

Application of Methodology for Identifying Regionally Significant Surf Breaks

Introduction

The following report describes how the methodology¹ for identifying regionally significant surf breaks in Northland has been applied and includes the results.

The methodology has been split into 3 Stages;

1. Setting the parameters for surf break assessment
2. Surf break assessment
3. Determining surf break significance

Setting the parameters for surf break assessment

Step 1: Identifying surf breaks

Council's intent is to identify and score all regularly surfed breaks in the region. These have been identified through the New Zealand surfing Guide² and through discussion with the expert panel.

A list of all the surf breaks identified in Northland can be found in appendix 1.

Step 2: Identifying attributes

Attributes are used to identify the aspects of a break that contribute to it being valued by surfers. The attributes used to assess surf breaks will need to reflect the broad range of values held by surfers.

The following attributes have been adopted from

1. *Planning approaches to the management of surf breaks in New Zealand* (Skellern, Perryman, Orchard and Rennie 2013), and
2. *Draft Auckland Regional Policy Statement background report surf breaks* (Coombes and Scarfe 2010), and
3. *Bay of Plenty surf break study* (Perryman 2011).

Attributes that could be used to assess the significance of surf breaks are outlined in Table 1. This list of breaks will be refined in subsequent steps to produce a list of primary attributes.

¹ Northland Regional Council, 2017. Methodology – Identifying Regionally Significant Surf Breaks in Northland.

² P. Morse and P. Brunskill, 2004. *New Zealand Surfing Guide*, Greenroom Surf Media Ltd.

Step 3: Select and describe primary attributes

During discussions with the expert panel it became apparent that there were two key factors that have more influence over a break's value as a recreational asset than others. These factors are;

- The attributes that make a break a good place to surf (physical values)
- The attributes indicating that a break is important to people (social values)

For that reason the primary attributes focus on physical and social values. This does not mean that economic and cultural values are not present or an important part of surfing in the region. Rather it reflects the strong correlation between the physical and social attributes and the cultural and economic attributes. If a break has desirable physical qualities and is popular the break is likely to have a strong influence on culture and is more likely to influence economic activity.

With that being said economic activity associated with surfing in Northland is often not associated with a particular break. The surf economy tends to be focused on the main urban centers which are separated from the surf breaks. While there is some economic benefits to smaller centers from surfers buying food, fuel and accommodation. The majority of spending is likely to occur in larger urban centers like Whangarei, Dargaville and Kaitiaki. This is largely because Northland's surf breaks often in relatively isolated rural areas.

While economic benefits of surfing should be recognized commercial activity associated with surfing is not a good indicator of the significance of a surf break in Northland.

The expert panel see the risk to a surf break from development in the ocean and on land as a key resource management issue for surf breaks and initially believed this should be reflected in the significance assessment. Risk itself is difficult to assess. It is difficult to know what to assess and how to measure it. Land use / use of coastal space can change rapidly and new uses may introduce risks that were not previously considered. This assessment process is not suited to respond to potentially rapid changes in risk that may occur in the future.

An attribute called '*physical robustness / fragility*' was introduced but was later removed to reflect the expert panel's thoughts / concerns however was later removed in favour of applicants undertaking a detailed assessment of the risk to surf breaks when they apply for resource consent.

As contact recreation, surfing safely relies in part on good water quality. Regional Council monitoring data shows that water quality on the open coast is generally very good.³ There is little difference in the monitoring data between surf breaks. While we recognise that water quality is a very important value to surfers it is not a good attribute for determining regional significance in Northland.

