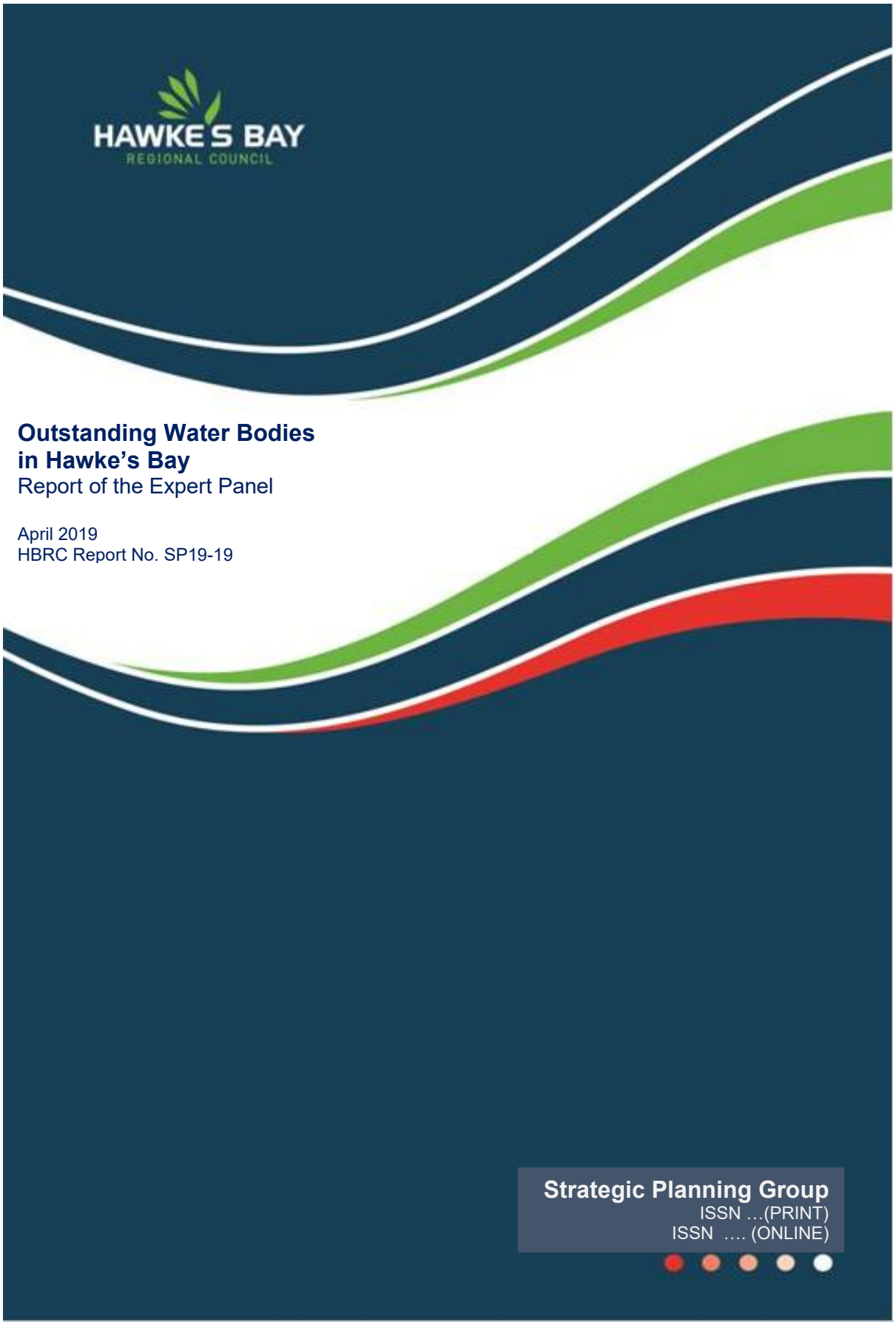

HAWKE'S BAY
REGIONAL COUNCIL
Outstanding Water Bodies
in Hawke's Bay
Report of the Expert Panel
April 2019
HBRC Report No. SP19-19
Strategic Planning Group
ISSN ...(PRINT)
ISSN .... (ONLINE)

HAWKE'S BAY
REGIONAL COUNCIL

159 Dalton Street . Napier 4110
Private Bag 6006 Napier 4142
Telephone (06) 835 9200
Fax (06) 835 3601
Regional Freephone (06) 0800 108 838

Outstanding Water Bodies in Hawke's Bay

Report of the Expert Panel

April 2019
HBRC Report No. SP19-19

Prepared by:

Morry Black, Mauri Protection Agency
Matthew Brady, Department of Conservation
John Cheyne, Wetland Works
Andrew Curtis, Water Strategies Ltd
Bernie Kelly, Hawke's Bay Canoe Club
Tom Winlove, Hawke's Bay Fish and Game Council

For Strategic Planning Group
Hawke's Bay Regional Council

ISSN …(PRINT)
ISSN …. (ONLINE)

Table of Contents

Executive Summary **1**
Expert Panel and Process **4**
Role of the Expert Panel 4
Composition of the Expert Panel 5
Expert Panel Process 6
Outcome 1: OWB Definition **7**
Outcome 2: OWB Assessment Criteria **9**
Outcome 3: Assessment **11**
Outcome 4: OWB Recommendations **14**
Heretaunga Aquifer 15
Porangahau Estuary 18
Te Whanganui a Orotū (Ahuriri Estuary) 21
Morere Hot Springs 24
Lakes Waikaremoana and Waikareiti 26
Upper Mohaka River 31
Ngaruroro River 36
Ruakituri River 42
Tukituki River 45
Waiau River 50
Kaweka Lakes 52
Lake Poukawa and Pekapeka Swamp 55
Lake Whakakī 58
Lake Whatumā 61
Maungawhio Swamp 63
Ngamatea East Swamp 65
Other Water Bodies requiring assessment re outstanding cultural values **67**
Not Outstanding Water Bodies **68**
Insufficient information to assess **68**
References **69**

Appendix 1: OWB Candidate Value **72**
Appendix 2: Water Bird Species **74**
Appendix 2A: Bird Species & Conservation Status 74

Appendix 2B: Whio (Blue duck) numbers in Hawke's Bay 77
Appendix 2C: Sub-Regional Water Bird Species Data 79
Appendix 3: Freshwater Fish Species 86
Appendix 4: Maori cultural and spiritual values 88

Abbreviations

BOI	Board of Inquiry (Tukituki Catchment Proposal)
CEP	Coastal Environment Plan
DOC	Department of Conservation
DoS	Deed of Settlement
HBRC	Hawke's Bay Regional Council
MfE	Ministry for the Environment
NIWA	National Institute of Water and Atmospheric Research
NPS-FM	National Policy Statement for Freshwater Management 2014
OWB	Outstanding Water Body
PC 5	Plan Change 5 to the RRMP
RiVAS	River Values Assessment System
RMA	Resource Management Act 1991
RPC	Regional Planning Committee
RRMP	Regional Resource Management Plan
TANK	Tutaekuri, Ahuriri, Ngaruroro and Karamu plan change process
WAI	Waitangi Tribunal
WCO	Water Conservation Order

Executive Summary

This report presents the findings of the Expert Panel on regionally Outstanding Water Bodies for Hawke's Bay. This Panel was tasked with identifying and recommending to the Hawke's Bay Regional Council (HBRC) those water bodies within the region that warrant classification as 'Outstanding Water Bodies' (OWBs) because of their 'Outstanding' value.

This is one of the key reports prepared to assist the HBRC in determining the region's OWBs and justifying their classification as such.

The Panel were provided with a list of 42 candidate water bodies identified by the Regional Planning Committee (RPC) and supplemented by water bodies suggested through preliminary consultation with stakeholders.

In determining what makes a water body 'Outstanding" and which values are "Outstanding", the Panel considered the National Policy Statement for Freshwater Management 2014 (NPS-FM) and the range of values discussed in the document. They considered that the scope of their recommendations should include freshwater bodies as well as wetlands and water bodies within the coastal environment, such as lagoons and estuaries. They also considered that an 'Outstanding' value had to be found with the water body itself, rather than from any 'out of stream' values and uses derived from water in the water body.

The Panel defined OWBs as:

> *Those waterbodies having regionally exceptional values, namely ecological, landscape, natural character, amenity/recreational and cultural and spiritual values*

In coming to this definition, the Panel agreed that the presence of at least one 'Outstanding' value was necessary for the water body to be recommended as an OWB. They also identified more specific criteria for each 'Outstanding' value to enable more rigorous and transparent assessment of each of the candidate water bodies.

The Panel noted that the significant values of any OWB may include 'Outstanding' values as well as a wider range of values, including both significant consumptive and non-consumptive values. They also noted the intent of those drafting the NPS-FM to have relatively few OWB across New Zealand.

The Panel noted that there were limitations to the assessments they were able to make with respect to:

- Insufficient information being available on the values of some water bodies;
- Cultural and spiritual values assessments that are more appropriately undertaken at a marae or hapu level.

The Panel recommends 16 water bodies within the Hawke's Bay region are classified as 'Outstanding Water Bodies'. The recommendations identify each water body's 'Outstanding' values and note when there are limitations on that value, such as applying spatially or temporally e.g. seasonally. The Panel recognises that this represents a number of water bodies across the region, but considers that each of these has unique or exceptional characteristics, reflecting the breadth of physical environments within the region and the range of ways in which people value and use those water bodies.

The Panel's recommendations for OWBs in Hawke's Bay are summarised in Table 1, and illustrated in Map 1, following.

TABLE 1: PROPOSED OUTSTANDING WATER BODIES FOR HAWKE'S BAY

TYPE	NAME OF WATER BODY	OUTSTANDING VALUE (SUMMARY ONLY)				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Aquifer	Heretaunga Aquifer System	■	■			■
Estuary	Porangahau Estuary	■	■			■
	Te Whanganui a Orotū (Ahuriri Estuary)	■	■		■	■
Hot Spring	Morere Hot Springs		■			■
Lake	Lakes Waikaremoana & Waikareiti	■	■	■	■	■
River	Mohaka River: Upper Mohaka including Waipunga & Te Hoe Rivers	■	■	■	■	■
	Ngaruroro River: including Taruarau River & Waitangi Estuary	■	■	■	■	■
	Ruakituri River			■	■	
	Tukituki River: including Ruataniwha Aquifer System, Waipawa River & Estuary	■	■		■	■
	Waiau River: above Matuku Stream confluence	■		■		
Wetland	Kaweka Lakes	■	■	■		
	Lake Poukawa & Pekapeka Swamp	■	■			■
	Lake Whakakī – Te Paeroa Lagoon – Wairau Lagoon: Whole system	■				■
	Lake Whatumā	■				■

	Maungawhio Lagoon – Lower Kopuwhara - Pukenui dune wetland					
	Ngamatea East Swamp					

MAP1: RECOMMENDED 'OUTSTANDING WATER BODIES' FOR HAWKE'S BAY

Expert Panel and Process

ROLE OF THE EXPERT PANEL

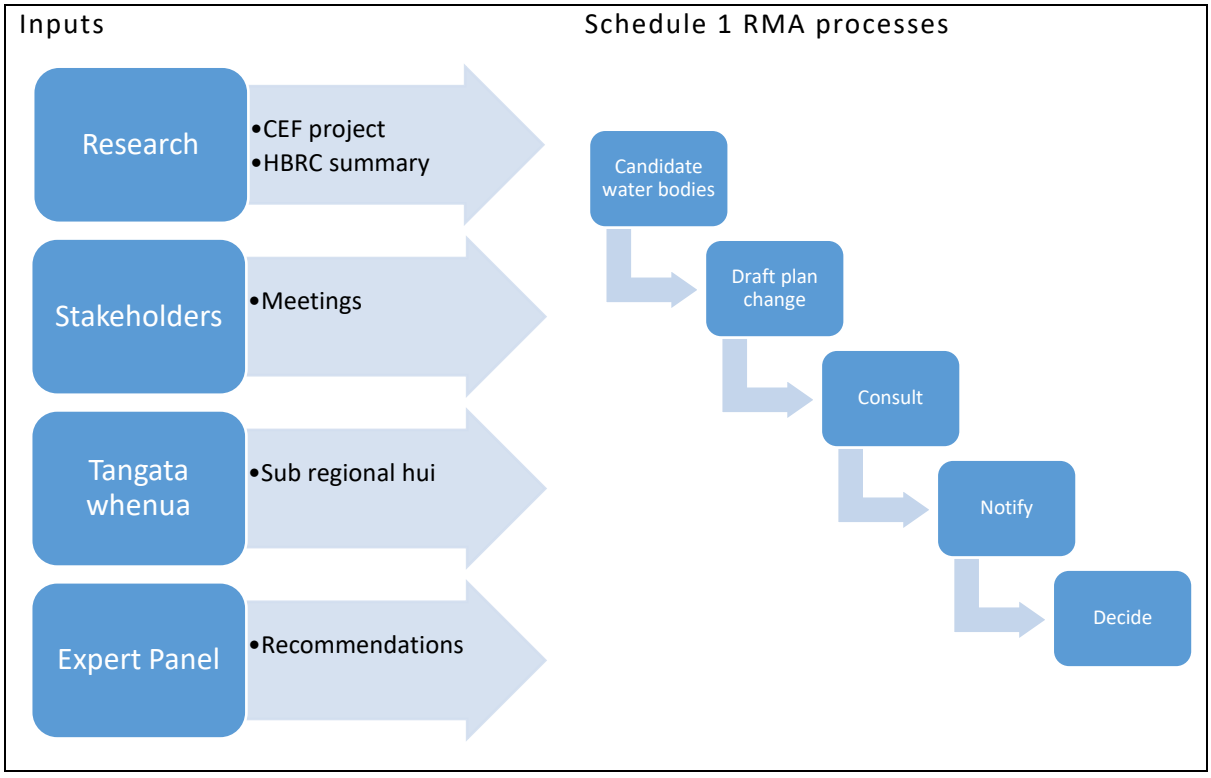
The role of the Expert Panel is to identify and recommend to HBRC a list of OWB for inclusion in the Hawke's Bay Regional Resource Management Plan (RRMP) through a subsequent regional policy statement change process. The Panel was provided with a list of candidate water bodies by HBRC, together with research material, to assist with their assessment and recommendations.

The recommendations of the Expert Panel form one input to the overall process to change the Regional Policy Statement (Chapter 3 of the RRMP), alongside more detailed research and consultation with key stakeholders and tangata whenua (refer to Diagram 1 below). The Panel notes that the change to the RRMP is the pre-cursor to subsequent regional plan changes, either catchment by catchment changes to the RRMP and/or to the Coastal Environment Plan for water bodies within the coastal environment. At this later stage, the detailed rules and mapping for the OWBs will be given effect.

Consequently, the Expert Panel's role has not been to provide recommendations on how the identified OWBs are to be managed, or what other values may be significant as this is a separate and subsequent process.

