

A Guide to Beach Safety Signs in New Zealand



A GUIDE TO BEACH SAFETY SIGNS IN NEW ZEALND

Contents

INTRODUCTION	02
SECTION 01: SLSNZ Drowning Prevention Strategy	.0 4
The Role of Risk Assessments	06
Assessment Process	07
SECTION 02: International Signage Standards	80
SECTION 03: How to use this guide	09
SECTION 04: Signage	10
Level 1: Road Signs	11
Level 2: Car Park Signs	12
Level 3: Access Signs	14
Level 4: Individual Hazards and Directional Signs	16
Emergency Markers	17
Sign Type Placement	18
Signage Details	19
CONCLUSION	20
REFERENCES	21

This manual has been developed by:

Dr Mick Kearney, National Coastal Safety Manager, Surf Life Saving New Zealand.

January 2022

Physical Address: Surf Life Saving New Zealand, Pelorus Trust Sports House,

93 Hutt Park Road, Seaview, Lower Hutt City, Wellington 5010 **PO Box:** PO Box 39 129, Wellington Mail Centre, Lower Hutt 5045

Phone: +64 4 560 0383 **Fax:** +64 4 560 0400

WWW.SURFLIFESAVING.ORG.NZ

02 Surf life Saving new Zealand a guide to beach Safety Signs in New Zealnd 0

Introduction

Introduction

Safety signage is an important strategy to reduce the incidence of drowning and injury on New Zealand's beaches. This is becoming progressively relevant, where the demands on land managers are increasing every year with growing recreational activities and visitor numbers, making the need for effective safety management on our beaches an even greater priority. Land managers have a moral responsibility and a duty of care to see that visitors to their beaches are reasonably safe, which entails providing adequate safety measures.

Surf Life Saving New Zealand recommend beach safety signage as an important preventative measure to reduce coastal drownings, as it alerts potential users to foreseen risks at a particular location. A successful signage strategy will minimise confusion and anxiety, allowing beach users to make informed decisions and feel more confident in their knowledge of safety when on the beach. A good sign should be clear, concise and consistent.

It is important that all beach users understand the risks and, equally important, the need to take care of their own welfare and be aware of the environment they are in. Signs should never take away the responsibility that members of the public have for their own actions and subsequent safety. However, signs tell users about the safety risks, lifeguard services and local information. These signs are not only important to people who are unfamiliar with the beach, but also provide important information about the conditions for regular beach users.

Surf Life Saving New Zealand has produced this guide, based upon the internationally recognised Australian / New Zealand Standard 2416:2010 "Water safety signs and beach safety flags" administered through Standards New Zealand (MBIE), which is the national standards body for New Zealand. It is not intended to be a definitive document nor is it an exhaustive list of safety guidelines. However we hope it fulfils its aim of setting a standard for the design and content of national beach water safety signs and symbols as well as providing land managers with sufficient information to enable them to set up effective and consistent signage systems on their beaches.

The number of signs and their locations should be determined through a robust and regular risk assessment. Signage is only required if a need is indicated through the risk assessment process. Remember, in some cases the results of a risk assessment may indicate there are no signage requirements, such as at isolated locations or very quiet beach where the level of risk is very low.

The benefits of standardising the design and content of beach safety information are immeasurable but, one thing is certain, our beaches will become safer as more operators adopt these standard measures. We strongly urge all land managers to read and use this guide to help make all our beaches safer places to visit.



Section 01

SLSNZ Drowning Prevention Strategy

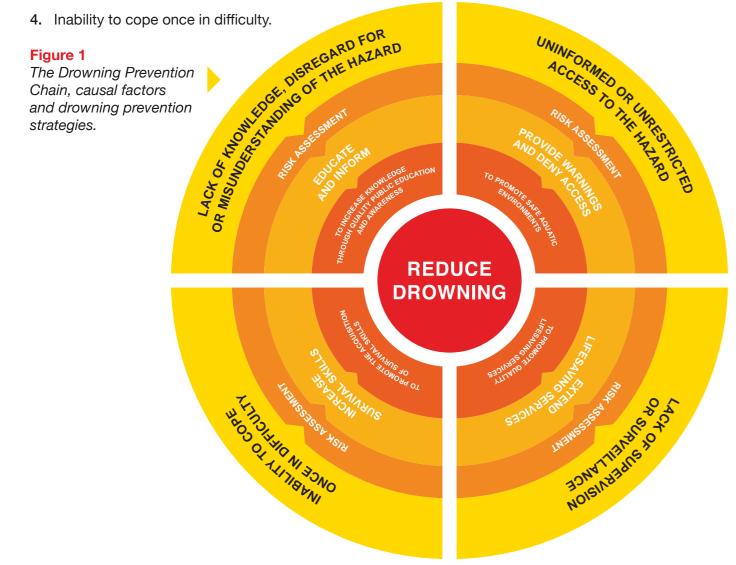
The drowning prevention strategy employed by SLSNZ is based upon the framework developed by the International Lifesaving Federation "Drowning Prevention Strategies, A framework to reduce drowning deaths in the aquatic environment for nations/regions engaged in lifesaving" (International Life Saving Federation, 2015).

