of National Importance	Ministry for the Environment
2004	Potential Water Bodies of National Importance for Recreation Value	Ministry for the Environment
2006	Areas of Significant Conservation Values: HB Coastal Marine Area (HBRC Report Number 4203 - Draft)	Hawke's Bay Regional Council
2008	Wetland Review Monitoring	Hawke's Bay Regional Council

2009	Angler Usage of Lake and River Fisheries Managed by Fish & Game New Zealand: Results from the 2007/08 National Angling Survey- NIWA	Martin Unwin
2010	Recreational Use of Hawke's Bay Rivers – Results of the Recreational Usage Survey 2010	Hawke's Bay Regional Council
2011	Tukituki Catchment Terrestrial Ecology Characterisation	MWH Global
2012	River Values Assessment System (RiVAS)	Lindis Consulting
2012	Tukituki River Catchment Cultural Values and Uses	Te Taiwhenua O Tamatea & Te Taiwhenua O Heretaunga
2014	Jet Boating New Zealand – Rivers Information	Jet Boating New Zealand
2015	Report to Decision Maker, Dispensation and Approval under the Freshwater Fisheries Regulations 1983	Department of Conservation
2016	Heretaunga Tamatea deed of settlement + documents schedule	Heretaunga Tamatea and the Crown
2016	Values and Management of Lowland Braided Rivers for Birds	C. O'Donnell
2016	Tukituki River Catchment. State and Trends of River Water Quality and Ecology 2004 – 2013	Hawke's Bay Regional Council
2017	Upper Tukituki Flood Control Scheme – Asset Management Plan	Hawke's Bay Regional Council
2018	Tukituki River Trout and Fly Fishing	NZ fishing website
2018	Cultural Values Table	Hawke's Bay Regional Council
2018	Land Air Water Aotearoa (LAWA)	Hawke's Bay Regional Council
2018	Huge colony of rare tarāpuka discovered at Tukituki River, Hawke's Bay	Stuff.co.nz
2018	Contamination of Tukituki River and Maraetotara Lagoon prompts warnings from Hawke's Bay District Health Board	Hawke's Bay Today
2018	Toxic algae found in Hawke's Bay's Tukituki River	Stuff.co.nz
2018	Tukituki Catchment – Healthier Water in the Tukituki Catchment	Hawke's Bay Regional Council
2018	Tukituki in New Zealand	Protected Planet
2018	The world's most threatened gull calls New Zealand home, but most kiwis don't know it	Stuff.co.nz
2018	Black billed gull/tarāpuka	Department of Conservation

Discussion

Purpose of report

1. The purpose of this report is to assist the RPC members to determine whether any of the values of the Tukituki River are outstanding for the purposes of the National Policy Statement for Freshwater Management (NPSFM).
2. This report presents the summarised findings of the values attributed to the Tukituki River in those documents referred to in Table 1, above. In accordance with decisions made by the RPC in June 2017, economic and consumptive use values have not been discussed in detail in this report.

Overview

3. The Tukituki River is a large gravel braided river system which rises in the Ruahine Ranges flowing into the sea 117 km later at Haumoana. It is one of two major rivers flowing across the Ruataniwha Plains and has a total catchment area of approximately 2,500 km². The river is highly valued for salmonid angling.
4. The Tukituki River is made up of a number of separate rivers which flow across the Ruataniwha Plains, including the Makaretu, Tukipo, and Waipawa Rivers. These rivers and streams all merge into the Tukituki River east of Waipukurau. The Tukituki River has a high degree of interaction with the Ruataniwha aquifer.
5. The Tukituki River is a tupuna awa (ancestral river) and has significant cultural values. Legend tells of how the Tukituki River came into existence. Two taniwha lived in a large lake situated on what is now the Ruataniwha Plains. They fought for possession of a boy who accidentally fell into the lake and their struggles formed the Waipawa and Tukituki Rivers which drained the lake.

6. The River is highly valued for productive uses, providing water for farms and orchards from Central Hawke's Bay through to the eastern corner of the Heretaunga Plains. It is partially enclosed by stop banks in parts to prevent flooding of the surrounding land. During the 1880's when farming was developing, barges used to travel down the river carrying wool from Waipawa to deliver to freighters off the coast of Haumoana.
7. Despite significant modifications, the Tukituki Estuary has high fisheries and wildlife values, and is listed as a Significant Conversation Area in the Hawke's Bay Regional Coastal Environment Plan. The Tukituki catchment has been identified as one of the six 'environmental hotspots' by Hawke's Bay Regional Council, and funding has been allocated towards improving the area.
8. During summer, when water levels are low, parts of the Tukituki River are subject to potentially toxic cyanobacteria blooms, which can be a health risk for people and animals.