The OWB expert panel selected water bodies that lie within both the Coastal Marine Area, the landward margin of the 'coastal environment' or the rest of the Hawke's Bay region. Following the OWB change to the Regional Policy Statement, Outstanding Water Bodies will be regulated through either the Regional Resource Management Plan or the Coastal Environment Plan.

DIAGRAM 1: SUMMARY OF OWB RPS CHANGE PROCESS



COMPOSITION OF THE EXPERT PANEL

The Expert Panel is composed of people nominated by stakeholders for their expertise in water-related values and their knowledge of water bodies across the Hawke's Bay region. Table 2 provides a statement of the Panellists' expertise:

TABLE 2: STATEMENT OF EXPERTISE

EXPERT PANELLIST	AREA OF EXPERTISE
Morry Black	Cultural values, including with respect to ecology and natural character: Ngati Kahungunu Iwi Inc Consultant: Mauri Protection Agency Knowledge of Hawke's Bay water bodies: Works extensively with tangata whenua in Hawke's Bay
Matt Brady	Aquatic ecology, including indigenous species Biodiversity Ranger - Department of Conservation Knowledge of Hawke's Bay water bodies: Worked for over 5 years in the freshwater field for DOC in Hawkes Bay. Have been on a number of working groups including TANK.
John Cheyne	Aquatic ecology, including indigenous species Consultant: Wetlands Works Knowledge of Hawke's Bay water bodies: resided in Hawkes Bay for 32 years, worked for DOC, Fish and Game and as a consultant to Hawke's Bay Regional Council. Worked on lakes, wetlands and rivers and associated bird species.
Andrew Curtis	Environmental management Consultant: Water Strategies Ltd Knowledge of Hawke's Bay water bodies: Past resident of Hawke's Bay including 6 years working for the Land Management team at HBRC
Bernie Kelly	Kayaking Birds Conservation Officer, Hawke's Bay Canoe Club Regional Representative Hawke's Bay Birds NZ Knowledge of Hawke's Bay water bodies:
Tom Winlove	Aquatic ecology, including trout and other salmonid species Recreation: Angling, boating and rafting Field Officer, Hawke's Bay Fish and Game Council Knowledge of Hawke's Bay water bodies: Hawkes Bay local who has spent a lot of time in and around Hawkes Bay waterbodies, worked for Fish & Game for over 7 years.

The Panel notes that there are some potential 'Outstanding' values in which their expertise is limited. These include 'landscape' values of water bodies and some recreational activities, including jet boating.

EXPERT PANEL PROCESS

The expert panel attended two full-day workshops at HBRC, independently facilitated by Dr Helen Ritchie of Participatory Techniques Ltd. These workshops were broken down to achieve the following key outcomes:

1. A definition of what constitutes an Outstanding Water Body;
2. A set of criteria and a system for assessing OWB;
3. An assessment of the candidate waterbodies against the criteria;
4. Panel recommendations on which water bodies are 'Outstanding'.

The Panel worked through a variety of exercises to achieve the outcomes, including:

- Background reading in preparation for the workshops;
- Group discussion around the scope of the exercise and how 'Outstanding' is best defined;
- More detailed consideration of the criteria for assessing and rating the agreed 'Outstanding' values;
- Preliminary individual assessments of 'Outstanding' values in each of the candidate water bodies;
- Group discussion to clarify and refine the assessment process, including to agree when insufficient information was available to make an assessment (and noting that cultural assessments would be complemented through a parallel input process with tangata whenua);
- Group discussion to agree on the proposed list of OWBs;
- Describing the outstanding values of the proposed OWBs;
- Collaboratively preparing this report.

The remainder of this report sets out these outcomes.

Outcome 1: OWB Definition

The Panel defined 'Outstanding' as meaning:

> *Special. Unique. Exceptional. Stands out. Magnificent.*

The Panel drew on the national values listed in the NPS-FM, and similar national and regional projects, and agreed on their definition of Outstanding Water Bodies (OWB) as:

> *Those waterbodies having regionally exceptional values, namely ecological, landscape, natural character, amenity/recreational and cultural/spiritual values*

The Panel also agreed that

> *The focus of this expert panel is on regionally outstanding water bodies (OWB) (including wetlands and estuaries) while acknowledging other waterbodies have local values, particularly from a cultural perspective (e.g. taonga value)*

The candidate values that the Panel considered for being 'Outstanding' values were drawn from the definition of an OWB in the NPS-FM, and then largely from *Appendix 1: National values and uses for fresh water* in the NPS-FM. The final candidate value for 'Capacity to support human life and health' was put forward by Hawke's Bay District Health Board (attached as Appendix 1). The Panel also considered these values with respect to estuaries and coastal wetlands.

The Panel agreed that in the context of the NPS-FM, 'Significant' and 'Outstanding' had slightly different meanings as they were used in different ways, and that while all 'Outstanding' values were significant, not all 'Significant' values were 'Outstanding'.

The Panel also agreed that the significant values of any OWB may include both significant consumptive and non-consumptive values. However, the Panel notes that it was *not* in their brief to identify all significant values of an OWB.

In identifying 'Outstanding' values, the Panel:

- Excluded values associated with water taken out of the water body, where it is added to something to make it valuable (e.g. water supply, irrigation, commercial and industrial uses);
- Noted that the National Policy Statement for Renewable Electricity Generation offers some degree of protection for that use of water;
- Acknowledged that they have limited ability to assess cultural and spiritual values on behalf of marae and hapu, and it was more appropriate for these to be assessed through the parallel input from tangata whenua;
- Acknowledged the importance of consumptive use values (of water taken from the water bodies and of hydro electricity generation) in supporting the communities of Hawke's Bay.

Table 3 following summarises the Panel's assessment of which values should be considered to be 'Outstanding' values of water bodies.

TABLE 3: EXPERT PANEL ASSESSMENT OF POTENTIALLY 'OUTSTANDING' VALUES

CANDIDATE VALUE / USE	ASSESSMENT	RECOMMENDATION
Ecological health and ecological function	Includes indicators of outstanding ecology	Assess under **Ecology**
Human health for recreation	Includes indicators of suitability for recreation	Assess under **Amenity/ Recreation**
Natural form & character	Outstanding value in its own right	Outstanding value: **Natural Character**
Mahinga kai	Component of Cultural & spiritual value	Assess under **Cultural & Spiritual**
Fishing	Component of Recreation value	Assess under **Amenity/ Recreation**
Irrigation, cultivation & food production	Consumptive use away from the water body	Not an outstanding value May be a significant value for specific water body
Animal drinking water	Consumptive use away from the water body	Not an outstanding value May be significant value for specific water body
Wai tapu Wahi tapu	Component of Cultural & Spiritual value	Assess under **Cultural & Spiritual**
Whakapapa	Component of Cultural & Spiritual value	Assess under **Cultural & Spiritual**
Water supply	Consumptive use away from the water body	Not an outstanding value May be a significant value for specific water body
Commercial & industrial use	Consumptive use away from the water body	Not an outstanding value May be significant value for specific water body
Hydro-electric power generation	May or may not be consumptive use	Not an outstanding value May be significant value for specific water body
Transport & tauranga waka	May be component of Cultural & Spiritual or Recreation	Assess under **Cultural & Spiritual** and **Recreation**
Capacity to support human life & health	Partially covered under Ecology, Recreation, Cultural & Spiritual values	Not an outstanding value May be significant value for specific water body

Outcome 2: OWB Assessment Criteria

The Panel considered the criteria for what makes the selected values regionally 'Outstanding'. The Gisborne District Council OWB criteria provided a useful framework but needed both simplification and some additional criteria.

Both quantitative and qualitative (descriptive) measures were selected and are set out below in Table 4. 'Outstanding' values could also be variable, for example, customary values can be dependent on the season or time of year.

TABLE 4: CRITERIA FOR ASSESSING 'OUTSTANDING' VALUES

'OUTSTANDING' VALUE	CRITERIA	INDICATOR
Ecology	Threatened Species	4 or more threatened species
	% of Population	• >2% of a national population of a native species • >15% of a regional population of a native species
	Ecological Distinctiveness	Presence of a unique or distinctive characteristic/ habitat or species at the regional level
	Ecological Function	Presence of a critical or outstanding: • Breeding site • Ecosystem component • Assemblage • Kohanga ika/ nursery • Fish passage/ fish spawning
Landscape	A water body that contains a unique hydrological, geological or culturally significant feature A water body that is widely recognised at the regional level for its scenic values	
Natural Character	A water body that is highly natural with little or no human modification, including to the flow, bed and riparian margins, water quality, flora and fauna, within a largely indigenous landscape	
Amenity/ Recreation	A recreational experience that is exceptional in or on the water An exceptional location for angling or customary food gathering A unique historical or heritage site	
Cultural & Spiritual	Preliminary and high level comments only are provided using the following framework: For understanding and assessing the outstanding values, attributes and uses of water bodies from a cultural and spiritual perspective, the following concepts have been applied:	

	Wairuatanga Mauri Mana Tapu Taonga tuku iho *Rangatiratanga* Mana whenua – mana moana Kaitiakitanga Mahinga kai (as a place, action or practice) *Whakapapa* O te whenua O te wai O te tangata Ki uta ki tai *Matauranga Maori* Tikanga Maori knowledge systems Traditional uses and values Origins of cultural knowledge *Cultural Natural Character* Spiritual condition Mana o te wai Connectivity between ground and surface water Cleansing properties as water passes through the whenua Spring / aquifer sources – water recharge systems SPECIAL NOTE: Tangata whenua will provide locally relevant assessments through separate input to the process (Refer to Appendix 4: Maori cultural and spiritual values, and see Diagram 1).

Outcome 3: Assessment

The Panel assessed all 42 candidate waterbodies provided by HBRC against the agreed criteria, according to their expertise and local knowledge, first individually and secondly as a collective.

The Panel eliminated those waterbodies that did not meet the criteria for 'Outstanding', including those that:

- should be considered for further cultural assessment; or
- had insufficient information available to make an adequate assessment.

The Panel focussed on those water bodies that met the 'Outstanding' criteria for one or more value and looked more closely at system inter-relationships and the specific nature of the 'outstanding' values for each.

'Outstanding' water bodies that were considered to form part of a wider system were clustered together.

The Panel considered that meeting any one criterion was sufficient to justify recommendation as an OWB for that 'Outstanding' value.

The summary of their assessment is shown in Table 5 and the 17 OWBs recommended are shaded in green.

TABLE 5: SUMMARY ASSESSMENT OF CANDIDATE WATER BODIES AS OWBS

TYPE	CANDIDATE WATER BODY NAME	ASSESSMENT
Aquifer	Heretaunga Aquifer System	OWB
	Ruataniwha Aquifer System	Include with Tukituki River OWB
Estuary	Porangahau Estuary	OWB
	Te Whanganui a Orotū (Ahuriri Estuary)	OWB
Hot Springs	Morere Hot Springs	OWB
	Tarawera Hot Springs	Cultural assessment needed
Lake	Lake Tūtira complex	Cultural assessment needed
	Lake Waikaremoana	OWB
	Lake Waikareiti	OWB with Lake Waikaremoana
River	Aropaoanui River	Cultural assessment needed
	Boundary Creek, including Shine Falls	Insufficient information
	Karamu River	Cultural assessment needed
	Makirikiri River	Cultural assessment needed

	Mangahouanga River	Not an OWB
	Upper Mohaka River (above Willowflat)	OWB
	Lower Mohaka River (below Willowflat)	Cultural assessment needed
	Ngaruroro River (upper above Whanawhana & lower)	OWB
	Nuhaka River	Insufficient information
	Porangahau River (below Porangahau village bridge)	Include within Porangahau Estuary OWB
	Porangahau River (above Porangahau village bridge)	Cultural assessment needed
	Ruakituri River	OWB
	Taruarau River	Include with Ngaruroro River OWB
	Te Hoe River	Include with Upper Mohaka River OWB
	Tukituki River	OWB
	Tutaekuri River	Cultural assessment needed
	Waiau River (above Matuku Stream)	OWB
	Waiau River (below Matuku Stream)	Cultural assessment needed
	Waihua River	Cultural assessment needed
	Waikaretaheke River	Not an OWB
	Waipawa River	Include with Tukituki River OWB
	Waipunga River	Include with Upper Mohaka River OWB
	Wairoa River	Cultural assessment needed
Wetland	Kaweka and Ruahine Ranges Wetlands	Insufficient information
	Kaweka Lakes	OWB
	Lake Poukawa	OWB

	Lake Whakakī – Te Paeroa Lagoon – Wairau Lagoon	OWB
	Lake Whatumā	OWB
	Maungawhio Lagoon – Lower Kopuwhara Stream – Pukenui Wetlands	OWB
	Ngamatea East Swamp	OWB
	Opoutama Swamp	Cultural assessment needed
	Pekapeka Swamp	Included with Lake Poukawa OWB
	Putere Lakes	Cultural assessment needed
	Waitangi – Tukituki Wetland	Waitangi Estuary with Ngaruroro River OWB Tukituki Estuary with Tukituki River OWB

Outcome 4: OWB Recommendations

The Panel has completed their Recommendation Report for Outstanding Water Bodies in Hawke's Bay, recording the 'Outstanding' values and information sources relied on for each OWB in the following sections.

The Panel notes that for a value such as 'Ecology', the interconnection of water bodies is often important for the outstanding value identified. Accordingly, the Panel clustered water bodies into groups where this best reflected the nature of the 'Outstanding' value. All waterbodies that were clustered in this way are identified under the main water body.

