

12 December 2003

Minister for Land Information

## FORESHORE PROJECT FINAL REPORT

### Introduction

- 1 In August 2003 you asked LINZ to provide you with the distance of:
  - New Zealand's coastline;
  - the portion of the foreshore that is bounded by privately owned land; and
  - the portion of foreshore that was in private ownership.
- 2 This memorandum provides final results for:
  - the distance of New Zealand's coastline;
  - the number of parcels that adjoin the coastline classified by the owners of those parcels;
  - the distance of coastline for each classification (sets of maps showing how each classification is spread throughout the country are **attached**); and
  - the numbers of parcels and distance of the coastline for the portion of the foreshore that is privately owned.
- 3 A glossary of foreshore related terms is **attached** for your reference.

### New Zealand's Coastline

#### *The distance of New Zealand's coastline*

- 4 New Zealand's coastline is 19,883 kilometres. This measurement includes the Chatham Islands, Pitt Islands, and is consistent with the definition for the coastal limits set out in the Resource Management Act 1991.

#### *What limits define the coastline*

- 5 The Resource Management Act 1991 defines the coastal limits as follows:

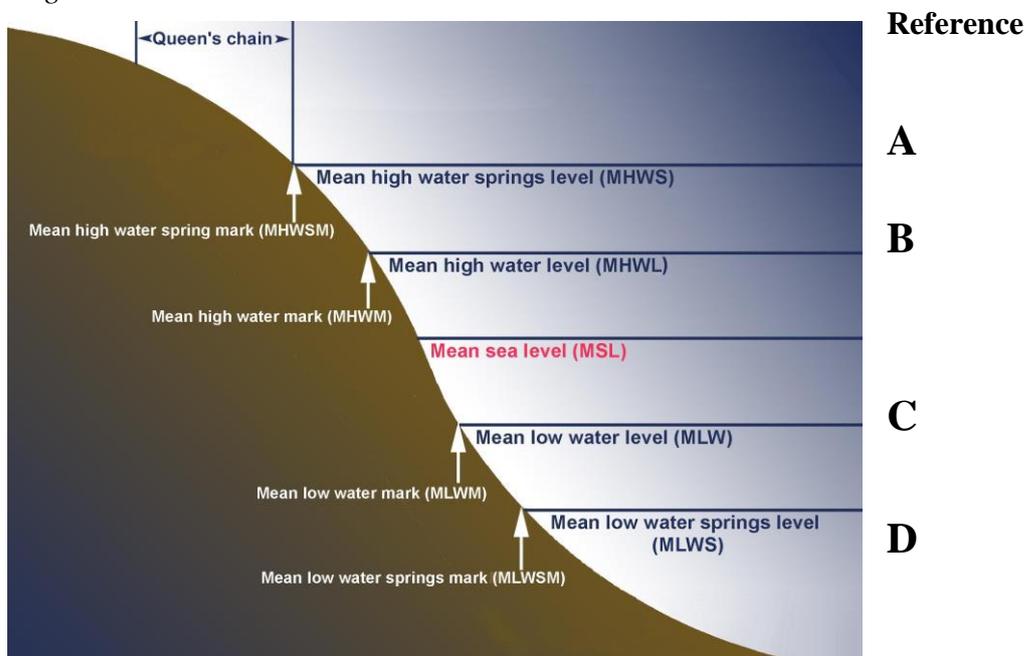
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- the seaward boundary is the 12 mile limit; and
- the landward boundary is the line of mean high water springs.
- When rivers are encountered the boundary is the lesser of—
  - i) One kilometre upstream from the mouth of the river; or
  - ii) The point upstream that is calculated by multiplying the width of the river mouth by five.

*Common foreshore boundaries*

6 Diagram One below shows the relationship between commonly used boundaries on the foreshore.

*Diagram One*



*Queens chain* – is a 20 metre strip above mean high water springs that provides public access. The strip is either a surveyed strip of land owned by the Crown or territorial authorities, or it is memorialised on certificates of title as a marginal strip or esplanade strip.

*Mean high water springs* is the average level of each pair of successive high tides during the 24 hours of each semi-lunation when the range of tides is greatest.

*Mean high water mark* is the average level of all high tides.