Location

9. The Tukituki River rises in the Ruahine Ranges, flowing north from southern Central Hawke's Bay and into the Pacific Ocean approximately 9 km south of Napier.
10. The location and extent of the Tukituki River can be seen in Figures 1 and 2, below.



Figure 1: Location of Tukituki River

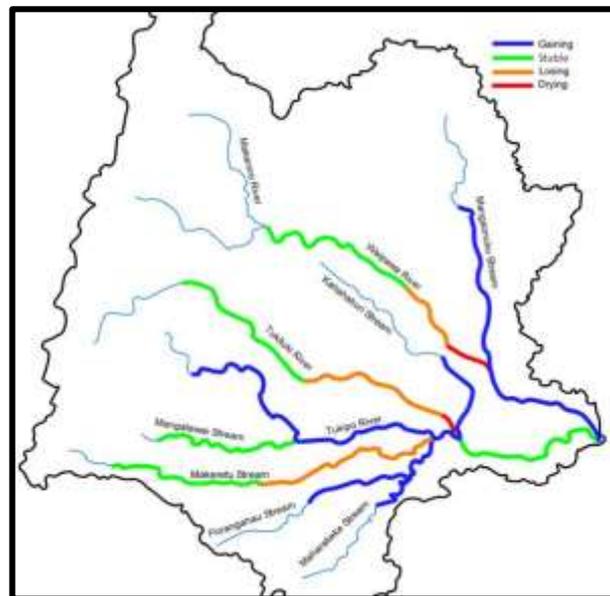


Figure 2: Rivers and Streams - Ruataniwha Plains

Cultural values

11. The Tukituki River is a significant waterway for Heretaunga Tamatea. The river is a tīpuna (ancestor). It is integral to the web of whakapapa connections shared by the different hapū along its banks. It provides hapū with a sense of identity and interconnectedness as it runs through their lives.
12. A narrative exists on the way in which the Tukituki River came into existence. A large lake was located in what is now the Ruataniwha Plains. Two taniwha lived in this lake. On one occasion a boy fell into the lake and the two taniwha fought over their prey. The resulting destruction on the landscape created breaks in the hills through which the lake drained away. One of the channels was the Tukituki River.
13. After the arrival of the Ngāti Kahungunu tīpuna to Heretaunga, the Tukituki River was established as the first boundary between Taraia, who took the land to the west of this river, and Te Aomatarahi who took the land to east and south of the river.
14. Historically, the Tukituki catchment had an abundance of mahinga kai and natural resources. The river was a significant food source central to the well-being of Heretaunga Tamatea. In particular, the river mouth and estuary was renowned for the abundance of fish species that were taken there, which included kahawai, pātiki, kanae, kataha, kokopu, inanga and tuna. The estuary area continues to support important traditional fisheries for kahawai, flatfish, whitebait and smelt. Many whānau come annually to do their fishing from the

mouth of the Tukituki awa at Haumoana through to an area off Tenants Rd referred to as Te Ahikoura (the place to fire and cook crayfish).

15. The river was traditionally the highway that connected whānau to other whānau, to their gardens, to trade links, to their pā sites, to their waahi tapu and to their waahi tupuna. Much of the Tukituki River was navigable by canoe in the winter time and was the main transport route through Heretaunga for much of the nineteenth century.
16. Attachment 1 contains a more detailed explanation of the cultural values associated with the Tukituki River.

Recreation values

17. The Tukituki River is popular for a range of recreational activities such as fishing, swimming, boating, whitebaiting and bird watching. The recreational activities associated with the Tukituki River have been discussed in a number of nationally published documents over the last 40 years.
18. During the warm summer months, slime and algae builds up in the Tukituki River making the river unsightly, and sometimes unsafe, which severely impacts the recreational values of the river.
19. In 2004, the Tukituki River was recognised as a Potential Water Body of National Importance for recreation, for whitebaiting and angling, by the Ministry for the Environment.
20. The main recreational activities which take place on the Tukituki River are discussed in more detail below.