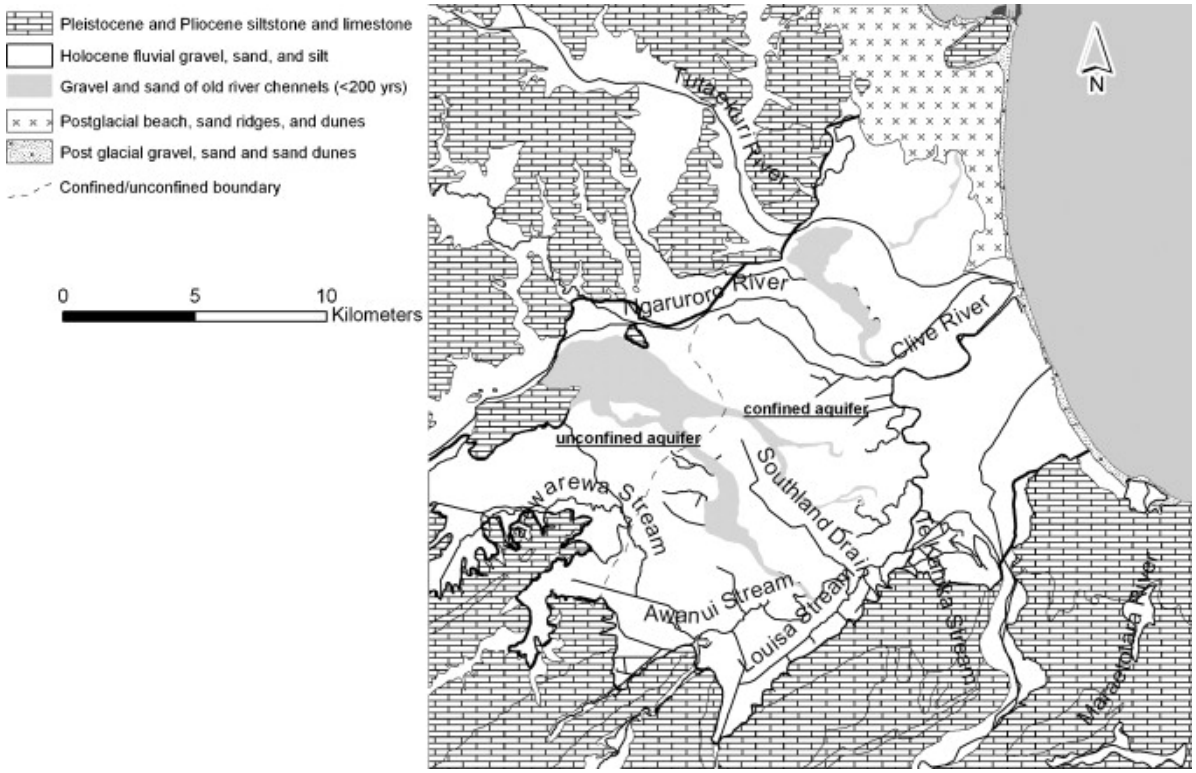
For some values, such as Landscape or some Cultural and Spiritual values, the value may exist over a specific area only, or may be seasonal or specific in some other way and the Panel describes where this occurs. Where this occurs, a comment is made in the 'Notes' section of the assessment.

References are attached at the end of this report.

The more detailed assessments against the criterion for each 'Outstanding' value of the recommended OWBs follow (pages 15 – xxx).

Heretaunga Aquifer

Aerial view over Heretaunga Aquifer



Geology: Heretaunga Aquifer

HERETAUNGA AQUIFER: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Aquifer	HERETAUNGA AQUIFER					

ECOLOGY

Description	Notes	Reference
Ecological Function: Critical for ecosystems on Heretaunga Plains. The aquifer receives and supplies water for many of the rivers and springs on the plains. Integrally tied to hydrological processes.		HBRC 2018

LANDSCAPE

Description	Notes	Reference
Hydrological features of the aquifer, including scale, are regionally unique		HBRC 2018

CULTURAL & SPIRITUAL

Description	Notes	Reference
Long regarded as a taonga of Ngāti Kahungunu and is within Heretaunga - Tamatea's traditional rohe		HBRC 2018
Wairuatanga: Mauri, Mana, Tapu, Taonga tuku iho *Rangatiratanga:* Mana Whenua - Mana Moana, Kaitiakitanga, Mahinga kai (place/action/practice) *Whakapapa:* Relationships founded on the integrity of the resource being maintained	Different strands and layers of whakapapa depending on context; Atuatanga and different realms / responsibilities;	Dravid and Brown; Heretaunga Ararau Haukunui (Te Hira Huata); He Toa Takitini Evidence and DoS; Ngaruroro Values

Matauranga Maori: Tikanga Maori, unique knowledge systems and origins		&Assessment Report NKII evidence PC5
Cultural Natural Character: Connectivity, hydraulic connection, springflows - punawai, natural cleansing, ecosystem services Mana o te Wai - Life essence, spiritual integrity, spiritual health, life-supporting capacity,		WAI 262 WAI 595 TANK PC 5

Porangahau Estuary

Including Porangahau River below Porangahau village bridge

PORANGAHAU ESTUARY: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Estuary	PORANGAHAU ESTUARY					

ECOLOGY

Description	Notes	Reference
Threatened Species: 7 bird species - White heron, black-billed gull, black-fronted tern, banded dotterel, Caspian tern, wrybill plover, lesser knot		Bird NZ Hawke's Bay Census counts
Ecological Distinctiveness: Largest barrier (bar) system in Hawke's Bay One of only 4 large estuaries in Hawke's Bay (Porangahau, Waitangi, Ahuriri and Maungawhio)		

Ecological Function: Important breeding & feeding ground for a significant number of bird species, regionally significant for native birds Only known location in Hawkes Bay where royal spoonbill and Caspian tern nest 2 main inanga spawning sites Regionally significant for native fish Lower Porangahau River (tidal reaches) is an integral part of estuary system Only known estuary in Hawke's Bay with seagrass still present		Bird list in Appendix 2 Bird NZ Census records Regional Coastal Plan 1999 NIWA Native Birds - RiVAS 2012 Native Fish – RiVAS 2012

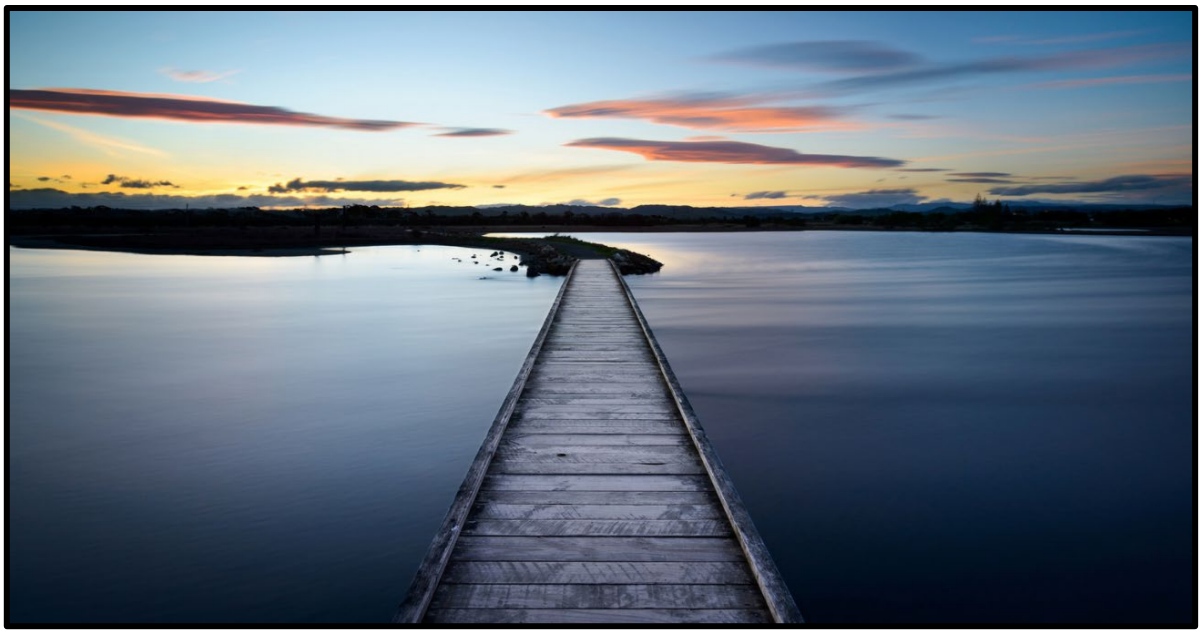
LANDSCAPE

Description	Notes	Reference
River mouth barrier system (regionally important)	River mouth	NZ Geopres. Inventory
En echelon sand dunes and cross-cutting strand lines (nationally important)	Sand dunes	NZ Geopres. Inventory

CULTURAL & SPIRITUAL

Description	Notes	Reference
Significant to Ngati Kere and Ngati Manuhiri - burial grounds and historical settlements on Puketauhinu Peninsular and around the backwash		HBRC 2018
Rangatiratanga: Mana Whenua - Mana Moana, Kaitiakitanga, Mahinga kai (place/action/practice) *Whakapapa:* o te whenua, o te wai, o te tangata Ki uta ki tai		Regional Coastal Plan 1999
Ecology: Whakapapa connections within and between species, Fish spawning – kohanga ika; Mahinga kai		Wakefield, Alan; Walker, Lisa 2005

Te Whanganui a Orotū (Ahuriri Estuary)



TE WHANGANUI A OROTŪ (AHURIRI ESTUARY): DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
ESTUARY	TE WHANGANUI A OROTŪ (AHURIRI ESTUARY)					

ECOLOGY

Description	Notes	Reference
Nationally Threatened Species: 6 bird species - White heron, shore plover, black-billed gull, banded dotterel, Caspian tern, lesser knot		Bird list in Appendix 2 BirdNZ Hawke's Bay Census counts
Ecological Function: Largest estuary in Hawke's Bay Important feeding and breeding site for diverse range of birds, including international migratory species such as the bar-tailed godwit as well as NZ Dotterel, marsh crake, spotless crake Breeding site for bittern; only known site in Hawke's Bay where bittern numbers have increased over the past 8 years Marine fish species nursery; Part estuarine and freshwater wetland		Bird list in Appendix 2 Bird NZ Census records DOC HBRC 2018 Ahuriri Management Plan, September 1992 (unpub)

LANDSCAPE

Description	Notes	Reference
1931 earthquake uplift (nationally important)		NZ Geopres. Inventory

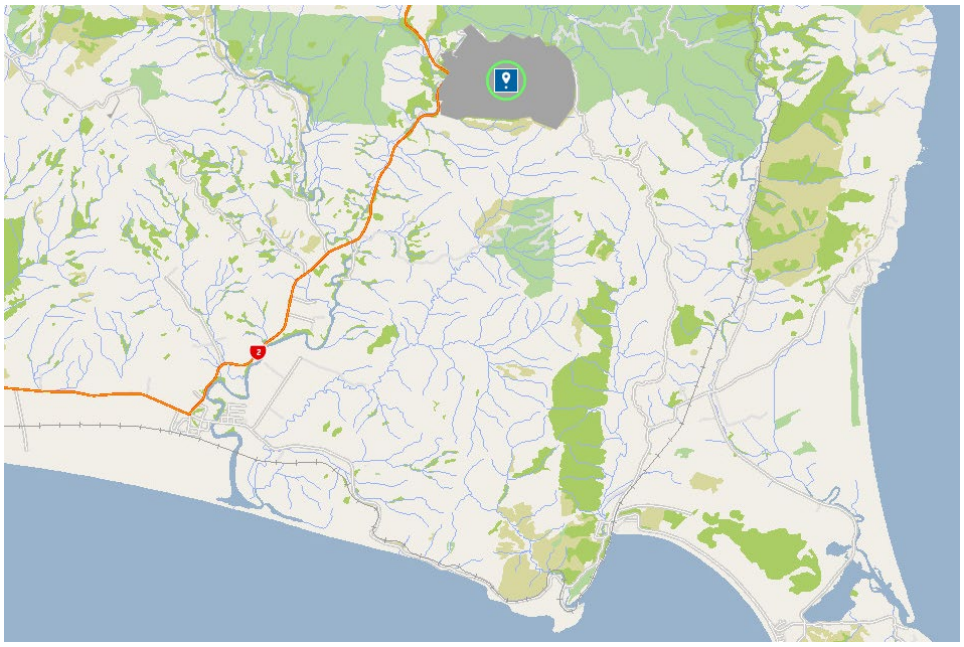
AMENITY & RECREATION

Description	Notes	Reference
Canoeing, sea yachting, waka ama, paddle board, swimming etc Only multi-sport facility of its kind in the region		HB Canoe Club Kelly 2019

CULTURAL & SPIRITUAL

Description	Notes	Reference
Highly significant cultural site		HBRC 2018
Rangatiratanga: Mana Whenua - Mana Moana, Kaitiakitanga, Mahinga kai (place/action/practice) *Whakapapa:* o te whenua, o te wai, o te tangata, ki uta ki tai *Kōhanga ika Kōhanga manu*		Ahuriri Report WAI 55

Morere Hot Springs



MORERE HOT SPRINGS: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Hot Springs	MORERE HOT SPRINGS					

LANDSCAPE

Description	Notes	Reference
Best example of hot springs on east coast North Island (regionally important)		NZ Geopres. Inventory

CULTURAL & SPIRITUAL

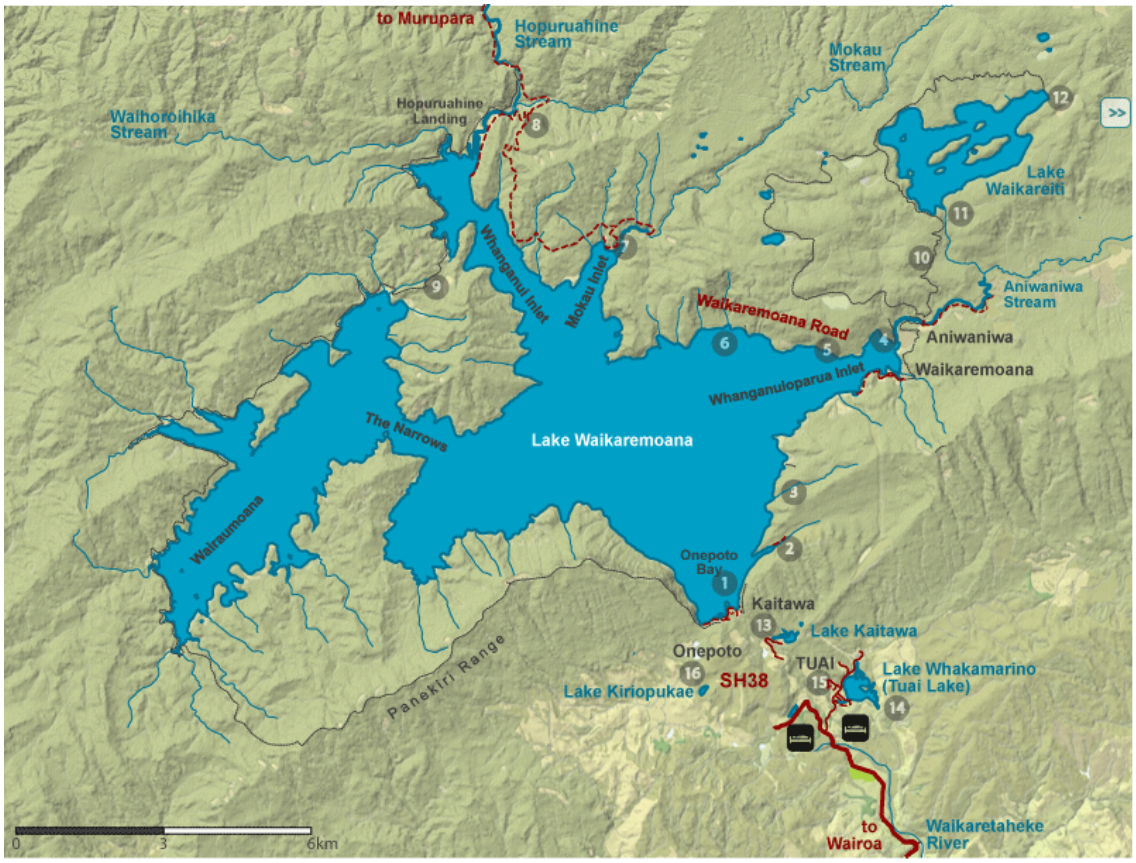
Description	Notes	Reference
Whakapapa: o te whenua, o te wai, o te tangata *Ki uta ki tai:*	Unique saltwater origin	