³ <http://www.lawa.org.nz/explore-data/northland-region/coastal/>

Table 1: Attributes and primary attributes

Attribute clusters	Attribute (primary attributes are bold)	Description
Physical	Wave quality	Performance of the surf break in optimum conditions i.e. height, shape and length of ride.
	Uniqueness	Does the surf break able to be ridden in wind or swell conditions that are unusual in respect to other breaks in the area?
	Wilderness/naturalness	Does the break feel remote, lack buildings or is it valued because of its uncrowded waves.
	Size / diversity of break area	How many people can the break can accommodate at once and does the break offers several surfable areas at any one time give suitable conditions.
	Consistency	How often does the break have wave conditions that are suitable for surfing
	Rarity (of break type)	How representative is the surf break is in terms of its type in the region i.e. is it a common type of surf break within the region or is it rare. - (reef break, point break, ledge, river mouth or beach break).
	Water Quality	Is the quality of the water at the site suitable for contact recreation?
	Physical Robustness/ fragility of surf break	This attributes seeks to quantify the risk to a surf break based on the sensitivity of the break type.
Social	Physical and mental health benefits provided to users	This attribute recognises the health benefits provided through exercise
	Enabling interactions between community members	Influence of a surf break on the sense of community. Does the presence of the surf break enable a diverse range of interactions contributing to a social fabric that extends into the wider community?
	Frequency of use / popularity	How regularly the break is used for recreation. This applies to the breaks suitability for a range of users from beginner to advanced levels.
	Lifestyle	Promotion of a healthy, family oriented, community based lifestyle.
	Education	Focus for skills learning, including encouragement of young/learner surfers to participate and socialise.
	Local community and competition	Influence of a break on the social fabric of the surf community. It includes the significance of a surf break as a contest venue for surf competition.
Cultural	Spiritual	Source of spiritual energy and a place to exercise spirituality important to individual health and community well-being.

	Cultural values	Access to use and enjoyment of surf breaks are important aspects to the link between coastal culture and the surf break environments. This may include the value of a surf break as a meeting place, important recreational resource, or a strong contributor to an areas sense of place or identify. Heritage value may also be considered here. Has a the surf break been the location for important historical surfing events, i.e. important surf competitions, the hub for a particular style of surfing or board development.
Economic	Commercially focused activities directly associated with surf break.	Presence of commercial activity that relies directly on its association with a surf break i.e. surf school, surf shop etc.

Step 4: Determine indicators and indicator thresholds

The indicators adopted to measure each primary attribute are presented below with their thresholds. Thresholds were developed by council's staff and approved by the expert panel.

Wave quality

This indicator requires the subjective assessment of wave quality of a surf break based on wave height, wave shape and length of the ride during optimum conditions.

In practice this is likely to be an iterative process, where the attributes of each break are discussed by the expert panel. It is inevitable that surf breaks will be compared during this process and scores are likely to be changes as the panel works its way through the list of breaks.

It may be useful to begin by assessing a handful of surf breaks that could be the best examples of wave quality in the region. The best example can then act as the baseline for assessing other breaks i.e. other breaks can be compared to the best break to help award a score between 1-10.

10 being the best example(s) of wave quality and 1 being an un-rideable wave.

Consistency

This is a measure of how many times a year waves at a break are rideable. This is not a measure of how frequently optimum surfing conditions are present rather it is a measure of how often it can be surfed even if the conditions are not ideal.

Score / threshold	Indicator (frequency that rideable waves occur days per year)	Comments
1	Less than 1	Rarely produces rideable waves. Is surfable every couple of years or so when the right conditions occur.
2-3	2- 49	Is surfable a couple of times a year to 2-3 days every other month.
4-6	50- 100	Is surfable for a few days every couple of weeks.
7-8	100-179	Is surfable for a couple of days most weeks.
9-10	More than 180	Very consistent, surfable for at least a few days most weeks i.e. able to be ridden more than half the time.

Rarity

This attribute is also known as representativeness. It measures how frequently a break type occurs within the study area. In Northland, the most common break type is beach breaks. The working party identified 5 categories of surf break in Northland.

Score / threshold	Indicator (break type)	Comments
2	Beach break	The most common break type in the region. Beach breaks are common in all parts of the region.
6	River mouth	These breaks are relatively common in the Whangarei area (between Mangawhai and Whananaki) but are rare in other parts of the region.
10	Ledge, Reef, Point	These break types occur the least in Northland. Only a handful of each break type occurs on each coast.

Wilderness / Isolation

This attribute is based on the feeling of isolation or being in a wilderness when surfing a particular break. Breaks with a low score will be those that do not feel wild because of their proximity to urban areas and / or because there is a lot of built development surrounding a break. Conversely breaks that are difficult to access and are in a natural state would score highly.

Score / threshold	Indicator (feeling of isolation)	Comments
1-3	Does not feel isolated	
4-7	Somewhat isolated	
8-10	Feels very isolated	

Popularity

High use implies high value.