Angling

21. The Tukituki River is predominately a rainbow trout fishery with some larger brown trout present in the lower reaches. The average weight of trout is around 1.5 kg however, during the whitebait season larger trout up to 4 kg in size can be found in the lower river. The trout population is self-sustaining.
22. The Tukituki River trout fishery is highly valued, attracting a high number of anglers from within Hawke's Bay each year. In the 1980s it was the most highly fished river in the region. However, in recent years usage has significantly declined, with the results of the national angling survey showing a decline of 50% between the early and late 2000s.
23. Over its 117 km length, the Tukituki River provides a variety of fishing experiences which are easy to access. The river starts off relatively small in it's the upper reaches, slowing gaining momentum as it moves downstream and a number of tributaries join its flow. The middle reaches are the most popular area for angling. The lower Tukituki River become much larger as it meets the sea.
24. During the summer months, slime and algae increases and river flows reduce, occasionally drying up in parts. This makes angling difficult by reducing the fishable areas and fouling fishing lures, which severely impact on angling values.
25. In 1982, the Tukituki River was identified by the Ministry of Agriculture and Fisheries as being a river which is of at least regional importance for angling, and may qualify as a river of national importance for angling subject to more information being gathered.
26. In 1984, a report by the Fisheries Research Division identified the Tukituki River as a 'recreational' fishery which has high use and is of at least regional importance. Specifically, the Tukituki River was identified as having exceptional overall importance for its access, large area of fishable water and being close to home.
27. In 1986, the Government released a finalised list of rivers and lakes with outstanding wild, scenic, recreational or other natural characteristics that should be protected. The Tukituki River was placed in 'Group Two'¹ for its scenic and recreation qualities. The report specifically refers to the Tukituki River's value for fishing.
28. In 2012, the Tukituki River was identified as nationally significant in the Hawke's Bay RiVAS assessments for salmonid angling.

¹ Group One = Excellent rivers or lakes containing an outstanding cultural, fisheries, wild flora, location, recreation, scenic, scientific, tourism, wildlife habitat, value(s). Group One contains the very best examples of these values. Group Two = Contains examples of water bodies whose values better represented by the rivers or lakes in group one. Group Three = those water bodies who may deserve to be in first or second group, but there was inadequate information.

Boating

29. The Tukituki River provides a 77 km stretch of easy jet boating water, which is suitable for beginners and family boating. During high flows the river is boatable from the sea to the Highway 50 Bridge or beyond, under normal flows the river is boatable to the Waipawa Confluence.
30. The Tukituki River is frequently used for canoeing, with the most popular trip from the Hylton Burn Stream down to the Highway 50 Bridge, and occasionally through to Havelock North. During late summer the river flows are too low to canoe from the Hylton Burn Stream confluence. The river is not used for rafting and is considered to be too shallow and of little interest.
31. In 1986, the Tukituki River was placed in 'Group Two' in the Government's list of rivers and lakes deserving protection, for its scenic and recreation qualities, which specifically noted its canoeing values.
32. In 1981, the Recreational River Survey assigned the recreational and scenic values of the Tukituki River an 'intermediate'² and 'picturesque'³ rating, respectively.
33. In 2014, Jet boating New Zealand classified the Tukituki River as an easy 'Class 1' jetboating trip on a shingle, braided river, suitable for family boating.
34. The Tukituki River did not feature in the 2012 RiVAS assessment undertaken in Hawke's Bay for whitewater kayaking.

Ecology values

35. The Tukituki River has high wildlife and native fish values and is identified as a Significant Conservation Area (SCA) in the Regional Coastal Plan. It has a braided river habitat which is a rare habitat type internationally, and is home to high numbers of waders. Part of the river is located within a wildlife refuge which was created to allow a safe haven for waterfowl during the shooting season.
36. The Tukituki River is highly connected to the Ruataniwha Aquifer, which influences both the hydrology and the water quality of the middle and lower reaches of the Tukituki River.
37. During the warm summer months when water flows are low, cyanobacteria mats can build up in parts of the Tukituki River. Excessive periphyton growth creates an unhealthy environment for fish, river bugs and insects and can have detrimental effects on a rivers ecology.
38. The ecological values associated with the Tukituki River are discussed in more detail below.