Mana o te wai:		

Lakes Waikaremoana & Waikareiti

Lake Waikaremoana

Lake Waikareiti



LAKES WAIKAREMOANA & WAIKAREITI: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Lake	LAKES WAIKAREMOANA & WAIKAREITI					

ECOLOGY

Description	Notes	Reference
Ecological Distinctiveness: An exceptional lake ecosystem which is one of the best examples of diverse aquatic vegetation in a large, deep, clear lake in the North Island A total of 22 species of submerged plants have been recorded in the lake Lake Waikaremoana is in extremely good condition, with a high Lake SPI score of 74%, the second highest ranked lake in the Hawke's Bay region		HBRC 2018

LANDSCAPE

Description	Notes	Reference
Largest debris-dammed lake in the region (nationally important)	Lake Waikaremoana	NZ Geopres. Inventory
Lake Waikareiti Beach (regionally important)	Lake Waikareiti	NZ Geopres. Inventory

NATURAL CHARACTER

Description	Notes	Reference
Lake Waikaremoana is a large clear sparkling blue lake set in the 225,000 hectares of Te Urewera which is the largest untouched native forest reserve in the North Island. The surrounding area has high natural character		HBRC 2018

values.		
Potential Water Body of National Importance for its scenic values: "Water quality in the lake is very good due to the largely pristine nature of the surrounding catchment. The lake is clear and blue with very low levels of nutrients and algae".		MfE 2004 HBRC 2018
Lake Waikareiti is located within the Te Urewera National Park and is a pristine example of an unmodified upland lake. The only 'un-natural' modifications include a walking track along the Western edge and two huts located at the northern and southern ends of the lake.		HBRC 2018

AMENITY & RECREATION

Description	Notes	Reference
Trout Fishery: Outstanding trout lake fishery. Waikaremoana is the highest used lake fishery in Hawkes Bay receiving 7,500 angler days in the 2015-16 season. It is the second most used fishery overall in Hawkes Bay, second to the Tukituki River. Both lake fisheries are known for their remoteness, wilderness and natural scenic values. These values are rare in North Island lake fisheries.		HBRC 2018 Unwin 2016
Kayaking: Destination for kayaking, unique experience in Hawke's Bay Multi-day experiences possible using facilities provided around the lake		Kelly 2019
Tramping: One of the 10 NZ Great Walks (premier walking tracks in NZ)		HBRC 2018

CULTURAL & SPIRITUAL

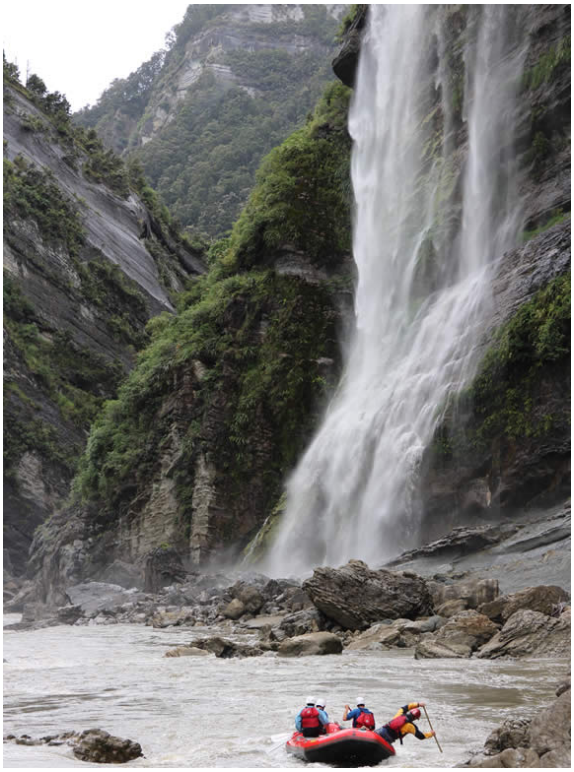
Description	Notes	Reference
Significant to Tūhoe, Ngāti Ruapani and Ngāti Kahungunu The waters are regarded as a taonga		HBRC 2018
Wairuatanga:		Ngai Tuhoe DoS

Mauri, Mana, Tapu, Taonga tuku iho *Whakapapa:* o te whenua, o te wai, o te tangata, *Kōhanga ika/Kōhanga manu*: Nursery; breeding ground; refuge,		
Rangatiratanga: Mana Whenua - Mana Moana, Kaitiakitanga, *Mahinga kai*: (place/action/practice)	Lake Waikareiti	Ngai Tuhoe DoS

Upper Mohaka River

Upstream of Willow Flat Bridge, including Waipunga and Te Hoe Rivers

Mohaka River downstream of Taharua confluence



Waterfall halfway down Long Rapid, Grade V Section

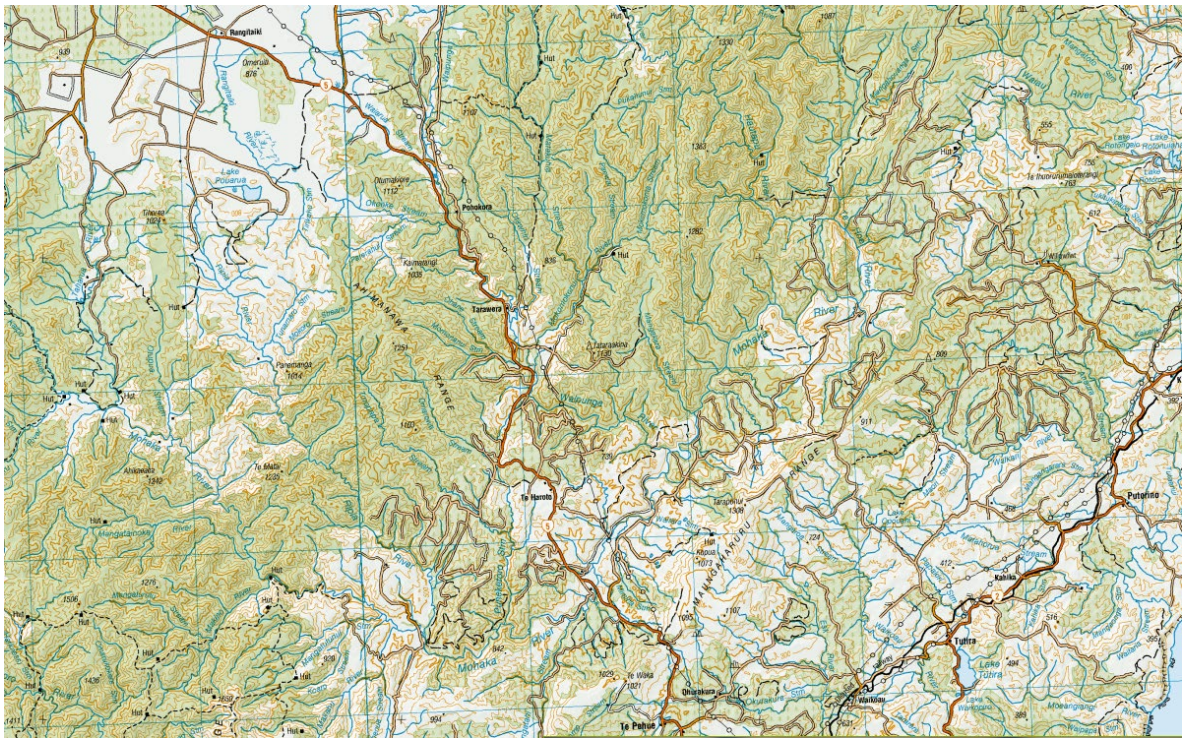
World Playground - Own work

Looking downstream mid-way through Long Rapid, at higher flows.

CC BY-SA 3.0

File: Mohaka River, Falls at Long Rapid.jpg

Created: 20 January 2014


Rangitaiki
Ponakura
Tarawera
Te Haroto
Putorino
Kahika
Tutira
Lake Tutira
Ohurakura
Te Pohue
Waikoau
Mohaka
River
RANGE

UPPER MOHAKA RIVER: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
River	UPPER MOHAKA RIVER					

ECOLOGY

Description	Notes	Reference
% of Population: Whio (blue duck): • 35% of regional population • 1.5 – 7.7% of national population	Includes Te Hoe River	Bird list in Appendix 2.1 Whio list in Appendix 2.2
Ecological Function Regionally significant for native birds Regionally significant for native fish		Native Birds RiVAS 2012 Native Fish RiVAS 2012

LANDSCAPE

Description	Notes	Reference
Horsehoe Bend (regionally important)	Horseshoe Bend	NZ Geopres. Inventory
Waipunga Falls (regionally important)	Waipunga Falls	NZ Geopres. Inventory

NATURAL CHARACTER

Description	Notes	Reference
Outstanding scenic characteristics in gorge areas	Mokonui gorge Te Hoe gorge	WCO 2004
Highest score for natural character in Hawke's Bay		Natural

		Character RiVAS 2012

AMENITY & RECREATION

Description	Notes	Reference
Outstanding Trout Fishery: Nationally significant wilderness trout fishery protected by a Water Conservation Order. Known for its outstanding back country/wilderness trout fishery, scenic beauty, solitude and large trout. Ranked no. 1 trout fishery by RiVAS report.	Upstream of SH5 bridge & including the Te Hoe and tributaries above that point	WCO 2004 Fish &Game HBRC 2018 Salmonid Angling RiVAS 2012
Outstanding amenity for water-based recreation: Internationally renowned for its whitewater boating opportunities, with several commercial rafting and canoeing organisations operating in this area. Its stable water flows means the river can be paddled all year round, making it usable when many other rivers are not due to summer low flows. One of the most frequently used rivers in the country, which provides for all levels of paddling difficultly along its length Placed in 'Group one' in the Government's list of rivers and lakes deserving protection for its scenic and recreation qualities, with specific note given to its rafting and canoeing values In 2004, The Mohaka River was recognised as a Potential Water Body of National Importance for recreation by the Ministry for the Environment	SH5 bridge to Willow Flat	WCO 2004 HBRC 2018
Kayaking: Nationally renowned for its whitewater boating opportunities High density of hydraulic features with multi day capability Good access for a range of kayaking abilities		Whitewater Kayaking RiVAS 2012 WCO 2004 Kelly 2019

CULTURAL & SPIRITUAL

Description	Notes	Reference
The landscape is culturally dense with a wealth of		HBRC 2018

place names and remembered events The upper Mohaka was also a key route inland		
Culturally significant for Ngati Hineuru - Waipunga Falls and hotsprings of note		HBRC 2018
Outstanding spiritual & cultural values	Whole Mohaka system	WCO 2004
Wairuatanga: Mauri, Mana, Tapu, Taonga tuku iho *Whakapapa:* o te whenua, o te wai, o te tangata		Maungaharuru Tangitu and Ngati Pahauwera Statements of claim (Waitangi Tribunal)
Landscape: Whole of upper river		Mohaka River Report 1992
Cultural Natural Character: Spiritual condition/connection Scenic, gorge section		

Ngaruroro River

Including Taruarau River & Waitangi Estuary

Upper Ngaruroro River

Lower Ngaruroro River

NGARURORO RIVER: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
River, Estuary	NGARURORO RIVER					

ECOLOGY

Description	Notes	Reference
Threatened Species: 8 bird species - Blue duck, grey duck, black-billed gull, banded dotterel, white heron, black fronted tern, bittern, Caspian tern 1 fish species - lamprey		Bird list in Appendix 2 Fish list in Appendix 3 HBRC 2018 Bird NZ Hawke's Bay bird census
% of Population Whio (blue duck) – 25% of regional population 1.1 – 5.6% of national population Banded dotterel – 37% of regional population 6-10% of national population		Bird list in Appendix 2
Ecological Function: Provides a range of diverse habitats for fish and bird species from the mountainous upper river, braided lower section, to the Waitangi Estuary The lower Ngaruroro is the second largest braided river in the North Island, a historically rare ecosystem in New Zealand, and rare internationally Regionally significant for native birds		McLellan, WCO application 2019 HBRC TANK Estuary reports HBRC 2018

Regionally significant for native fish		Native birds RiVAS 2012 Native fish RiVAS 2012

LANDSCAPE

Description	Notes	Reference
Ngaruroro gorge is one of the two best gorges in the region (regionally important)	Ngaruroro Gorge	NZ Geopres. Inventory
Taruarau gorge is one of the two best gorges in the region (regionally important)	Taruarau Gorge	NZ Geopres. Inventory
Best example of a braided river channel in the region (regionally important)	Whanawhana to Fernhill bridge	NZ Geopres. Inventory
Landscape features including karst formations		Rangitikei District Plan ONFL report

NATURAL CHARACTER

Description	Notes	Reference
Widely recognised as being in a near natural state. There are very few development influences in surrounding area, with the exception of forestry, which when harvested may impact on the river's water quality	Ngaruroro upstream of Kuripapango	HBRC 2018
Nationally significant and in near pristine condition	Ngaruroro upstream of Kuripapango	Natural character RiVAS 2012
Highly impressive scenic values as in near natural state	Taruarau River	HBRC 2018

AMENITY & RECREATION

Description	Notes	Reference
Trout Fishery: Outstanding back country/wilderness trout fishery A nationally important wilderness river fishery, … outstanding characteristics … scenic beauty, solitude, large area of fishable water and large	Above Whanawhana including Taruarau River	HBRC 2018 Fish &Game Salmonid Angling RiVAS 2012

trout Ranked 3rd for Salmonid Angling in Hawkes Bay		WCO application
Whitebaiting Flounder Mullet	Waitangi Estuary	Local knowledge
Kayaking: Multi-day back country kayaking available to a high number of medium level kayakers Ranked 3rd in Hawke's Bay for whitewater kayaking, technically challenging	Above Whanawhana	WCO application Whitewater Kayaking RiVAS 2012 HBRC 2018
Jet Boating: Nationally highly valued braided section with a high level of use, not just locally, but from people who reside throughout both the North and South Islands.	Lower Ngaruroro below Taruarau confluence	Eccles 2018 HBRC 2018