A key component of this drowning prevention strategy is the "Drowning Prevention Chain" which identifies four causal factors, that acting alone, or in any combination, can lead to death or injury by drowning. These are outline below, and shown conceptually in Figure 1.

The four causal factors are:

- 1. Lack of knowledge, disregard for or misunderstanding of the hazard;
- 2. Uninformed or unrestricted access to the hazard:

3. Lack of supervision or surveillance; and,



Section 01

SLSNZ Drowning Prevention Strategy

Each causal factor has corresponding drowning prevention strategies and control measures that can reduce death or injury by drowning (Table 1).

The four drowning prevention strategies are:

- 1. Educate and inform;
- 2. Provide warnings and deny access;
- 3. Extend lifesaving services; and
- 4. Increase survival skills.

Table 1

Summary of the causal factors that lead to drowning, and associated drowning prevention strategies and control measures to help prevent drowning. Signage is a recognised control measure.



CAUSAL FACTORS	DROWNING PREVENTION STRATEGIES	CONTROL MEASURES
Lack of knowledge, disregard for or misunderstanding of the hazard.	Educate and inform	Community educationArrival education
2. Uniformed or unrestricted access to the hazard.	Provide warnings and deny access	Manage accessSafety signageActivity management
3. Lack of supervision and surveillance	Extend lifesaving services	 Trained observers Carer supervision Lifeguard services and emergency response capacity Remote monitoring
4. Inability to cope once in difficulty	Increase survival skills	Community educationEmergency communicationsPublic Rescue Equipment

Section 01

SLSNZ Drowning Prevention Strategy

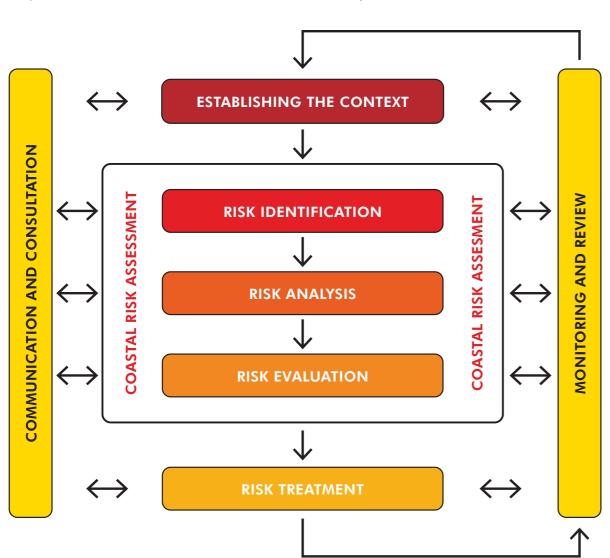
THE ROLE OF RISK ASSESSMENTS

In order to make a decision in relation to the most appropriate drowning prevention strategies and control measures for a specific location / population, a formal risk assessment should be conducted. It ensures that all elements of risk in the coastal landscape are duly considered and addressed in the risk assessment reporting and implementation process.

SLSNZ uses the risk management standard, AS/NZS ISO 31000:2009 Risk management - Principles and guidelines, which provides an internationally recognised framework for the evaluation of hazards and risk (Standards Australia/Standards New Zealand, 2009). The process is displayed in Figure 2, and further explained below.

Figure 2

Risk management process, adapted from AS/NZ ISO 31000:2009 Risk management - Principles and guidelines (Standards Australia/Standards New Zealand, 2009).