Fish

39. The Tukituki Catchment contains a high diversity of native fish, with a total of 21 species (18 native) of fish recorded in the catchment between 1964 and 2011. The Tukituki Estuary is recognised as an important spawning ground for the native galaxiid species.
40. Of the 18 native species recoded in the catchment, 8 have a declining threat classification and include the longfin eel, īnanga, redfin bully, bluegill bully, lamprey, torrentfish, koaro and dwarf galaxiid.
41. Trout populations in the Tukituki River are self-sustaining with trout spawning occurring in the Tukituki River and in a number of its tributaries.
42. The Tukituki River mouth is identified as a Significant Conservation Area (SCA) in The Hawke's Bay Regional Coastal Environment Plan. The river mouth is identified as being an important inanga spawning site and vital for the passage of native diadromous fish between the sea and freshwater habitats higher in the catchment.
43. In 2012, the River Values Assessment System (RiVAS) was used to assess the significance of rivers in Hawke's Bay for native fish. The RiVAS assessment determined the Tukituki catchment was nationally significant for native fish, concluding the average number of native fish in the Tukituki catchment is 198,740.
44. In 2015, the Department of Conservation advised that the high diversity of native fish in the Tukituki catchment is similar to other catchments draining to the East Coast of the North Island.

² Recreational values graded on a five point scale: insignificant, low, intermediate, high, exceptional

³ Scenic values graded on a six point scale: dull, uninspiring, moderate, picturesque, impressive, exceptional.

45. Note: The information in this section relates to fisheries in the greater Tukituki catchment (i.e. it is not limited to the Tukituki River).

Wildlife

46. The Tukituki River is recognised as an important wildlife habitat due to its high diversity of birds, some of which are endangered, and its large waterfowl population.
47. A total of 51 species of birds have been recorded on the river, including the endangered black billed gull and a number of threatened species such as white heron, royal spoonbill, grey duck, Caspian tern, white fronted tern, South Island oystercatcher and the New Zealand pipit. The long-tailed bat is present in bush alongside the river.
48. Four riverbed bird surveys occurred on the Tukituki River between 1967 and 1986⁴. These surveys confirm the river supports the largest population of waders when compared to all other Hawke's Bay Rivers, with particularly large populations of banded dotterel and pied stilt residing at the river. Black billed gulls were also found to be more common on the Tukituki River than elsewhere in Hawke's Bay.
49. In total, 43 bird species were recorded around the river mouth. Waterfowl were noted as being more common than on the other rivers, particularly on the lower half of the river, and white-faced heron and black-fronted tern were identified as being regular winter visitors.
50. The Tukituki River is thought to hold around 5% of the national population of banded dotterel (around 55% of the regional population) and 3-4% of the national population for pied stilt (around 50% of the regional population). Both birds are noted as having a very large range and are recorded as 'least concern' on the IUCN⁵ red list.
51. The Tukituki River mouth is identified as a Significant Conservation Area (SCA) in The Hawke's Bay Regional Coastal Environment Plan, due to its high wildlife values, particularly the large number of black billed gulls, terns and little black shags. Recent observations have found black billed gulls to be the most common on the Tukituki River when compared to other rivers in Hawke's Bay.
52. In 2017, a black-billed gull colony of more than 300 nests was found at the Tukituki River mouth. The black-billed gull is New Zealand's only endemic gull and is referred to as the "most threatened gull in the world". In 2013, its threat status was upgraded from 'Nationally Endangered' to 'Nationally Critical' with its population having declined by 80%.
53. In 1967, a large section of the Tukituki River (located upstream of the Tukituki Bridge) was designed as a wildlife refuge, due to the high waterfowl numbers and in order to provide a safe area for these birds during the duck shooting season. This area is managed by Department of Conservation and is a Closed Game Area.
54. In 1984, the New Zealand Wildlife Service⁶ listed the Tukituki River as having high⁷ importance for wildlife due to its high numbers of waders and black backed gulls. The river mouth was listed as having medium-high importance, due to the low numbers of waders recorded on this section of river.
55. In 1992, the Department of Conservation designated most of the Tukituki River bed as a Recommended Area for Protection (RAP) as part of its Protected Natural Areas Programme (PNAP) surveys⁸, citing "*its valuable riverbed habitat which supports high numbers of waders and wetland birds*".
56. In 2012, Hawke's Bay RiVAS assessments for native birdlife concluded the upper Tukituki River (above SH50) was locally significant, the middle Tukituki River (between SH2 and SH50) was of regional importance, and the lower Tukituki River was nationally significant, for native birdlife.