CULTURAL & SPIRITUAL

Description	Notes	Reference
Highly impressive scenic values as in near natural state	Taruarau River	HBRC 2018
Waters considered to be of outstanding cultural and spiritual significance by tāngata whenua - mahinga kai, nohoanga, urupā, waahi tapu, traditional trails and other taonga are all important aspects	Upper Ngaruroro	HBRC 2018 He Toa Takitini DoS 2015
Significant to Heretaunga Tamatea - Te Awa o Te Atua - important for food gathering. Many sacred sites and settlements beside it.	Lower Ngaruroro River	HBRC 2018 Te Hira Huata – Wai claim
Wairuatanga: Mauri, Mana, Tapu, Taonga tuku iho (God-given treasure/gift) *Nohoanga:* Traditional sites for accessing resources and cultural practices	Ngaruroro River	He Toa Takitini DoS 2015
Wairuatanga: Mauri, Mana, Tapu, Taonga tuku iho *Whakapapa:*	Taruarau River	He Toa Takitini DoS 2015

o te whenua, o te wai, o te tangata		
Rangatiratanga: Mana Whenua - Mana Moana, Kaitiakitanga, M*ahinga kai*: (place/action/practice) *Whakapapa:* o te whenua, o te wai, o te tangata, ki uta ki tai *Ki Uta ki Tai:* Fish passage	Waitangi Estuary	He Toa Takitini DoS 2015

Ruakituri River

RUAKITURI RIVER: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
River	RUAKITURI RIVER					

NATURAL CHARACTER

Description	Notes	Reference
Nationally recognised for exceptional scenic values	Upper Ruakituri	HBRC 2018

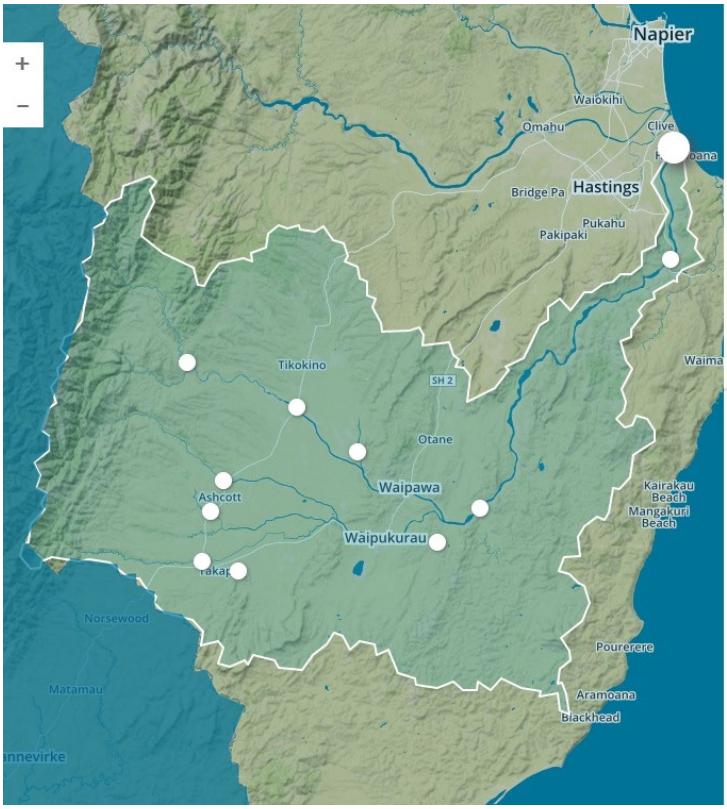
AMENITY & RECREATION

Description	Notes	Reference
Trout Fishery: Ranked 3rd in RiVAS report and as having a High or National level of importance for Salmonid Angling in Hawkes Bay Internationally renowned trout fishery; regionally outstanding. High scenic and wilderness values. Known for trophy sized trout. Most enjoyed river fishery in North Island in 2013 report.		Fish &Game HBRC 2018 Salmonid Angling RiVAS 2012
Kayaking: Exceptional as few examples exist of rock slide within the waterways that are unique to Hawke's Bay	Rock slide	Kelly 2019

Tukituki River

Including Waipawa River, Ruataniwha Aquifer & Estuary

Lower Tukituki near Black Bridge



TUKITUKI RIVER: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
River, Aquifer, Estuary	TUKITUKI RIVER					

ECOLOGY

Description	Notes	Reference
Threatened Species: 9 bird species - Grey duck, white heron, bittern, black-billed gull, black-fronted tern, reef heron, blue duck, banded dotterel, Caspian tern 1 natïve fish species: lamprey		Bird list in Appendix 2 Fish list in Appendix 3 HBRC 2018
% of Population:		Bird list in

Banded dotterel - 35% regional population 6-10% national population		Appendix 2 HBRC 2018 BirdsNZ 1986 Census
Ecological Function: Provides a range of diverse habitats for fish & bird species from the upper river in the Ruahines, the braided lower section and the estuary Braided river habitat is a rare habitat type internationally Fish passage Nationally significant for native birds Nationally significant for native fish		Birds NZ Winter & Summer Wader Census HBRC 2018 Parrish G, 1988 Native birds RiVAS 2012 Native fish RiVAS 2012

LANDSCAPE

Description	Notes	Reference
Waipawa river alluvial terraces - one of the best examples in the region (regionally important	Waipawa River alluvial terrace	NZ Geopres. Inventory
Ruataniwha Aquifer – distinctive hydrological feature that is integral to the Tukituki river system	Ruataniwha Aquifer	HBRC 2018
Te Mata Peak limestone ridge - iconic Hawke's Bay river landscape (regionally important)	Vicinity of Te Mata peak ridge	NZ Geopres. Inventory

AMENITY & RECREATION

Description	Notes	Reference
Trout Fishery: Nationally significant trout fishery Ranked 3rd for Salmonid Angling in Hawkes Bay RiVAS report The most used trout fishery in the Hawkes Bay Region receiving 9,650 angler days in the 2015-16 season The Tukituki River was identified as having exceptional overall importance for its access, large	Includes Waipawa River	Fish &Game HBRC 2018 Salmonid Angling RiVAS 2012

area of fishable water and being close to home		
Whitebait & smelt: Important fishery Inanga spawning areas	Lower Tukituki River	Fish &Game HBRC 2018 Native Fish RiVAS 2012 Brown J. Rook H 2017

CULTURAL & SPIRITUAL

Description	Notes	Reference
The Tukituki awa was used extensively for mahinga kai, and for transporting people and goods. It was once a 'river of villages' and a 'highway' connecting whānau to their mahinga kai, to other whānau, and to trade and prosperity All along the Tukituki River are signs of occupation and sites that record key events in tribal history. Wahi tapu (Specific sites)		HBRC 2018
Significant for Heretaunga Tamatea – natural resources and inland access - Wahi tapu (Specific sites)	Waipawa River	HBRC 2018
Wairuatanga: Mauri, Mana, Tapu, Taonga tuku iho *Rangatiratanga:* Mana Whenua - Mana Moana, Kaitiakitanga, Mahinga kai (place/action/practice) *Matauranga Maori:* Tikanga Maori, knowledge systems and origins	Ruataniwha Aquifer	BOI 2013
Wairuatanga: Mauri, Mana, Wahi Tapu, Taonga tuku iho *Whakapapa:* o te whenua, o te wai, o te tangata, ki uta ki tai, Kohanga ika *Matauranga Maori:* Tikanga Maori, knowledge systems and origins	Tukituki River	He Toa Takitini DoS 2015
Matauranga Maori: Tikanga Maori, knowledge systems and origins	Waipawa River	He Toa Takitini DoS

(Kōhanga ika/Kōhanga manu)		2015
Spiritual condition: Connectivity, cleansing properties, spring source Aquifer recharge and springflows		BOI 2013
Cultural Ecology: Supported by intact/healthy mauri of the water Braided river, water quality, fish and bird habitat	Tukituki River	TToH Values and Uses Report 2012

Waiau River

Above Matuku Stream confluence

WAIAU RIVER: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
River	WAIAU RIVER					

ECOLOGY

Description	Notes	Reference
% of Population: Whio (blue duck): 18% of regional population		DOC unpub
Ecological function: Ecologically significant for native birds		Native birds RiVAS 2012

NATURAL CHARACTER

Description	Notes	Reference
'Nationally Significant' for Natural Character		Natural Character RiVAS 2012

Kaweka Lakes

Lakes Rotoroa and Rototuna

KAWEKA LAKES: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Wetland	KAWEKA LAKES					

ECOLOGY

Description	Notes	Reference
Threatened Species: 1 bird species – grey duck 3 plant species – *amphibromus fluitans*, *carex cirrhosa*, *pterostylis micromega*		Bird list in Appendix 2 Clarkson, B & Druce, A 1984
Ecological Distinctiveness: Population of lake-locked Koaro The lakes and associated wetlands are ecologically distinct in the region		HBRC 2018 Clarkson 1984
Ecological Function: Unmodified ecology – the catchment is almost entirely native and has associated bog, palustrine and riverine wetlands Lakes SPI highest scoring for lakes surveyed in the region		HBRC 2018 NIWA LakeSPI

LANDSCAPE

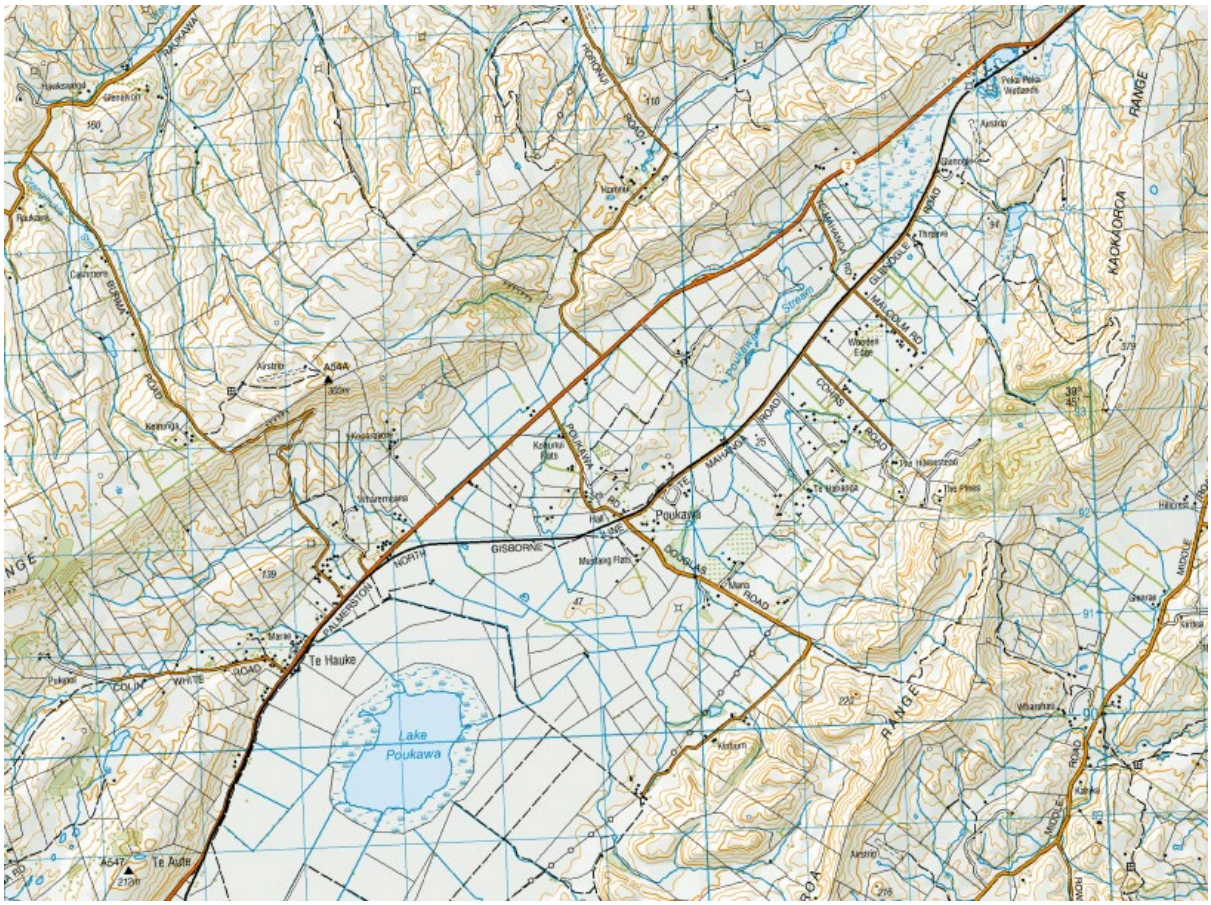
Description	Notes	Reference
Widely recognised for their scenic qualities due to the catchments pristine state		HBRC 2018

NATURAL CHARACTER

Description	Notes	Reference

The lakes are in an unmodified state surrounded by indigenous forest and small wetlands		WCO application 2019 NIWA Lakes SPI

Lake Poukawa & Pekapeka Swamp



LAKE POUKAWA & PEKAPEKA SWAMP: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Wetland	LAKE POUKAWA & PEKAPEKA SWAMP					

ECOLOGY

Description	Notes	Reference
Threatened Species: 6 bird species – grey duck, white heron, bittern, black-billed gull, banded dotterel, Caspian tern		Bird list in Appendix 2

% of Population: Bittern – 16% of regional population Dabchick – 27% of regional population 5-10% of national population Pied stilt – 50% of regional population Shoveler duck – 3% of national population		Bird list in Appendix 2 Cheyne J 2019
Ecological Function: High connectivity between Lake Poukawa & Pekapeka Swamp and Karamu Stream for native fish migration and bird movement Supports high number of bird species that breed on ephemeral wetlands associated with Lake Poukawa Supports a large shortfin eel population Fish passage		WONI Cat A 1987 NIWA 2009

LANDSCAPE

Description	Notes	Reference
Lake Poukawa Holocene Swamp (nationally signficant)	Lake Poukawa	NZ Geopres. Inventory

CULTURAL & SPIRITUAL

Description	Notes	Reference
Wairuatanga: Mauri, Mana, Tapu, Taonga tuku iho (fish passage & recruitment) *Rangatiratanga;* Mana Whenua - Mana Moana, Kaitiakitanga, *Mahinga kai:* (place/action/practice) (fish passage & recruitment) *Whakapapa:* o te whenua, o te wai, o te tangata, unique peatlands (life force and soul energy)		WAI 262; J. G. Wilson, 1976; Heretaunga Ararau Haukunui (Te Hira Huata)
Spiritual condition: Connectivity, cleansing properties, spring source – recharge zones		BOI 2013

Lake Whakakī

Including Patangata, Te Paeroa & Wairau Lagoons

LAKE WHAKAKĪ: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Wetland	LAKE WHAKAKĪ					

ECOLOGY

Description	Notes	Reference
Threatened Species: 6 bird species – Grey duck, white heron, bittern, black-billed gull, banded dotterel, Caspian tern		Bird list in Appendix 2
Ecological Function: Named wetlands are strongly connected hydrologically and ecologically Highly rated in the 'wetlands of ecological and representative importance' and the 'sites of special wildlife interest' databases		HBRC 2018