This may not hold true for two reasons:

1. Remote places, which offer few encounters with other people, may be highly valued for their wilderness value and the experience of 'having the place to ourselves'.
2. Crowding may occur at popular sites, which may turn people away. This may be anticipated and displace people to another break nearby (if one exists).

A high score of 8 would indicate that the breaks is used by high number of people during peak times when compared to other breaks in the region.

Score / threshold	Indicator (level of use during peak times)	Comments
1-3	Low	
4-7	Medium	
8-10	High	

Uniqueness

The baselines for this attribute are the north east facing beach breaks on the east coast and the exposed west facing beach breaks on the west coast. When conditions are suitable for these breaks there are generally lots of places to surf. These breaks have been attributed a score of 5 to show that they are not particularly unique but also to show that these breaks will be working in conditions that are not suitable at some other breaks therefore they should receive a score higher than 1. The expert panel agreed that these breaks should be scored a 5 and breaks that work in more unusual conditions should be given scores greater than 5.

Score / threshold	Indicator	Comments
5	Not unique – many breaks are rideable in the same conditions.	
6-8	Somewhat unique – has characteristics that enable it to be ridden when many other breaks are un-rideable but there are other breaks that are rideable in similar conditions.	The break rideable in; East coast - SE or NW wind -SE swell West coast – SE wind Very small swell (this characteristic should not have

		a strong influence on the score)
10	Unique – surf break is rideable in conditions where most other breaks in the area are un-rideable	The break is rideable in; East coast - NE wind West coast - SW wind Both coasts -Very large swell

Education

Many surf breaks are not suitable to learn to surf on because they create waves that are difficult to ride or because they present some danger to people who do not yet have an adequate level of skill to operate safely in that environment.

This attribute seeks to assess the a breaks value as a place to learn to surf.

Score / threshold	Indicator (suitability for learning)	Comments
1-3	Un-suitable	
4-7	Somewhat suitable	
8-10	Suitable	

Surf break assessment

Step 5: Apply indicator thresholds

Expert panel estimates were required for all indicators in the absence of reliable data.

The assessment process is iterative and tends to work by comparing breaks then attributing a score. This may mean that scores are changed as the panel works through the list of breaks. As a starting point it has been useful to identify the best example for each attribute then compare or rate other breaks against that break. This provides context and something tangible for the panel to work from.

Breaks were scored out of 10 against each attribute. 10 being the best example of that attribute in the region. This may be one of the Nationally Significant Surf Breaks identified in the New Zealand Coastal Policy Statement or one of the other breaks in the region.

Scores for each attribute have been recorded in appendix 1

Determining surf break significance

Step 6: Weight primary attributes

The default in the method is to apply equal weighting to attributes. In line with that the following attributes were not weighted (i.e. they had a weighting of 1): wave quality, consistency, uniqueness, popularity and education.

Isolation and Rarity were given half weight (i.e. they had a weighting of 0.5). Isolation and rarity scores are an important pieces of information for decision makers to be aware of, so they should be included in the assessment, however they appear to less influence on whether surfers considered a break to be significant. Therefore they were given less weigh.

Step 7: Determine surf break significance

This section sets out how the threshold for regional significance was set. The threshold for regional significance is a tool used to determine which surf breaks are regionally significant and those that are locally significant or not significant.

To help us determine what a regionally significant surf break is, it is helpful to look at how the term regionally significant is applied to other resources under the RMA. The RMA itself uses the terms national, regional and local to explain the importance of a natural resource. The same three tiered hierarchy is used throughout the resource management field to explain the relative significance of everything from natural character to roading. In a practical sense the use of this hierarchy recognises that some resources have more value than others. In the policy context, it can allow policy to be tailored to suit the value of the resource. For example, more protective policy can sometime be applied to national or regionally significant resources. This same level of protection may not be justifiable if it was applied across the whole resource because of the cost imposed on resource users. In other cases, policy may encourage the improvement of resources with less value.

A brief desk top review of the way regionally significant natural resources are identified in other regional plans revealed that in most cases schedules of regionally significant resources do not include all examples of the resource within the region. For example, there are around 1500 wetlands in the Taranaki region but only 29 are scheduled in the Taranaki Regional plan. The identification of Regionally Significant Wetlands in Otago and the Regionally Significant landscapes in Canterbury also use a threshold to determine which resources are regionally significant and which are not. Only those resources that meet or exceed the threshold are included in the respective regional plans.