SLSNZ Drowning Prevention Strategy

ASSESSMENT PROCESS

The generic framework and the main elements of the risk assessment process identified are:

1. Communication and consultation

- Key stakeholders both internal and external are identified and engaged
- **b.** A responsible person or persons are identified
- **c.** The option of establishing a working group considered

2. Establish the context

- a. Identify any historical data and statistics
- b. Determine the legislative framework
- **c.** Determine if there are any other advisory standards or guidelines
- Determine if there are any other criteria to be achieved
- e. Determine technical expertise required
- f. Identify benchmarks
- g. Identify the need for external advice / consultancy

3. Coastal risk assessment

- a. Risk identification
 - Establish the operational environment
 - ii. Establish a systematic framework for identifying hazards

b. Risk analysis

- i. Determine what can happen
- ii. Determine who might be harmed and how
- iii. Identify other potential negative impacts
- iv. Determine likelihood andconsequences
- c. Risk evaluation
 - i. Establish a 'risk score'
 - ii. Set risk priorities

4. Risk treatment

- a. Identify existing control measures (if any)
- b. Evaluate existing control measures
- c. Identify other treatment options
- d. Evaluate treatment options

5. Monitor and review

- a. Establish review date(s)
- **b.** Establish criteria for an immediate reevaluation

For further information regarding the Risk Assessment Process, please contact:

Dr Mick Kearney

National Coastal Safety Manager Surf Life Saving New Zealand

Email: mick.kearney@surflifesaving.org.nz

Section 02

How to use this document

Section 03

International Signage Standards

SLSNZ recommends beach safety signage as an important preventative measure to reduce coastal drownings. SLSNZ urge all councils adhere to the Australian / New Zealand Standard 2416:2010 "Water safety signs and beach safety flags" administered through Standards New Zealand (MBIE), which is the national standards body for New Zealand.

Standards New Zealand is the national body who promote international standards. The AS/NZS 2416 Water safety signs and beach safety flags standards provide internationally recognised signage (Standards New Zealand, 2010a; 2010b; 2010c). These standards provide detailed guidance on symbol usage, signage layout and design. Adhering to these documents will provide signage consistency across New Zealand, and help make our beaches a safer environment for users.

- I. AS/NZS 2416.1:2010 Water safety signs and beach safety flags Specifications for water safety signs used in workplaces and public areas. Prescribes water safety signs intended for use with the aquatic environment. Adopted with national changes from ISO 20712-1:2008 (International Organisation for Standardisation, 2008; Standards New Zealand, 2010a).
- II. AS/NZS 2416.2:2010 Water safety signs and beach safety flags Specifications for beach safety flags Colour, shape, meaning and performance. Specifies requirements for the shape and colour of beach safety flags for the management of activities on coastal and inland beaches. Adopted with national changes from ISO 20712-2:2007 (International Organisation for Standardisation, 2007; Standards New Zealand, 2010b).
- III. AS/NZS 2416.3:2010 Water safety signs and beach safety flags Guidance for use. Provides guidance for the selection and use of water safety signs as specified in ISO 20712-1 and beach safety flags as specified in ISO 20712-2, in aquatic environments. It provides guidance on their location, mounting positions, lighting and maintenance. It also provides guidance on the design and location of multiple signs (International Organisation for Standardisation, 2007, 2008; Standards New Zealand, 2010c).

These standards can be accessed through Standards New Zealand's online library https://www.standards.govt.nz/shop/asnzs-2416-12010/. This may be a standard which you already have access to through your Standards NZ online library subscription. If not, please contact Standards New Zealand to organise adding this to your current subscription.

This document should be used as a guide by beach owners and operators when specifying and installing new signs. You may find it helpful to visit each beach with this document so you can refer directly to the sign and symbol designs. If you have any questions when using this guide please contact the SLSNZ Coastal Safety team: contact details can be found on the inside back cover of this document.

SAFETY SIGNS

This guide is dedicated to signs; the signs have been categorised in to the following levels:

· Level 1: Road signs

· Level 2: Car park signs

Level 3: Access signs

· Level 4: Individual hazards and regulation signs

The section of this document 'Placing signs' will help you work out how many of each sign you need for your beach and where to locate them. You will probably need to use most groups of signs listed above, but the quantity will vary depending on beach size and risk assessment.

SYMBOLS

The AS/NZS 2416.1:2010 Water safety signs and beach safety flags - Specifications for water safety signs used in workplaces and public areas provides a symbol directory showing the most common symbols you will need on your signs. You may find additional symbol meanings are required, in which case you are asked to refer to the latest New Zealand Standards. The symbols directory may be updated from time to time and you will be sent replacement pages.

Figure 3
Symbol Examples



Large Breaking Waves



Strong Rips/ Currents



Submerged Objects



Sudden Drop Off

Section 04

Signage

Section 04

Signage

Signs on beaches tell beach users about hazards, prohibited actions, lifeguard services and local information. There are a variety of signs to choose from and they should be positioned in sequence at the beach entrances and along the beach.

Design templates for the different types of beach signs have been created for you to use; the content of the signs can be modified to suit your needs. All sign visuals shown are for illustrative purposes only. Any information contained on the signs is not directly related to the beach used in the example. Nominal dimensions are shown in millimetres.