LANDSCAPE

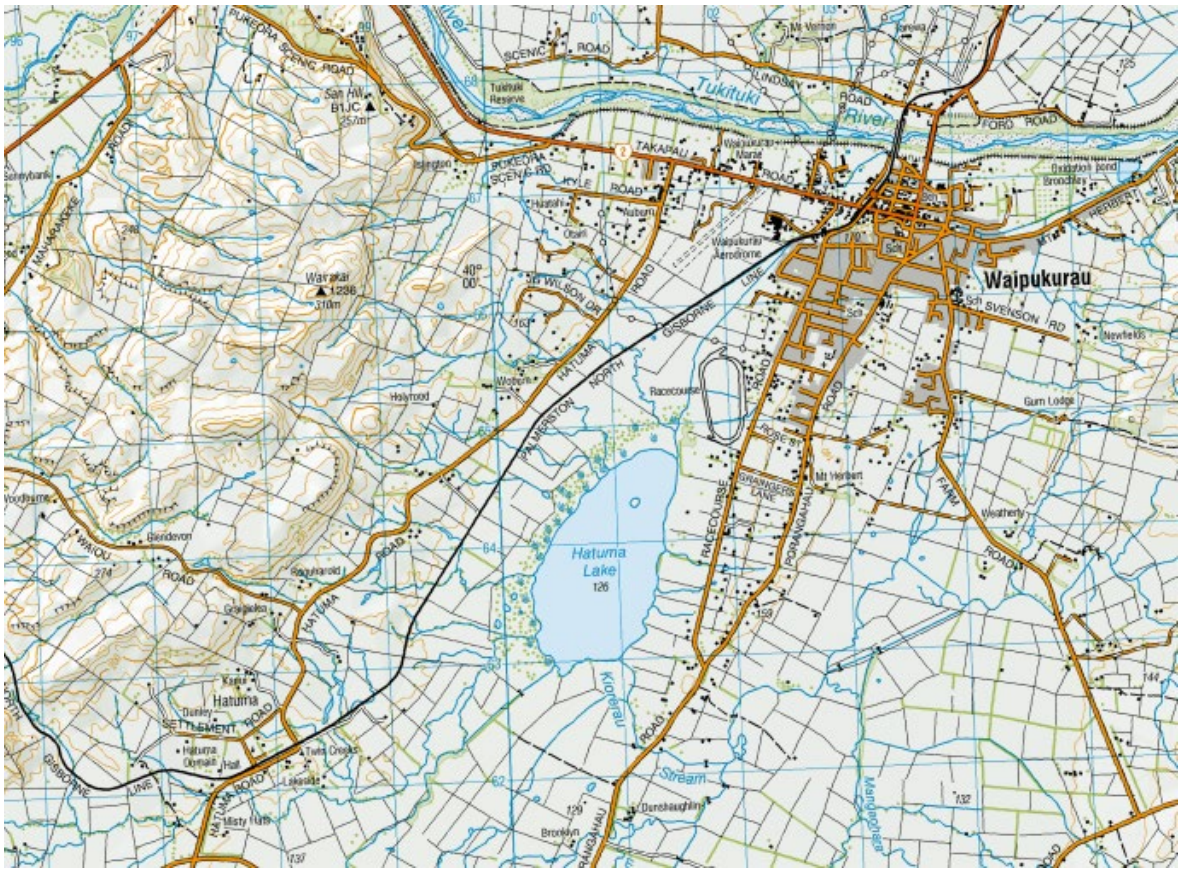
Description	Notes	Reference
Best coastal wetland/ lagoon complex in the region (regionally important)		NZ Geopres. Inventory

CULTURAL & SPIRITUAL

Description	Notes	Reference
Significant to the iwi and hapū of Te Rohe o Te Wairoa. Ngāti Kahukura, Ngāti Kirituna and hapū of Te Whakakī have cultural associations with the lake		HBRC 2018
Wairuatanga: Mauri, Mana, Tapu, Taonga tuku iho *Rangatiratanga:*		WAI 262

Mana Whenua - Mana Moana, Kaitiakitanga, *Mahinga kai:* (place/action/practice) *Whakapapa:* o te whenua, o te wai, o te tangata, ki uta ki tai		

Lake Whatumā



LAKE WHATUMĀ: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Wetland	LAKE WHATUMĀ					

ECOLOGY

Description	Notes	Reference
Threatened Species: 6 bird species – grey duck, white heron, bittern, black-billed gull, banded dotterel, Caspian tern		Bird list in Appendix 2 O'Donnell C
% of Population: Bittern – 22% of regional population 2.5% of national population Dabchick – 26% of regional population 5-10% of national population Pied stilt – 45% of regional population		Cheyne J 2019 O'Donnell C

CULTURAL & SPIRITUAL

Description	Notes	Reference
Significant to the iwi and hapū of Te Rohe o Te Wairoa. Ngāti Kahukura, Ngāti Kirituna and hapū of Te Whakakī Nui-a-Rua have cultural associations with the lake		HBRC 2018
Whakapapa: o te whenua, o te wai, o te tangata, ki uta ki tai *Mahinga kai:*		HTT DoS 2015

Maungawhio Lagoon

Including Lower Kopuwhara Stream and Pukenui dune wetlands

Lower Kopuwhara Stream

MAUNGAWHIO LAGOON: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Wetland	MAUNGAWHIO LAGOON					

ECOLOGY

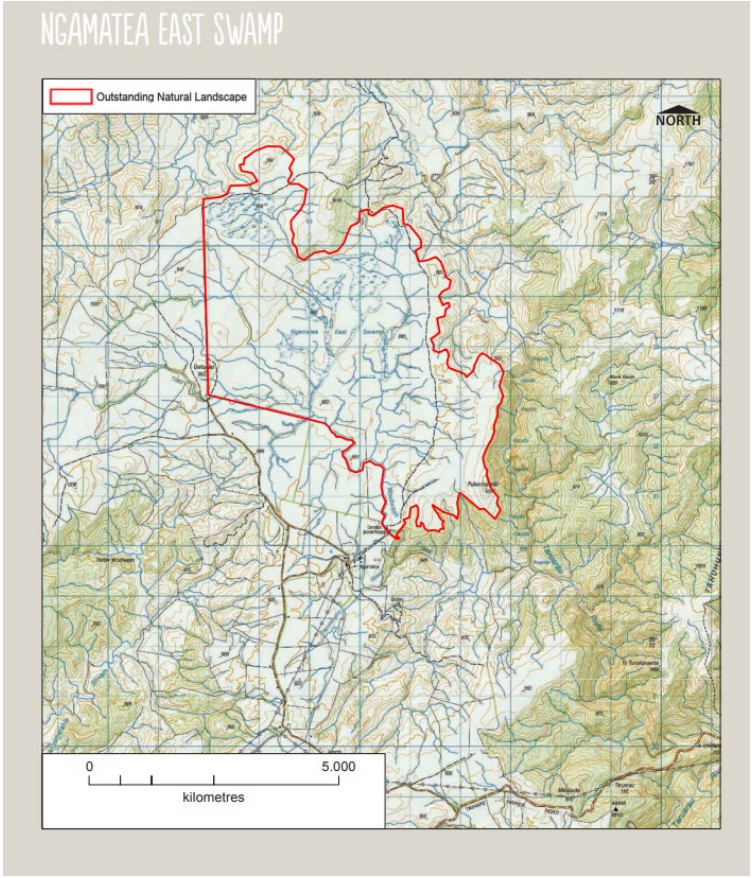
Description	Notes	Reference
Threatened species: 9 bird species – White heron, bittern, shore plover, black billed gull, reef heron, banded dotterel, Caspian tern, lesser Knot, black fronted tern		Birds NZ counts, DOC Wairoa records
Ecological distinctiveness: National importance in the 'wetlands of ecological and representative importance' index Unique flora, some of which are not found anywhere else in NZ, on surrounding dunes		HBRC 2018
Ecological function: Regional importance for native fish		Native fish RiVAS 2012

LANDSCAPE

Description	Notes	Reference
One of the largest sand tombola in New Zealand (nationally important)		NZ Geopres. Inventory
Maungawhio Lagoon – excellent example of a tidal lagoon (regionally important)		NZ Geopres. Inventory

Ngamatea East Swamp

Ngamatea East Swamp: aerial view



Source: Rangitikei District Plan

NGAMATEA EAST SWAMP: DESCRIPTION OF OUTSTANDING VALUES

SUMMARY

TYPE	NAME	OUTSTANDING VALUE				
		ECOLOGY	LANDSCAPE	NATURAL CHARACTER	AMENITY & RECREATION	CULTURAL & SPIRITUAL
Wetland	NGAMATEA EAST SWAMP					

ECOLOGY

Description	Notes	Reference
Threatened Species: 2 bird species – grey duck, banded dotterel 2 plant species – *carex strictissima*, *ranunculus recens var*		DOC Protected Natural Area report
Ecological Distinctiveness: Significant expanse of native vegetation		DOC PNA Report

NATURAL CHARACTER

Description	Notes	Reference
Very high in natural character as a result of its significant ecological value, expansive open landscape, expressive wetland drainage and vegetation patterns. Highly valued by Māori.		Rangitikei District Plan

Other Water Bodies requiring assessment re outstanding cultural values

The Panel the following candidate water bodies that did not meet the criteria for 'Outstanding" value for Ecology, Landscape, Natural Character and Amenity/ Recreation values should be referred to the iwi input process for cultural assessment.

TABLE 6: CANDIDATE OWBS REQUIRING CULTURAL ASSESSMENT ONLY

TYPE	NAME OF WATER BODY
Hot Springs	Tarawera Hot Pools
Lake	Lake Tutira complex
River	Aropaoanui River
	Karamu River
	Makirikiri River
	Lower Mohaka River (below Willowflat)
	Porangahau River (above Porangahau village bridge)
	Tutaekuri River
	Waiau River (below Matuku Stream confluence)
	Waihua River
	Wairoa River
Wetland	Opoutama Swamp
	Putere Lakes

'Not Outstanding' Water Bodies

The Expert Panel assessed the following water bodies as being 'Not Outstanding':

TABLE 7: CANDIDATE WATER BODIES THAT ARE NOT 'OUTSTANDING'

TYPE	NAME OF WATER BODY	ASSESSMENT
River	Boundary Stream, including Shine Falls	Ecological restoration in process Popular site with good educational information available May have been outstanding in the past, but is not at present
	Mangahouanga Stream	Site of internationally significant archaeological value (fossil bones) Archaeological value does not directly relate to the water body itself as the bones are found in ancient rocks, revealed by tectonic processes
	Waikaretaheke River	Locally outstanding for kayaking: Controlled flows (up to 6 times per year) provide excellent training in river hazards

Insufficient information to assess

There was insufficient information available for the Expert Panel to assess the following water bodies:

TABLE 8: INSUFFICIENT INFORMATION AVAILABLE

TYPE	NAME OF WATER BODY
River	Nuhaka River
Wetland	Kaweka and Ruahine Ranges Wetlands

References

Bird NZ Hawke's Bay Census records

Board of Inquiry (2013). *Tukituki Catchment Proposal*. Environment Protection Agency.

Booth, K et al (2012). *Salmonid Angling in Hawke's Bay: Application of the River Values Assessment System (RiVAS and RiVAS+)*, LEaP Research Paper No. 16, HBRC Plan No. 4374

Booth, K (2012). *Natural Character in Hawke's Bay: Application of the River Values Assessment System (RiVAS and RiVAS+)*, LEaP Research Paper No. 15, HBRC Plan No. 4375

Booth, K et al (2012). *Whitewater Kayaking in Hawke's Bay: Application of the River Values Assessment System (RiVAS)*, LEaP Research Paper No. 12, HBRC Plan No. 437

Brown, J. and Rook, H. (2017) Tutaekuri Ngaruroro: Inanga Spawning Report. Prepared for HBRC

Burton, T (2107). *Assessment of Lakes in the Hawke's Bay Regional using LakeSPI*, HBRC Report RM18-02

Cheyne, J (2019), unpublished bird count data.

Cheyne, J. and Rook, H. (2015) *Inanga Spawning Sites: Heretaunga Plains Rivers.* Prepared for Hawke's Bay Regional Council.

Clarkson, BR and Druce, AP (1984). *Flora and Vegetation of the Kaweka Lakes, Kaweka State Forest Park*.

Davis, SF (1987). *Wetlands of National Importance to Fisheries*. NZ Freshwater Fisheries Report No. 90, Freshwater Fisheries Centre, MAFFish, Christchurch.

Department of Conservation (1994). *Conservation Management Strategy for Hawke's bay Conservancy 1994-2004 (Volume 1)*.

Dravid, P. N., and Brown, L. J. (1997) *Heretaunga Plains Groundwater Study, Volume 1.* Hawke's Bay Regional Council

Eccles, B (2018). *Statement of Evidence,* Stage 2 Application for Water Conservation Order for the Ngaruroro River and Clive River, 28 November 2018.

Hastings District Council, Hawke's Bay Regional Council, City of Napier and Department of Conservation (1992). *Ahuriri Management Plan*

Hawke's Bay Regional Council (1999). *Regional Coastal Plan*.

Hawke's Bay Regional Council (2006). *Regional Resource Management Plan*, updated 2018

Hawke's Bay Regional Council (June 2012). *Tukituki River Catchment Cultural Values and Uses;* HBRC Report No. 12/28.

Hawke's Bay Regional Council (2014). *Coastal Environment Plan*.

Hawke's Bay Regional Council (2018). *Summary of cultural values associated with water bodies in Hawke's Bay*, HBRC Report No. SD18-01.

Hawke's Bay Regional Council (2018). *Summary of recreation, landscape and ecology values associated with water bodies in Hawke's Bay*, HBRC Report No. SD18-02.

Hawke's Bay Regional Council. *TANK reports*, https://www.hbrc.govt.nz/hawkes-bay/projects/tank/about-tank/

Huata, Te Hira - *Heretaunga Ararau Haukunui.* Statement of Evidence and Powerpoint presentation for WAI 2357 and WAI 2358

He Toa Takitini Evidence and Heretaunga Deed of Settlement (2015). https://www.govt.nz/treaty-settlement-documents/heretaunga-tamatea/

Hughey, K et al (2012). *Native Fish in Hawke's Bay: Development and Application of the River Values Assessment System (RiVAS and RiVAS+)*, LEaP Research Paper No. 18, HBRC Plan No. 4379

Hughey, K et al (2012). *Native Birdlife in Hawke's Bay: Application of the River Values Assessment System (RiVAS and RiVAS+)*, LEaP Research Paper No. 14, HBRC Plan No. 4376

Kelly, B (2017). *Statement of Evidence*, Stage 1 Application for Water Conservation Order for the Ngaruroro River and Clive River, 17 October 2017.

Kelly, B (2019). Hawke's Bay Canoe Club

Maungaharuru - Tangitū Hapū Deed of Settlement (2013). https://www.govt.nz/treaty-settlement-documents/maungaharuru-tangitu/

McLellan, R (2017). *Statement of Evidence*, Stage 1 Application for Water Conservation Order for the Ngaruroro River and Clive River, 19 October 2017.