In addition to looking at how other regional councils identify regionally significant resources it is also important to look at how significant resources are identified in Northland. During the past three or four years Northland Regional Council has commissioned investigations to identify significant ecological areas, significant wetlands, natural character and outstanding natural landscapes. All of these investigations set a threshold, with some resources ultimately being considered regionally significant while others were not regionally significant.

The identification of regionally significant surf breaks should be consistent with the approach taken to identify other significant resources in the region. A threshold for regional significance should be set to determine which surf breaks are regionally significant and which surf breaks are locally significant or not significant.

At their meeting on xx the expert panel recommended that Northland Regional Council adopt all the surf breaks assessed by the expert panel as Regionally Significant Surf Breaks. The main reasons behind this recommendation were that all the breaks that were assessed were regularly surfed and were valued by their respective communities for one reason or another. Surf breaks that were not assessed would be considered locally significant.

The expert panels recommendations were considered at the Regional Policy Committee meeting on xx. While the data the expert panel collated and some of their policy recommendations were accepted the threshold recommended by expert panel was not accepted. The Policy Committee adopted a regional significance threshold of 31.

To provide some context the nationally significant surf break Super Tubes would score 53 out of 60. A threshold of 31 is the equivalent of a 5 out of 10 on the 'stoke' meter used to identify nationally significant surf breaks by the Board of Enquiry.

While the Regional Policy Committee did not accept that all the breaks assessed by the expert panel were regionally significant they did agree that the inclusion of policy in the Proposed Regional Plan was necessary to guide the management of all surf breaks identified by the expert panel. . Policy D 5.27 was included in the Proposed Regional Plan in response.

East Coast	West Coast
Mangawhai beach	The Bluff
Mangawhai Bar	Tasman Heights / Karirikura
Langs Beach and Ding Bay	Pari pari
Langs Beach Bombie	Pines
Waipu Cove	Blue House/ Pattio
Waipu River mouth	Seaweeds
The racecourse (Ruakaka)	The Box
The Power Station (Ruakaka)	Kawarua and Waipoa reefs
Ocean Beach	Ripiro Beach (Baylys Beach)
Pataua Bar	
Horahora Bar and beach	
Ngunguru Bar	
Matapouri bar	
Sandy Bay	
Whananaki Bar	
Moureeses Bay	
Pareparea Beach	
Okupe Beach (Mimiwhangata)	
Teal Bay	
Oakura	
Elliotts / Akau Bay	

<p>Tapuaetahi (to be listed as one break but includes Elliots Point, The Lagoon, the ledge, Stubbies and Centre Reef)</p> <p>Taupo Bay Point</p> <p>Taupo Bay Beach</p> <p>Matauri Bay</p> <p>Paradise Bay / Motukahakaha</p> <p>Tokerau Beach</p> <p>Karikari Beach</p> <p>Puwheke Beach</p> <p>Rangiputa Reefs</p> <p>Ranganunu Harbour Bar</p> <p>Houhora heads</p> <p>Henderson Bay</p> <p>Rarawa Beach</p> <p>Tapotupoto Bay</p>	
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Appendix 1 - Surf break assessment table