⁴ 1967, 1972, 1984 and 1986

⁵ International Union for Conservation of Nature red list of threatened species.

⁶ 1984, the Fauna Survey Unit (FSU) of the New Zealand Wildlife Service, Department of Internal Affairs, carried out a survey of wildlife and wildlife habitats (Sites of Special Wildlife Interest – SSWI) of the Hawke's Bay Region as part of a national habitat inventory.

⁷ Sites were ranked using criteria and classed as outstanding, high, moderate-high, moderate and potential.

⁸ The RAP extends from the confluence of the Makaroro and Waipawa Rivers, and the Tukituki River near the top of Tukituki Road, right down to the river mouth.

Macroinvertebrates

57. Hawke’s Bay Regional Council regularly monitors the freshwater ecology of the Tukituki River at the following sites (see Table 2). The macroinvertebrate measures in Table 2 are an indicator of stream health where generally, the higher the Macroinvertebrate Community Index, taxa richness and percent EPT, the better the health of the stream.
58. The monitoring results show at SH50 and Tamumu Bridge the Tukituki River has median MCI scores indicative of “good” water quality with mild pollution. The sites at Black Bridge and Red Bridge have much lower MCI scores which suggest poor water quality, with moderate pollution.
59. Notwithstanding, the Black Bridge monitoring site is known to be influenced by saline water intrusion which may have a significant influence on macroinvertebrate composition. This means the MCI scores at Black Bridge may not be a robust indicator of ecological health at that site.

Table 2: Macroinvertebrate sampling results – Tukituki River (median 2011 - 2016)

Monitoring site	Macroinvertebrate Community Index (MCI)	Classification	Taxonomic richness	Percent EPT ⁹ richness
Black Bridge (Haumoana)	MCI between 80 and 99	FAIR	16	27.8.1%
Red Bridge (Tukituki Valley)	MCI between 80 and 99	FAIR	15	35.2%
SH50	MCI between 100 and 119	GOOD	14	72.1%
Tamumu Bridge	MCI between 100 and 119	GOOD	13	44.4%

Note: Regional Councils use a classification from Stark & Maxted (2007) for MCI sampling, assigning a rating of either excellent, good, fair or poor for ecological health and/or habitat condition.

Landscape / scenic values

60. The Tukituki River is relatively small in its upper reaches, flowing through native bush and a narrow, scrub lined gorge before forming a braided river system that runs across the Ruataniwha Plains. The Tukituki River gradually increases in size as a number of tributaries join its flow.
61. In 1979, the Tukituki River was given an ‘interesting’¹⁰ scenic rating in “64 New Zealand Rivers” which contains an indepth scenic evaluation of sixty four of New Zealand’s major Rivers.
62. In 1981, The New Zealand Recreational River Survey assigned the scenic values of the Tukituki River a ‘picturesque’¹¹ rating.
63. In 1986, the Government released a finalised list of rivers and lakes with outstanding wild, scenic, recreational or other natural characteristics that should be protected. The Tukituki River was placed in ‘Group Two’¹² for its scenic and recreation qualities.
64. Photographs of the Tukituki River are contained in Attachment 2.

Naturalness/intactness of waterbody

65. The Tukituki River is largely unmodified in its upper reaches, with river control works beginning at Waipukarau and below Havelock North. To assist with flood control long stretches the Tukituki River have been converted from a braided river to a meandering river flow.

⁹ EPT stands for Ephemeroptera (mayfly), Plecoptera (stonefly) and Trichoptera (caddisfly). These are macroinvertebrates which are sensitive to water pollution.

¹⁰ Scenic values graded on a five point scale: dull, ordinary, interesting, impressive, exceptional.

¹¹ Scenic values graded on a six point scale: dull, uninspiring, moderate, picturesque, impressive, exceptional.

¹² Group One = Excellent rivers or lakes containing an outstanding cultural, fisheries, wild flora, location, recreation, scenic, scientific, tourism, wildlife habitat, value(s). Group One contains the very best examples of these values. Group Two = Contains examples of water bodies whose values better represented by the rivers or lakes in group one. Group Three = those water bodies who may deserve to be in first or second group, but there was inadequate information.

66. The Tukituki Estuary has undergone considerable works to control flood waters which has had a significant effect on the ecology of the estuary.
67. In 2012, Hawke’s Bay RiVAS assessments for natural character concluded the upper Tukituki River (above SH50) was nationally significant, the middle Tukituki River (between SH50 and Waipukurau) was of regional importance, and the lower Tukituki River was locally significant, for natural character.