*Mean sea level* is the average level of the surface of the sea in the absence of tides.

*Mean low water mark* is the average level of all low tides.

*Mean low water springs* is the average level of each pair of successive low tides during the 24 hours of each semi-lunation when the range of tides is at their smallest.

## Summary of land that adjoins the coastline

### *The number of parcels that adjoin the coastline*

- 7 The number of parcels that adjoin the foreshore is 33,712. Of these parcels:
- 30,449 are land parcels;
  - 2,726 seabed parcels; and
  - 501 are parcels that have completely eroded.

(Note that while 501 parcels are fully eroded, 4,881 of the land parcels are partially eroded).

### *Who owns the parcels that adjoin the foreshore*

- 8 Table One below is a summary of the types of parcels that adjoin the foreshore, the owners of these parcels, (parcel classifications), and the distance of coastline of each classification.

**Table One - Summary of the parcels that adjoin the foreshore**

<i>Parcel classifications</i>	<i>Land parcels</i>	<i>Seabed parcels</i>	<i>Eroded parcels</i>	<i>Distance of coastline</i>	<i>% of coastline distance</i>
owned by the Crown	5,935	2,511	0	7,455km	37.64%
owned by territorial authorities	11,632	204	95	6,239km	31.42%
General land	9,693	27	199	3,979km	20.05%
Maori land	2,916	5	9	2,053km	10.35%
Unresolved	273	15	0	107km	0.54%
<i>Total results</i>	<i>30,449</i>	<i>2,762</i>	<i>501</i>	<i>19,833km</i>	<i>100.0%</i>

### *Parcels owned by the Crown*

- 9 The Crown owns 5,935 parcels (7,455km) that adjoin the foreshore (37.64%). This land is mainly made up of:
- National parks that run to the coast;
  - Strips of Crown land reserved from sale;
  - Reserves for wild life heritage; and
  - Railway.

*Parcels owned by territorial authorities*

10 Territorial authorities own 11,632 parcels (6,239 km) that adjoin the foreshore (31.42%). This land is mainly made up of:

- Esplanade reserves;
- Public recreation reserves; and
- Road parcels.

*The portion of foreshore that is bounded by privately owned land*

11 In total 6,032 kilometres (30.4%) of the coastline is bounded 12,609 privately owned land parcels<sup>1</sup>. Diagram Two below shows the number of privately owned parcels surveyed to each of the relevant tidal marks shown in Diagram One above.

*Diagram Two*

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Parcels surveyed to mean high water springs with public access (350 found, 186.6km)	Parcels surveyed to mean high water mark (12,243 found, 5,839km)	Parcels surveyed to below mean high water mark (16 found, 6.4km)	Seabed parcels and eroded parcels located below mean low water mark. (32 Seabed parcels and 208 fully eroded parcels found, 1000 partially eroded parcels estimated)
<i>Esplanade/marginal strip</i>			
<i>Mean high springs</i>			
<i>Mean high water mark</i>			
<b>Foreshore</b>			
<i>Mean low water mark</i>			
<b>Sea</b>			

**Summary of the privately owned land that adjoins the foreshore**

*Privately owned land parcels surveyed to mean high water springs*

12 As denoted by the letter “A” in Diagram Two, 350 privately owned parcels are surveyed to *mean high water springs*. These parcels are broken down as follows:

- 279 parcels are general land parcels with a Queen’s chain (134.6km); and
- 71 parcels are Maori land parcels with a Queen’s chain (52km).

<sup>1</sup> 2,053 kilometres comprises 2,916 Maori land parcels and 3,979 kilometres comprises 9,693 general land parcels.

*Privately owned land parcels surveyed to mean high water mark*

13 As denoted by the letter “B” in Diagram Two, 12,243 privately owned parcels are surveyed to *mean high water mark*. These parcels are broken down as follows:

- 9,403 parcels are general land parcels (3,843km); and
- 2,840 parcels are Maori land parcels (1,996km).

*Privately owned land parcels surveyed to below mean high water mark*

14 As denoted by the letter “C” in Diagram Two, 16 privately owned parcels are surveyed to *below mean high water mark*. These parcels are broken down as follows:

- 11 parcels are general land parcels (1.4km); and
- 5 parcels are Maori land parcels (5km).