McLellan, R (2018). *Statement of Evidence*, Stage 2 Application for Water Conservation Order for the Ngaruroro River and Clive River, 12 December 2018.

Ministry for the Environment (2004). *Water Programme of Action: Potential Water Bodies of National Importance*, Technical Working Paper.

NZ Government (2017). *National Policy Statement for Freshwater Management 2014*, updated August 2017.

New Zealand Geopreservation Inventory, https://services.main.net.nz/geopreservation/

New Zealand Government (2004). *Water Conservation (Mohaka River) Order 2004*, SR 2004/397.

Ngāi Tūhoe Deed of Settlement (2013). https://www.govt.nz/treaty-settlement-documents/ngai-tuhoe/

McArthur, K., Black, M. et al (2016). *Ngaruroro Values and Attributes Report.* Report prepared for Hawke's Bay Regional Council.

Ngati Kahungunu Iwi Inc (2013). *Evidence of Ngahiwi Tomoana and Marei Apatu.* Statements of Evidence prepared for Environment Court, (ENV-2013-WLG-000050)

Ngati Pahauwera Deed of Settlement (2010). https://www.govt.nz/treaty-settlement-documents/ngati-pahauwera/

NIWA LakeSPI Lake Submerged Plan Indicators, https://lakespi.niwa.co.nz/

O'Donnell, CF (2014). *Department of Conservation unpublished Field Notes*, Bird Survey, Lake Whatumā.

Parrish, G (1988). *Wildlife and Wildlife Habitat of Hawke's Bay Rivers*.

Rangitikei District Council (2013). *Rangitikei District Plan, Outstanding Natural Landscapes section*

Rogers, GM (1993). *Protected Natural Areas Progaramme, Moawhango Ecological Region*.

Waitangi Tribunal (1995). *Te Whanganui a Orotū Claim (WAI 55)*.

Waitangi Tribunal (2011). *Ko Aotearoa Tēnei (WAI 262)*.

WAI 595 Treaty of Waitangi Claim Heretaunga Aquifer

Wakefield, Alan., Walker, Lisa. (2005). *Maori methods and indicators for marine protection – Ngati Kere interests and expectations for the rohe moana*

Water Conservation Order Application for Ngaruroro and Clive Rivers: https://www.epa.govt.nz/public-consultations/in-progress/water-conservation-order-ngaruroro-and-clive-rivers/hearings/?accordion-anchor=845

Unwin, M (2016). *Angler usage of New Zealand lake and river fisheries: results from the 2014/15 National Angling Survey*, NIWA Client Report 2016021CH. Fish and Game Council New Zealand.

Wildlands (2012). *Whakakī 2N Incorporation Resource Consent at Iwitea Road, Wairoa, Hawke's Bay: Investigation of Alternative Options for Increasing the Area Available for Farming*.

Appendix 1: OWB Candidate Value

Human life supporting capacity

The following request was made for the Expert panel to consider 'Human life supporting capacity' as an 'Outstanding' value for water bodies in Hawke's Bay:

HUMAN LIFE SUPPORTING CAPACITY AS A CRITERION FOR ASSESSING OUTSTANDINGNESS OF WATER BODIES

February 2019

Nicholas Jones, Clinical Director Health Improvement and Equity. Hawke's Bay District Health Board.

This memo explains why it is necessary to add an additional outstanding water body criterion.

Humans are part of the environment and the RMA must be concerned with maintaining (and enhancing where degraded) the capacity of the environment to support human life.

Section 2 of the Resource Management Act defines "environment" to include ecosystems and their constituent parts, including people and communities.

As the Hawke's Bay community is aware, safe drinking water, and a secure drinking water supply, is critical for the health and safety (and wellbeing) of people.

The RMA clearly reflects the fact that humans exist within the New Zealand ecosystem and that although much of the Act concerns the regulating the activities of humans on non-human species (along with environmental attributes that support them) the Act is clearly concerned with sustaining the environment's capacity to support human life (and to meet the needs of future generations).

Uncontaminated water is essential for the maintenance of human life and health. The quantities of water required to support basic human survival, along with contaminant levels at which adverse effects on human health are appropriately assured, are well established.

The fundamental need for drinking water exists independently of any economic values attributed to the extraction and utilization of water. Water also contributes to the social, spiritual and cultural well being of humans.

Criteria for outstandingness of ground water bodies

The assessment of outstandingness for ground water bodies requires a separate set of criteria to surface bodies for the following reasons:

- Ground water bodies are not visible (except when they interact with surface water through springs etc). This means that visual attributes are not relevant;
- Ground water fauna are not visible and their ecosystem values have only recently been investigated. Therefore, a precautionary approach is required given the lack of scientific knowledge;
- Ground water specific attributes such as the presence of aquitards or confining layers, vertical flows, hydraulic head, transmissivity etc contribute to the outstandingness of ground water bodies;
- Ground water body surface water body interactions must be taken into account in assessing both surface and ground water body outstandingness.

Our recommendation:

1. A separate set of criteria are used by the panel to assess outstandingness of ground water bodies for recommendation to the Outstanding Water Body plan change.

2. Capacity to support human life and health is included as a criterion for assessing candidate water bodies alongside other relevant attributes. This assessment should not be undertaken as an economic assessment.

3. Ground water specific attributes also should be assessed for candidate water bodies and compared to other ground water bodies to determine how the attributes of candidate water bodies compare.

4. We note the panel as currently constituted may have limited expertise in assessing some of these criteria and strongly recommend that a ground water expert be invited to advise the panel on the outstandingness of candidate ground water bodies. As is readily apparent aquifers are a significant resource in the region and are prime candidates for outstandingness.

Appendix 2: Water Bird Species

APPENDIX 2A: BIRD SPECIES & CONSERVATION STATUS

APPENDIX 2A TABLE 1: BIRD SPECIES & CONSERVATION STATUS

Water Birds Recorded in Hawkes Bay, Conservation Status and Population

Prepared for Hawkes Bay Regional Council Outstanding Water Bodies Plan Change (John Cheyne Wetland Works and Matthew Brady Department of Conservation March 2019)

Species of Water Bird Found in Hawkes Bay	Conservation Status of NZ Birds 2016 (1)	Criteria (1)	Qualifiers (1)	New Zealand Population 2016 (1)	Predicted Decline Over 10 yrs (1)	Hawkes Bay Region Population (2)
	THREATENED					
Grey duck	Nationally Critical	B (1/1)	DP, SO	250-1000	50-70%	Unknown
White heron	Nationally Critical	A(1)	OL, SO, St	<250	Stable	5 Int **(3)**
Bittern	Nationally Critical	B(1/1)	RF,Sp,TO	250-1000	50-70%	54 male = 108 individuals
Shore plover	Nationally Critical	A(1)	CD, RR, Sp, St	<250	Stable	30
Black billed gull	Nationally Critical	C	DP,RF		>70%	250
Black fronted tern	Nationally Endangered	C(1/1)	CD, DP,RF,Sp	1000-5000	50-70%	300 Int
Reef heron	Nationally Endangered	B(1/1)	DP,SO,Sp	250-1000	Stable	20
Blue duck	Nationally Vulnerable	C(1/1)	CD, PD,Sp	1000-5000	10-50%	220
Banded dotterel	Nationally Vulnerable	D (1/1)	DP	5,000-20,000	30-70%	3000
Caspian tern	Nationally Vulnerable	C(1/1)	SO,Sp	1000-5000	10-50%	60
Wrybill plover	Nationally Vulnerable	B91/1)	DP, RR	1000-5000	Stable	100 Int
Lesser knot	Nationally Vulnerable	E(1/1)	TO	20,000-100,000	50-70%	50 Ext
	AT RISK					
Spotless crake	Declining	A(1/1)	DP, SO	5,000-20,000	10-30%	250
Marsh crake	Declining	A(1/1)	DP	5,000-20,000	10-30%	100
Banded rail	Declining	A(1/1)	DP, RR	5,000-20,000	10-30%	20
White fronted tern	Declining	A91/1)	DP	5,000-20,000	10-30%	300
N Is fernbird	Declining	B(1/1)	DP	20,000-100,000	20,000-100,000	1200
NZ pipit	Declining	C(1/1)		>100,000	10-70%	2500
S Is pied oystercatcher	Declining	B(1/1)		20,000-100,000		150 Int
Red billed gull	Declining	C(1/1)		>100,000	10-70%	250
Bar tailed Godwit	Declining	B(1/1)	TO	20,000-100,000		600 Ext
NZ dabchick	Recovering	A(1/1)	DP	5,000-20,000	10-30%	400
Northern NZ dotterel	Recovering	A	CD	1000-5000	>10%	80
Brown teal	Recovering	A	CD, RR	1000-5000	>10%	100
Variable oystercatcher	Recovering	A		1000-5000	>10%	150

Pied shag	Recovering	B		5,000-20,000	>10%	50
Black fronted dotterel	Naturally Uncommon		SO, Sp	3000-4000	Increasing	2500
Australian coot	Naturally Uncommon		Inc, SO		Increasing	200
Black shag	Naturally Uncommon		SO,Sp			400
Little black shag	Naturally Uncommon		RR			300
Royal spoonbill	Naturally Uncommon		Inc, RR, SO, Sp		Increasing	250 Int
Pacific golden plover	Naturally Uncommon					40 Ext
	NOT THREATENED					
Shoveler duck	NOT THREATENED					5,000
Grey teal	NOT THREATENED		Inc, SO		Increasing	4,000
NZ scaup	NOT THREATENED		Inc		Increasing	250
Black swan	NOT THREATENED		SO			3,000
White faced heron	NOT THREATENED		SO			1200
Pied stilt	NOT THREATENED		SO			2,500
Little shag	NOT THREATENED		Inc			400
Pukeko	NOT THREATENED		Inc, SO		Increasing	20,000
Paradise shelduck	NOT THREATENED					10,000
NZ kingfisher	NOT THREATENED					1,000
Spur wing plover	NOT THREATENED					2,000
Black backed gull	NOT THREATENED		SO			2,000
Gannet	NOT THREATENED		Inc, SO		Increasing	2,000

1. **Conservation Status of NZ Birds, 2016. NZ Threat Classification Series 19 Department of Conservation**

All species have a conservation status, which is not the same as being "threatened." Conservation categories are listed below.
The status of each bird species is reviewed every five years by an expert panel convened by the Department of Conservation using the best data available and assessing against a range of criteria and qualifers to place individual species of NZ birds in one of the following categories.
Similar lists are available for freshwater fish, plants and lizards.
Extinct
Data Deficient
Threatened (in priority order for conservation purposes: Nationally Critical, Nationally Endangered, Nationally Vulnerable)
At Risk (Declining, Recovering, Relict, Naturally Uncommon)
Non-Resident Native (Migrant, Vagrant, Coloniser)
Not Threatened, Introduced and Naturalised

Criteria and Qualifiers
CD Conservation Dependant, **Dec** Declining, **DP** Poor data, **Inc** Increasing, **OL** One location,
PD Partial decline, **RF** Recruitment failure **RR** Range restricted **SO** Secure overseas **Sp**

Sparse
St Stable **TO** Threatened overseas

2. Hawkes Bay Region Bird Populations

The numbers presented in the above Table are based on published and unpublished field data for some species eg bittern, blue duck, pied stilt, dabchick, banded dotterel, pied stilt etc sourced from Birds NZ Hawkes Bay census figures, DOC, F&G, HBRC, private conservation projects, Dr Colin O'Donnell and John Cheyne.
Where field data was unavailable, best estimates were developed for the Hawkes Bay region populations based on the combined local knowledge of OWB panel members Matt Brady (DOC), Tom Winlove (F&G), Bernie Kelly (Birds NZ) and John Cheyne.

3. Migrant Species

A number of bird species are resident in Hawkes Bay and some migrate seasonally to Hawkes Bay from other parts of NZ (Internal migrants **Int**) and some migrate from the northern hemisphere (External migrants **Ext**)

APPENDIX 2B: WHIO (BLUE DUCK) NUMBERS IN HAWKE'S BAY

APPENDIX 2B TABLE 1: WHIO (BLUE DUCK) NUMBERS IN HAWKE'S BAY REGION

CATCHMENT	LOCALITY	NUMBER OF WHIO	CATCHMENT TOTAL	REGIONAL POPULATION
Tukituki			10	5%
	Tukituki	4		2%
	Makaroro	6		3%
Ngaruroro			56	25%
	Ikawatea Stream – Apias/Mistake	14		6%
	Upper Ikawatea above forks	4		2%
	Lower Ikawatea	2		1%
	Makiriri Stream	4		2%
	Taruarau Stream	10		5%
	Koau Stream	4		2%
	Poporangi – Dead Dog Creek	4		2%
	Ohara Stream	2		1%
	Ngaruroro & tributaries (to Taruarau confluence)	12		5%
Mohaka			77	35%
	Te Hoe River	40		18%
	Waipunga River	8		4%
	Omarawa Stream	4		2%
	Upper Mohaka River	19		9%
	Ripia River	6		3%
Wairoa			54	25%
	Waiau River	40		18%
	Ruakituri River	8		4%
	Lake Waikaremoana tributaries	6		3%
Region		220		100%

NOTES TO TABLE 1

Prepared for Hawkes Bay Regional Council Outstanding Water Bodies Plan Change by John Cheyne (Wetland Works) and Matthew Brady (Department of Conservation) March 2019

Blue duck are classified as nationally vulnerable by the Department of Conservation (NZ

Threat Classification of NZ Birds, 2016)* The NZ population is estimated to be 1000-2000 birds with a predicted decline of 10-50% over the next 10 years. Blue duck numbers can fluctuate on individual rivers as a result of large floods. Stoats have proven to be a major predator of eggs, ducklings and adult birds and population increases have been recorded where mammalian predator control has been carried out.

The mountain rivers and streams in the region are a hotspot for this species and conservation efforts are largely directed towards controlling stoat numbers.

The above blue duck numbers are based on surveys by DOC (30 years) and conservation projects like Forest Lifeforce Restoration Trust (8 years) and recent discussions with DOC staff. Observations by rafters, kayakers, fishermen and hunters have also contributed to the overall understanding of blue duck numbers and their location.

This information is based on unpublished field data held by the above groups and personal observations. It is considered to be conservative and suitable for this purpose. Some smaller habitats in the region have not been included but collectively are likely to support approximately an additional 20 birds.

APPENDIX 2C: SUB-REGIONAL WATER BIRD SPECIES DATA

This information was compiled by Expert Panellists John Cheyne and Matthew Brady for this report in March 2019.

The Key and further explanatory notes are found after Table 1D (page 84).