Water Quality

68. Hawke’s Bay Regional Council regularly monitors the quality of water in the Tukituki River for both recreational and ecosystem purposes.
69. The water quality of the Tukituki River with regard to ‘recreation’ and ‘ecosystem health’ is discussed below.

Water quality – recreation

70. Hawke’s Bay Regional Council regularly samples the water quality of the Tukituki River for *E.coli* at the following locations (see Table 3). *E.coli* concentrations are measured at these sites to determine whether a site is suitable for full immersion activities such as swimming. An overall bacterial risk rating is assigned based on three years of data.
71. During the summer months these sites are also monitored for toxic algal blooms. In April 2018, the water quality at Black Bridge was unsuitable for swimming due to the presence of a toxic algal bloom which is thought to have washed in from the sea.

Table 3: Recreational water quality – Tukituki River (2016 – 2018)

Monitoring site	Microbiological Indicator (<i>E. coli</i>)	Overall bacterial risk rating	Toxic algae rating
Black Bridge (Haumoana)	<i>E. coli</i> level significantly vary, in the last three years lowest reading = 1 cfu/100ml and highest reading = 1,220 cfu/100ml.	LOW Risk - this site is generally suitable for swimming	No recent data - Potentially toxic algal blooms occur at times
Walker Road (Waipawa)	<i>E. coli</i> level significantly vary, in the last three years lowest reading = 1 cfu/100ml and highest reading = 812 cfu/100ml.	MEDIUM risk - caution advised – usually suitable for swimming but younger children and older people may be at increased risk at times.	No recent data - Potentially toxic algal blooms occur at times
SH2 Bridge	<i>E. coli</i> level significantly vary, in the last three years lowest reading = 1 cfu/100ml and highest reading = 870 cfu/100ml.	MEDIUM risk - caution advised – usually suitable for swimming but younger children and older people may be at increased risk at times.	No recent data - Potentially toxic algal blooms occur at times

Water quality – ecosystem health

72. Hawke’s Bay Regional Council regularly samples the water quality of the Tukituki River at the following locations (see Table 4). The nitrate and ammonia attribute bands provide an indication of the chronic toxicity risk to aquatic animals.

Table 4: Water quality – Tukituki River (2016)

Monitoring site	Water clarity	Nitrogen	Phosphorus	Microbiological Indicator (<i>E. coli</i>)
Black Bridge (Haumoana)	Turbidity = 2.4 NTU; Black disk = 2.1 metres. The black desk test, is in the best 50% of like sites within New Zealand. Turbidity state is in the worst 50% of like sites within New Zealand.	NOF BAND A Total Nitrogen, and Total Oxidised Nitrogen are within the worst 50% of like sites within New Zealand. Total Nitrogen = 0.67 g/m ³ ; Total Oxidised Nitrogen = 0.5 g/m ³ (Annual median) and 1.22 g/m ³ (95 th percentile); Ammoniacal Nitrogen is in the best 25% of like sites in New Zealand Ammoniacal Nitrogen = 0.0102 g/m ³ (Annual median), 0.0393 g.m ³ (annual maximum)	Dissolved Phosphorus, and Total Phosphorus are within the best 50% of ‘like’ sites within New Zealand. Dissolved Phosphorus = 0.009 g/m ³ , Total Phosphorus =0.016 g/m ³ .	NOF Band A E. coli = 32 n/100ml (annual median) In the best 25% of like sites in New Zealand
Red Bridge (Tukituki Valley)	Turbidity = 3.13 NTU; Black disk = 1.9 metres. The black desk test, is in the best 50% of like sites within New Zealand. Turbidity state is in the worst 50% of like sites within New Zealand.	NOF BAND A Total Nitrogen, and Total Oxidised Nitrogen are within the worst 50% of like sites within New Zealand. Total Nitrogen = 0.75 g/m ³ ; Total Oxidised Nitrogen = 0.565 g/m ³ (Annual median) and 1.254 g/m ³ (95 th percentile); Ammoniacal Nitrogen is in the best 25% of like sites in New Zealand Ammoniacal Nitrogen = 0.0093 g/m ³ (Annual median), 0.0329 g.m ³ (annual maximum)	Dissolved Phosphorus = 0.011 g/m ³ . Dissolved Reactive Phosphorus, is within the worst 50% of ‘like’ sites within New Zealand. Total Phosphorus =0.018 g/m ³ . Total Phosphorus is within the best 50% of ‘like’ sites within New Zealand.	NOF Band A E. coli = 30 n/100ml (annual median) In the best 25% of like sites in New Zealand
SH50	Turbidity = 4.29 NTU; Black disk = 1.28 metres. Turbidity state and black disk are in the worst 50% of like sites within New Zealand.	NOF BAND A Total Nitrogen = 0.14 g/m ³ ; Total Oxidised Nitrogen = 0.064 g/m ³ (Annual median) and 0.26 g/m ³ (95 th percentile) Ammoniacal Nitrogen = 0.0028 g/m ³ (Annual median), 0.0153 g/m ³ (annual maximum) All are in the best 25% of like sites in New Zealand	Dissolved Phosphorus = 0.0046 g/m ³ , Total Phosphorus =0.008 g/m ³ . Both are in the best 25% of like sites in New Zealand	NOF Band A E. coli = 13 n/100ml (annual median) In the best 25% of like sites in New Zealand
Tamumu Bridge	Turbidity = 3.29 NTU; Black disk = 1.8 metres. Turbidity state and black disk are in the worst 50% of like sites within New Zealand.	NOF BAND A and NOF BAND B Total Nitrogen = 0.894 g/m ³ ; Total Oxidised Nitrogen = 0.73 g/m ³ (Annual median) and 1.549 g/m ³ (95 th percentile) Ammoniacal Nitrogen = 0.0098 g/m ³ (Annual median), 0.034 g/m ³ (annual maximum) All are in the worst 50% of like sites within New Zealand.	Dissolved Phosphorus = 0.016 g/m ³ , Total Phosphorus =0.022 g/m ³ . Both are in the worst 50% of like sites within New Zealand.	NOF Band A E. coli = 26 n/100ml (annual median) In the best 25% of like sites in New Zealand