Surf break name	Quality	Consistency	Rarity	Uniqueness	Popularity	Isolation/wilderness	Education	Weighted Total
Shipwreck Bay / TeKohanga	10	9	10	10	10	1	10	54.5
Mokarau 1	10	8	10	10	10	4	8	53
Mokarau 2	10	8	10	10	10	4	8	53
Supertubes	10	6	10	10	10	5	5	48.5
Peaks / Tokanui	10	7	10	10	10	3	4	47.5
Whananaki Bar	10	5	10	10	6	4	7	45
Pines /	7	7	10	10	8	5	5	44.5
Sandy Bay	7	8	2	8	10	2	9	44
Taupo Bay Point	8.5	5	10	8	8	3	7	43
Kawarua and Waipoa reefs	10	8	10	10	3	10	2	43
Blue House/ Pattio	8	7	10	10	8	6	1	42
The Ledge	10	4	10	10	6	7	1	39.5
The Bluff	7	6	5	7	6	8	6	38.5
Mangawhai Bar	10	6	10	6	9	1	2	38.5
centre reef	10	4	10	10	7	3	1	38.5
Ocean Beach	8	7	2	7	8	2	6	38
Langs (Beach, Ding Bay)	7	4	7	7	9	1	7	38
Elliots Point	10	4	10	10	5	6	1	38
The lagoon	10	4	10	10	6	3	1	37.5
Taupo Bay Beach	8	5	5	5	8	3	7	37
Tapotupoto Bay	6	7	8	8	3	8	5	37
Mangawhai beach	8	7	2	4	9	1	7	36.5
Tasman Heights / Karirikura	4	8	2	7	6	1	10	36.5
Matauri Bay	7	3	1	7	8	4	8	35.5
The racecourse (Ruakaka)	8	4	6	7	9	1	4	35.5
The power station	8	4	6	7	9	1	4	35.5
Rarawa Beach	6	5	2	5	6	6	9	35
Stubbies	7	4.5	10	10	4	3	3	35
Matapouri bar	8	4	6	6	5	3	7	34.5
Waipu Cove	7	5	2	4	10	1	7	34.5
Paradise Bay / Motukahakaha	7	5	5	5	4	10	6	34.5
Elliots / Akau Bay	8	7	2	8	5	7	2	34.5
Ranganunu Harbour Bar	7	3	10	10	5	5	2	34.5
Pareparea Beach	8	8	2	7	2	8	4	34
Seaweeds	8	6	10	6	3	10	1	34
Pataua Bar	8	5	8	7	7	2	2	34
Kaka Street Ramp	4	8	2	5	3	5	10	33.5
Ngunguru Bar	9	5	8	7	5	3	2	33.5
Oakura	6	3	2	6	7	2	9	33
Horahora bar and beach	8	5	8	7	3	8	2	33
Tokerau Beach / Doubtless Bay	5	4	2	5	5	5	10	32.5
Pari pari	3	8	2	7	6	1	7	32.5
Henderson Bay	8	5	7	5	6	6	2	32.5
Langs Bombie	10	2	10	10	4	1	1	32.5

Moureeses Bay	7	5	2	6	5	4	6	32
The Box / Okoura	8	4	10	6	3	10	1	32
Waimamaku Beach	7	5.5	2	5	5	8	4	31.5
Puwheke Beach	5	5	2	7	5	7	5	31.5
Okupe Beach look at other names	6	8	2	6	2	8	4	31
Baylys Beach	9	5	2	4	6	4	4	31
Waipu rivermouth	8	5	6	5	5	6	2	31
Teal Bay	5	4	2	7	5	6	6	31
Houhora heads	9	1	10	10	1	6	2	31
Grahams Beach	6	5	2	4	5	5	7	30.5
Mimiwhangata	3	3	2	8	5	7	7	30.5
Midges	6	3	8	10	2	9	1	30.5
Kauri Mountain Beach	7	6	2	5	4	6	4	30
Tanutanu	8	5	2	5	3	10	3	30
Karikari Beach	5	5	2	7	3	7	5	29.5
Glinks Gully	9	5	2	4	4	4	4	29
Omamari	9	5	2	4	4	4	4	29
Pataua Beach	6	6	2	5	6	2	4	29
Great Exhibition Bay	6	4	2	5	2	10	6	29
Tom Bowling Bay	6	6	6	5	1	10	3	29
Fairway Reef	6	1	10	10	1	10	1	29
Scott Point	6	5	5	5	2	10	3	28.5
Spirits Bay	6	6	6	5	2	10	1	28
Taipa	3	3	2	5	5	1	10	27.5
Takou Bay	7.5	6	2	5	3.5	5	2	27.5
Waitangi	7	2	10	9	3	1	1	27.5
Mitimiti Beach	7	5	2	5	1	8	4	27
Waipapakauri Ramp	6	4	2	5	3	5	5	26.5
Rangiputa reefs (Rangiputa reefs, Rangiputa Bar, Raupo Bay)	5	3	8	8	3	5	1	26.5
Te Paki	4	4	4	5	2	10	4	26
Hukatere	4	4	4	5	3	5	5	25.5
Te Werahi Beach	6	4	2	5	1	10	3	25
Parengarenga Harbour Bar	6	2	8	5	1	10	1	24
Frog town	4	4	2	4	4	4	4	23
Twilight Beach	5	4	2	5	1	10	1	22