APPENDIX 2C TABLE 1A: WATER BIRD SPECIES – NORTHERN & CENTRAL HAWKE'S BAY INLAND

Bird Species		Lakes Waikare-moana & Waikareiti	Ruakitori River	Waiau River	Mohaka River
Conservation Status: Threatened (1)					
Grey duck	Nationally critical	*	*	*	*
White heron	Nationally critical				
Bittern (2)	Nationally critical				
Shore plover	Nationally critical				
Black billed gull	Nationally critical				
Black fronted tern	Nationally endangered				
Reef heron	Nationally endangered				
Blue duck (7)	Nationally vulnerable	*B	*B	*	*B
Banded dotterel	Nationally vulnerable				
Caspian tern	Nationally vulnerable				*
Wrybill plover	Nationally vulnerable				
Lesser knot	Nationally vulnerable				
Total Species Threatened: 12		2	2	2	3
Conservation Status: At Risk (1)					
Spotless crake	Declining				
Marsh crake	Declining				
Banded rail	Declining				
White fronted tern	Declining				
Fernbird	Declining				
NZ Pipit	Declining		*		*B
Pied oystercatcher	Declining				
Red billed gull	Declining				
Godwit	Declining				
NZ dabchick	Recovering	*			
NZ dotterel	Recovering				
Brown teal	Recovering				

Variable oystercatcher	Recovering				
Pied shag	Recovering				
Black fronted dotterel	Naturally uncommon				*
Australian coot	Naturally uncommon				
Black shag	Naturally uncommon	*	*		*
Little black shag	Naturally uncommon				
Royal spoonbill	Naturally uncommon				
Pacific golden plover	Naturally uncommon				
Total Species At Risk: 20		2	2		3

•

APPENDIX 2C TABLE 1B: WATER BIRD SPECIES – NORTHERN HAWKE'S BAY COASTAL

Bird Species		Lake Whakakī	Maungawhio Lagoon
Conservation Status: Threatened (1)			
Grey duck	Nationally critical	*	
White heron	Nationally critical	*	*
Bittern (2)	Nationally critical	*B	*
Shore plover	Nationally critical		*
Black billed gull	Nationally critical		*
Black fronted tern	Nationally endangered		
Reef heron	Nationally endangered		*
Blue duck (7)	Nationally vulnerable		
Banded dotterel	Nationally vulnerable	*	*
Caspian tern	Nationally vulnerable	*	*
Wrybill plover	Nationally vulnerable		
Lesser knot	Nationally vulnerable		*
Total Species Threatened: 12		5	8
Conservation Status: At Risk (1)			
Spotless crake	Declining	*B	*
Marsh crake	Declining		*

Banded rail	Declining		*
White fronted tern	Declining		*
Fernbird	Declining	*B	*
NZ Pipit	Declining	*	*
Pied oystercatcher	Declining	*	*
Red billed gull	Declining		*
Godwit	Declining	*	*
NZ dabchick	Recovering	*B	*
NZ dotterel	Recovering		*
Brown teal	Recovering		
Variable oystercatcher	Recovering		*
Pied shag	Recovering		*
Black fronted dotterel	Naturally uncommon		
Australian coot	Naturally uncommon		
Black shag	Naturally uncommon	*	*
Little black shag	Naturally uncommon	*	*
Royal spoonbill	Naturally uncommon	*	*
Pacific golden plover	Naturally uncommon	*	*
Total Species At Risk: 20		11	17

APPENDIX 2C TABLE 1C: WATER BIRD SPECIES –CENTRAL HAWKE'S BAY

Bird Species		Tukituki River & Estuary (6)	Lake Poukawa & Pekapeka Swamp (4)	Ngaruroro River (3) & Waitangi Estuary	Ahuriri Estuary
Conservation Status: Threatened (1)					
Grey duck	Nationally critical	*	*	*	
White heron	Nationally critical	*	*	*	*
Bittern (2)	Nationally critical	*B	*B	*B	*B
Shore plover	Nationally critical				*
Black billed gull	Nationally critical	*B	*	*	*B
Black fronted tern	Nationally endangered	*		*	
Reef heron	Nationally endangered	*			

Blue duck (7)	Nationally vulnerable	*B		* B	
Banded dotterel	Nationally vulnerable	*B	*	*B	*
Caspian tern	Nationally vulnerable	*	*	*	*
Wrybill plover	Nationally vulnerable				*
Lesser knot	Nationally vulnerable				*
Total Species Threatened: 12		9	6	8	8
Conservation Status: At Risk (1)					
Spotless crake	Declining	*	*	*	*B
Marsh crake	Declining	*			*B
Banded rail	Declining				
White fronted tern	Declining	*		*B	*
Fernbird	Declining				
NZ Pipit	Declining	*	*	*B	*
Pied oystercatcher	Declining	*		*B	*
Red billed gull	Declining	*		*	*
Godwit	Declining	*		*	*
NZ dabchick	Recovering	*	*B	*B	*
NZ dotterel	Recovering	*		*	*
Brown teal	Recovering				
Variable oystercatcher	Recovering				*
Pied shag	Recovering				
Black fronted dotterel	Naturally uncommon	*	*	*	*
Australian coot	Naturally uncommon				
Black shag	Naturally uncommon	*	*	*	*
Little black shag	Naturally uncommon	*		*	*
Royal spoonbill	Naturally uncommon	*	*	*	*
Pacific golden plover	Naturally uncommon	*			*
Total Species At Risk: 20		14	6	12	15

APPENDIX 2C TABLE 1D: WATER BIRD SPECIES –CENTRAL INLAND & SOUTHERN HAWKE'S BAY

Bird Species		Porangahau Estuary	East Ngamatea Swamp	Lake Whatumā (5)	Kaweka Lakes
Conservation Status: Threatened (1)					
Grey duck	Nationally critical	*	*	*	*
White heron	Nationally critical	*		*	
Bittern (2)	Nationally critical			*B	
Shore plover	Nationally critical				
Black billed gull	Nationally critical	*		*	
Black fronted tern	Nationally endangered	*			
Reef heron	Nationally endangered				
Blue duck(7)	Nationally vulnerable				
Banded dotterel	Nationally vulnerable	*	*	*	
Caspian tern	Nationally vulnerable	*B		*	
Wrybill plover	Nationally vulnerable	*			
Lesser knot	Nationally vulnerable	*			
Total Species Threatened: 12		8	2	6	1
Conservation Status: At Risk (1)					
Spotless crake	Declining			*B	
Marsh crake	Declining			*	
Banded rail	Declining			*	
White fronted tern	Declining	*			
Fernbird	Declining	*			*
NZ Pipit	Declining	*			*
Pied oystercatcher	Declining	*			
Red billed gull	Declining	*			
Godwit	Declining	*			
NZ dabchick	Recovering			*B	
NZ dotterel	Recovering	*			
Brown teal	Recovering				
Variable oystercatcher	Recovering	*		*	
Pied shag	Recovering				
Black fronted dotterel	Naturally uncommon			*	

Australian coot	Naturally uncommon			*	
Black shag	Naturally uncommon	*	*	*	*
Little black shag	Naturally uncommon	*		*	
Royal spoonbill	Naturally uncommon	*B		*	
Pacific golden plover	Naturally uncommon	*			
Total Species At Risk: 20		12	1	10	3

KEY

*	Meets recommended threshold for 'Outstanding' Ecology value: (4 or more Threatened native species)
*	Recorded presence of other Threatened or At Risk bird species
B	Breeding activity recorded
(1)	Conservation Status NZ Birds, 2016 NZ Threat Classification Series 19
(2)	Cheyne J, 2019, unpublished field data
(3)	Department of Conservation, 2018, unpublished field data
(4)	Hawke's Bay Fish and Game Council, unpublished field data
(5)	O'Donnell C, Department of Conservation, unpublished field data
(6)	Forest Lifeforce Conservation Restoration Trust, unpublished field data

FURTHER INFORMATION ON NOTES (2) – (7)

(2)	*Significant populations of bittern (nationally critical):* Ahuriri Estuary - 6 males 11% of regional population Poukawa- Pekapeka - 9 males 16% of regional population Whakakī - 7 males 13% of regional population Whatumā - 12 males 22% of regional population Regional male population - 54 males Maungawhio and Opoutama combined - 9 males 16% of regional population Source: Cheyne J Unpublished data
(3)	*Ngaruroro River (lower braided section) 2018:* 1160 Banded dotterel 55% of regional population 6-10% of national population 625 pied stilt 30% of regional population Source: Department of Conservation, Unpublished field data 2018

(4)	*Lake Poukawa* *Survey 4 August 2014:* 4815 Shoveler duck 3% of national population, 2381 grey teal 1% of national population 108 dabchick 27% of regional population 5-10% of national population. *Survey 8 August 2011:* 1067 pied stilt 50% of regional population 3% of national population Source: Cheyne J, Hawkes Bay Fish and Game, Unpublished field data
(5)	*Lake Whatumāī* 104 dabchick 26% of regional population 5-10% of national population, 941 pied stilt 45% of regional population Source: O'Donnell C (2014), DOC Unpublished field data
(6)	*Tukituki River* Banded dotterel and black fronted dotterel populations are nationally significant Pied stilt population regionally significant *Survey 1986* 1149 banded dotterel 35% of regional population 6-10% of national population Source: Parrish G (1988)
(7)	Blue duck numbers (refer to Appendix 2B Table 1) *Tukituki catchment* 10 birds - 5% of regional population *Ngaruroro catchment* 56 birds - 25% of regional population *Mohaka catchment* 77 birds - 35% of regional population *Wairoa catchment* 54 birds - 25% of regional population Waiau (on its own) 40 birds 18% *Sources* Department of Conservation Unpublished data Forest Lifeforce Conservation Restoration Trust Unpublished data John Cheyne Unpublished data Personal comments hunters, anglers, trampers and rafters

Appendix 3: Freshwater Fish Species

All records are taken from the New Zealand NIWA Freshwater Fish Database, some data is recordings from tributaries, and some waterbodies have no records against them. The Key to both tables is placed at the end.

This information was compiled by Expert Panellists John Cheyne and Matthew Brady for this report in March 2019.

APPENDIX 3 TABLE 1: FRESHWATER FISH SPECIES & CONSERVATION STATUS – RIVERS

FISH SPECIES	THREAT CLASSIFICATION (1)	MOHAKA RIVER	NGARURORO RIVER	PORANGAHAU RIVER	TUKITUKI, WAIPAWA RIVERS
Lamprey	Nationally vulnerable		*		*
Bluegill bully	Declining	*	*		*
Dwarf galaxias	Declining		*		*
Inanga	Declining	*	*	*	*
Koaro	Declining	*	*		*
Longfin eel	Declining	*	*	*	*
Torrentfish	Declining	*	*		*
Giant bully	Naturally uncommon		*	*	*
Banded kokopu	Not threatened	*			
Black flounder	Not threatened	*	*		*
Common bully	Not threatened	*	*	*	*
Crans bully	Not threatened	*	*	*	*
Estuarine triplefin	Not threatened	*	*	*	*
Grey mullet	Not threatened		*		
Redfin bully	Not threatened				*
Shortfin eel	Not threatened	*	*	*	*
Upland bully	Not threatened	*	*	*	*
Yelloweyed mullet	Not threatened		*		*
Total Species		12	17	9	17

APPENDIX 3 TABLE 2: FISH SPECIES & CONSERVATION STATUS –ESTUARIES, LAKES & WETLANDS

FISH SPECIES	THREAT CLASSIFICATION (1)	AHURIRI ESTUARY	LAKE WAIKAREMOANA	LAKE POUKAWA/ PEKAPEKA SWAMP (2)	KAWEKA LAKES
Lamprey	Nationally vulnerable				
Bluegill bully	Declining				
Dwarf galaxias	Declining				
Inanga	Declining	*		*	
Koarao	Declining		*		*
Longfin eel	Declining	*		*	
Torrentfish	Declining	*			
Giant bully	Naturally uncommon	*			
Banded kokopu	Not threatened				
Black flounder	Not threatened				
Common bully	Not threatened	*	*	*	
Crans bully	Not threatened		*		
Estuarine triplefin	Not threatened				
Grey mullet	Not threatened				
Redfin bully	Not threatened				
Shortfin eel	Not threatened				
Upland bully	Not threatened	*		*	
Yelloweyed mullet	Not threatened				
Total Species		7	3	4	1

KEY

*	Meets recommended threshold for 'Outstanding' Ecology value: (4 or more Threatened native species)
*	Recorded presence of other Threatened or At Risk bird species
*	Fish species recorded in water body
	No information recorded
(1)	Threat status was taken from NZ Threat Classification Series 24 Conservation Status of NZ Freshwater Fishes 2017
(2)	These records were all from Poukawa Stream which runs between Lake Poukawa and Pekapeka Swamp

APPENDIX 4: Maori cultural and spiritual values

A range of Maori cultural and spiritual values are already included at 1.6 of the 'Introduction' section of the Regional Resource Management Plan. These are categorised as 'Iwi Environmental Management Principles' or referred to as concepts within the text. They include:

- Wairuatanga
- Rangitiratanga
- Whanaungatanga
- Kotahitanga, and
- Manaakitanga

The first two of these can be directly applicable to water bodies, when one considers the wairua of the water body, or Mana o te Wai as expressed within the NPS FM. For assessment of a water body's 'outstandingness' or of an outstanding cultural/spiritual value, Wairuatanga and Rangatiratanga can be regarded as the overall practices and belief systems from which other cultural/spiritual values are derived.

One example is with 'Mauri' where it is a spiritual value that is derived from the ethos and belief in Wairuatanga. All things within the natural world have Mauri, but its state or condition is reliant on how it is regarded by tangata whenua within each of their rohe. For some it is an essential part of their reality within Te Ao Maori. For others the Mauri within a water body can be seen as diminished or intact. Within a cultural context, if the Mauri of most of the water bodies in a rohe is seen as greatly diminished or degraded, then one where the Mauri is vibrant and intact will be seen as outstanding.

It is up to specific hapu and marae to classify where each of their water bodies sit with a range of quality and significance, and which attributes contribute to such outstandingness if it is present. Because tangata whenua typically interact with water bodies on a seasonal basis – e.g. the tuna heke (eel migration) or the whitebait season, the corresponding outstanding state, can have temporal nuances, where it is restricted to season and spatially defined.

For landscape features associated with water bodies, where these flow from a maunga (mountain) held in high esteem, the water body's origin can determine its significance or whether it is outstanding from a cultural sense. For Ngati Rakaipaaka of Nuhaka, their river flows from Moumoukai, their ancestral mountain. Because of this their river has a high degree of significance. Whether this makes it outstanding, is a matter for them to decide. This aspect can apply to several other tangata whenua groups or hapu/hapu collectives within Hawke's Bay. As an iwi, Ngati Kahungunu is supportive of these types of processes, as they enable the articulation and expression of tikanga Maori from the marae and the whenua,

Where this report identifies 16 water bodies as being outstanding, based on a specific range of criteria, a parallel strand of work is underway to engage with tangata whenua at the local level, where they have the opportunity to add more cultural whakaaro to the narrative.