*Privately owned seabed parcels*

15 In addition to the privately owned parcels on the land, there are 32 privately owned *seabed* parcels that are covered by the sea. These are denoted by the letter “D” in Diagram Two. These parcels are broken down as follows:

- 27 parcels are general land seabed parcels (16.7km and area of 1.5km<sup>2</sup>); and
- 5 parcels are Maori owned seabed parcels (4.2km and area of 1.1km<sup>2</sup>).

*Privately owned eroded parcels*

16 Over time the sea has eroded land. A total of 208 privately owned parcels were found that were once on dry land that have now totally eroded. A further 1,000 privately owned parcels were estimated to be partially eroded. A break down of the *eroded* and *partially eroded* parcels that are privately owned is set out below:

- 199 parcels are general land parcels that are totally *eroded* (area of 43.8km<sup>2</sup>);
- 9 parcels are Maori land parcels that are totally *eroded* (area of 0.4km<sup>2</sup>);
- 800 general land parcels are estimated to be *partially eroded* (450km); and
- 200 Maori land parcels are estimated to be *partially eroded* (220km).

**Summary of the foreshore that is privately owned**

17 Based on the RM Act definition that the upper limit of the foreshore is at *mean high water springs*, 12,499 privately owned parcels would (at least in part) be within the boundary of the foreshore. A break down of these parcels is set out in the table below.

*Privately owned parcels below (on the seaward side of) mean high water springs*

Reference from Diagram One and Two	Surveyed boundary	Number of parcels	Distance of coastline (km)	Area of seabed (km <sup>2</sup> )
<b>B</b>	Mean high water mark	12,243 (in part only)	5,839	<i>na</i>
<b>C</b>	Below mean high water mark	16	6.4	<i>na</i>
<b>D</b>	Seabed parcels	32	20.9	2.6
	Eroded parcels	208	<i>na</i>	44.2
	Total	12,449	5,866.3km	46.8 km <sup>2</sup>

- 18 In addition to the parcels in the table above, a further 1000 privately owned parcels are estimated to be partially eroded. The total distance of coastline of these parcels is estimated to be 670km.

**Recommendations**

- 19 I recommend that you **note** the contents of this memorandum.

Kevin Kelly  
General Manager Policy

**Noted**

**Hon John Tamihere**  
**Minister for Land Information**  
/ /2003

## **GLOSSARY OF TERMS FOR THE FORESHORE**

### **Foreshore boundary definitions**

*Foreshore* – parts of the bed, shore, or banks of a tidal water as are covered and uncovered by the flow and ebb of the tide at mean springs tide.

*Seabed* – Land that is permanently wet or covered by the sea

*Mean high water springs* – The average of the levels of each pair of successive high waters during that period of about 24 hours in each semi-lunation when the range of tides is greatest.

*Mean high water mark* - The average level of all high tides.

*Mean sea level* - The average level of the surface of the sea in the absence of tides.

*Mean low water mark* - The average level of all low tides.

*Mean low water springs* - The average level of each pair of successive low tides during the 24 hours of each semi-lunation when the range of tides is at their smallest.

*Queens chain* – A 20 metre strip above mean high water springs that provides public access. The strip is either a surveyed strip of land owned by the Crown or territorial authorities, or it is memorialised on certificates of title as a marginal strip or esplanade strip.

### **Property definitions**

*Parcel* – a plot of land, whether dry or under water, that is identified as a separate entity in cadastral records held by the Chief Executive of Land Information New Zealand.

*Seabed parcel* – a parcel of land that is permanently wet or covered by the sea.

*Land parcel* – a parcel situated above mean high water springs that is never permanently wet.

*Eroded parcel* – a parcel that was once situated above mean high water springs but is now permanently wet or covered by the sea.

*Partially eroded parcels* - a parcel that was once situated above mean high water springs but is partly permanently wet or covered by the sea.

*General land* – is land registered under the Land Transfer Act 1952.

*Maori Land* – for the purposes of this exercise Maori land was considered to be land identified from Maori land plans for which there were no further records in the land transfer system.

*Unresolved parcels* – are instances a parcel has not been classified because an owner could not be easily identified.