Signs to be installed on a beach may display English and Māori text. If you would like help with any other cultural considerations, please contact the SLSNZ Coastal Safety team (see contact details inside back cover).

SAFETY SIGNS

This guide is dedicated to signs; the signs have been categorised in to the following levels:

- Level 1: Road signs
- · Level 2: Car park signs
- · Level 3: Access signs
- · Level 4: Individual hazards and regulation signs

Level 1: Road Signs

Figure 4

Level 1: Road Signs.







Most commonly, intersection direction sign formats, as determined by relevant road authority standards, will apply when directing traffic to specific areas. This sign type is categorised as a services sign and consists of white reflective lettering on a blue background. Information symbols for available services may be included. Symbols are to be white on a blue background. Emergency markers directions are to be white characters on a green rectangle.

There may also be a need for warning symbols to be displayed along a road within the reserve. Examples of warnings may include 'Pedestrians', 'Gravel Road' or 'No Lifesaving Service'. These signs shall be comprised of a black symbol and a border on a yellow diamond shaped background.

Section 04

Signage

Section 04

Signage

Level 2: Car Park Signs

The graphic content for level 2 and 3 signs has been designed using the standard symbols for easy recognition and uniformity. The car park sign has been designed to attract attention and to display important information to visitors so that an informed decision on the suitability of the location can be made prior to undertaking activities.

The sign is made up of four sections in the following hierarchy:

- Location name and emergency marker (if applicable) or street address.
- Hazards within the designated area.
- Lifesaving service or safety information.
- · Regulations.

The location name is displayed in white on a red background. This has been proven to draw people's attention to the sign.

The size of the sign will depend on the amount of information that is required to be displayed.

(Dimensions shown are a guide only)



Figure 5

Type A signs are used when 3 or 4 hazards symbols are to be displayed.

Figure 6

Type B signs are reduced in size to display 1 or 2 hazard symbols.



Section 04

Signage

Section 0

Signage

Level 3: Access Signs

Access signs follow the same principles as those of Level 2 car park signs.

There are two types of access signs:

- · Defined Access sign.
- · Open Access sign.

HIERARCHICAL LAYOUT

Consideration should be given to the order in which information is presented on signs. The recommended hierarchical layout is:

- · Location identification
- · Hazards and warnings
- Information
- Regulations
- · Facility manager

To maintain a standardised approach and improved recognition of the facility user it is highly recommended that the colour scheme shown be used for each section of the sign. (Only exception is the area for the facility manager's logo, which can be corporate colours)

(Dimensions shown are a guide only)

Figure 7

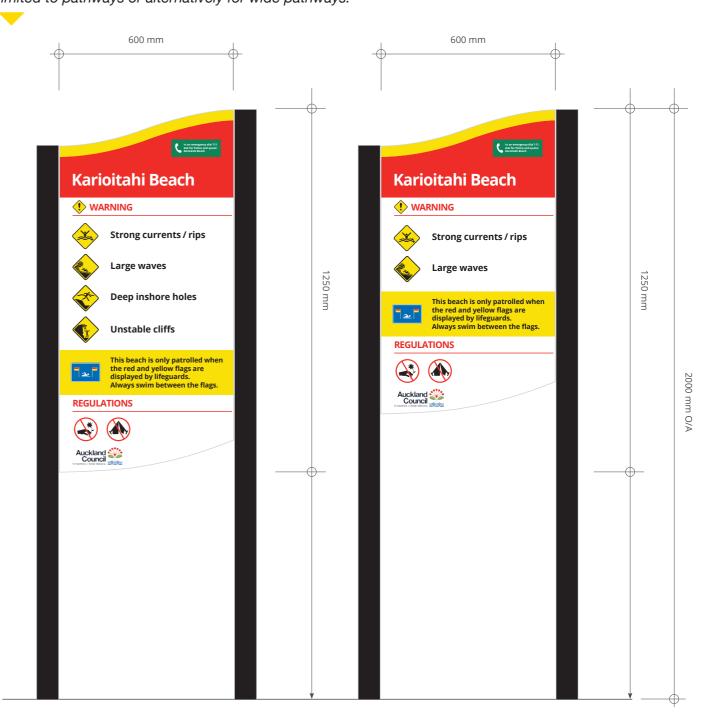
Defined Access sign – for use where access to the area is controlled via a narrow pathway.





Figure 8

Open Access sign - to be used for areas where access is not limited to pathways or alternatively for wide pathways.