Note 1: NOF BAND A for E.coli = water suitable for designed use with les 1% risk of infection from contact with water during activities with occasional immersion (such as wading and boating). Band A is suitable for swimming.

Note 2: NOF BAND A for Nitrogen = unlikely to be effects even on sensitive species.

Values Summary

Overarching Value	Sub-value	Description	Outstanding Yes/no	Comments
Cultural	TBC	TBC	TBC	TBC
Recreational	TBC	TBC	TBC	TBC
Ecological	TBC	TBC	TBC	TBC
Landscape	TBC	TBC	TBC	TBC
Natural Character	TBC	TBC	TBC	TBC

9. Statutory Acknowledgement Area of Interest



Figure 6 Heretaunga Tamatea Area of Interest

10. Resource Management Plans

The following tables list any relevant resource management plans developed by iwi/hapū, the regional council or territorial authorities. The tables include any specific provisions that apply to the Tukituki River. They do not include all of the general policies or rules that may apply. Water quality and water quantity provisions have been included as it is recognised that these aspects can significantly impact on cultural values.

Iwi and Hapū Resource Management Plans

Kahungunu ki Uta, Kahungunu ki Tai: Marine & Freshwater Fisheries Strategic Plan

Mana Ake - An Expression of Kaitiakitanga, Te Taiwhenua o Heretaunga

Regional Resource Management Plan

Section 5.9 (Tukituki River Catchment) – various objectives, policies, limits and targets apply to water quantity and water quality

Catchments Sensitive to Animal Effluent Discharges (Schedule 6b)

Minimum Flow Rivers (Schedule 7)

Rivers Considered for Riparian Protection (Schedule 8)

Schedule 14c – Tukituki River Sub-catchments

Schedule 15 – Tukituki Plan Change 6 – Water Management Zones

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Regional Coastal Environment Plan

Specific water quality standards apply to Tukituki River downstream of Tamumu bridge

- 100 Faecal Coliforms (cfu/100ml)
- 10 Suspended Solids (mg/l)

Schedule R - Stock Management Areas - Tukituki River mouth

Hastings District Plan

Appendix 50 - Waahi Tapu Sites

Central Hawke's Bay District Plan

Appendix C – Schedule of sites of cultural significance to tangata whenua – contains archaeological sites

Appendix H – Schedule of identified community facilities includes several marae – for information purposes only (no rules).

Attachment 2: Photographs - Tukituki River



Lower Tukituki River



Tukituki River (Walker Road)



Tukituki River