Section 04

Signage

Section 04

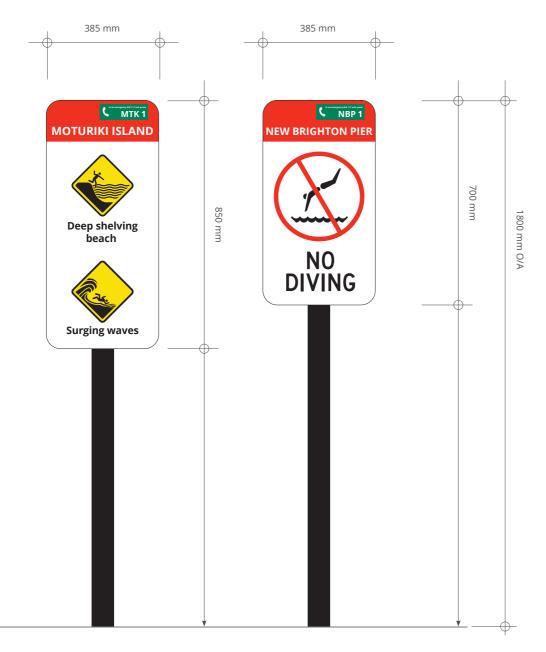
Signage

Level 4: Individual Hazards and Regulation Signs

Individual hazard signs are to be used where a hazard is localised and has been identified at a level of risk that warrants sign posting. Examples may include unstable cliffs, slippery rocks and no diving.

Individual signs may also be used for displaying regulations for known trouble spots or to indicate regulation boundaries such as 'dogs permitted off leads past this point'.

Figure 9 Individual Hazard Signs



Emergency Markers

An Emergency Location Indicator (where available) or an address should be placed on risk management signs in the top right hand corner.

The number or address displayed is quoted over the phone so that emergency services can respond to the location of the distress call. Location numbers may be located on road signage to assist emergency vehicles in finding the location.

Figure 10
Emergency
Marker





Section 04

Signage

Section 04

Signage

Sign Type Placement

The example on the right is a best practice model for risk and safety signage. With best practice signage in place, visitors will have a number of opportunities to be informed of hazards, regulations and lifesaving services within the designated area.

Figure 11
Sign Type
Placement Map



Signage Details

Water safety and information signage template for Karioitahi Beach. The design complies with the current water safety signage standard AS/NZS 2416:2010

Figure 12
Signage Details





Conclusion

References

At the heart of it, aquatic recreation areas are maintained for the safe enjoyment of the community. This is a very tangible and highly valued benefit to all people with access to these special places. Many land managers espouse the beauty and uniqueness of their coastal areas and have strategies encouraging people to actively enjoy them.

Effective management increasingly needs to promote the safe enjoyment of aquatic areas through prudent and effective risk management, and if necessary the provision of signage to inform the behaviour of people using aquatic areas. This is only reasonable, as it cannot be expected that visitors to a unique area will understand the inherent hazards of these places in the same way that experts such as surf lifeguards would.

The Coastal Risk Assessment process offers the assuredness that recommendations from an independent and expert third party assessment of risk can provide. The benefits include more effective delivery of outcomes such as `safe enjoyment of aquatic areas'. Responsibility to recreational users of aquatic areas can be having an independent Coastal Risk Assessment conducted, documenting the outcomes and then following the recommendations.

Coastal risk assessments are designed to be applied to the coastal and other aquatic environments including beaches, harbours, marinas, swimming pools, resorts, rivers and lakes.

International Organisation for Standardisation. (2007). ISO 20712-2:2007 Water safety signs and beach safety flags — Part 2: Specifications for beach safety flags — Colour, shape, meaning and performance

International Organisation for Standardisation. (2008). ISO 20712-1:2008 Water safety signs and beach safety flags — Part 1: Specifications for water safety signs used in workplaces and public areas

International Life Saving Federation. (2015). Drowning Prevention Strategies – A framework to reduce drowning deaths in the aquatic environment for nations/regions engaged in lifesaving. 2015 edition. The International Life Saving Federation Gemeenteplein 26, 3010 Leuven, Belgium.

Standards New Zealand. (2010a). AS/NZS 2416.1:2010 Water safety signs and beach safety flags - Specifications for water safety signs used in workplaces and public areas. Wellington, New Zealand.

Standards New Zealand. (2010b). AS/NZS 2416.2:2010 Water safety signs and beach safety flags - Specifications for beach safety flags - Colour, shape, meaning and performance. Wellington, New Zealand.

Standards New Zealand. (2010c) AS/NZS 2416. 3:2010 Water safety signs and beach safety flags, Part 3: Guidance for use. Wellington, New Zealand.

