



**International
Standard**

ISO 20712-3

**Water safety signs and beach
safety flags —**

**Part 3:
Guidance for use**

*Signaux de sécurité relatifs à l'eau et drapeaux de sécurité pour
les plages —*

Partie 3: Lignes directrices pour l'utilisation

**Fourth edition
2024-05**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 145, *Graphical symbols*, Subcommittee SC 2, *Safety identification, signs, shapes, symbols and colours*.

This fourth edition cancels and replaces the third edition (ISO 20712-3:2020), which has been technically revised.

The main changes are as follows:

- Clause 8 and Annex E have been deleted, as tsunami specifications have been incorporated into ISO 22578;
- minor editorial changes have been made throughout.

A list of all parts in the ISO 20712 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document reflects good practice in the use of water safety signs and beach safety flags. The figures show examples of the selection and location of water safety signs and beach safety flags designed to provide information about aquatic hazards and the action necessary to avoid those hazards.

A standardized method of signing with the use of appropriate supplementary text throughout the working and public environment assists the process of education and instruction on the meaning of water safety signs and beach safety flags, and the appropriate actions to take. The intention of this document is to ensure a uniformity of application of water safety signs and beach safety flags which leads to increased familiarity, and therefore improved safety, for users, including visitors, and for the general public.

The figures within this document are based on assumptions that some people could be unfamiliar with the features of indoor or outdoor swimming pools or the beach. The figures are not intended to cover every potentially hazardous situation and they should be interpreted as recommendations and not as minimum requirements.

The use of water safety signs and beach safety flags does not replace the need for proper working methods and safety instruction or for training in accident prevention and the actions to be taken in the event of an emergency, or for the provision of lifeguards.

NOTE 1 The statutory regulations of some countries can differ in some respects from the recommendations given in this document.

NOTE 2 Some countries can differ in regard to the recommendations given in this document for the use of the diamond geometric shape for warning signs.

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Water safety signs and beach safety flags —

Part 3: Guidance for use

IMPORTANT — The colours represented in the electronic file of this document can be neither viewed on screen nor printed as true representations. For the purposes of colour matching see ISO 3864-4, which provides colorimetric and photometric properties together with, as a guideline, references from colour order systems.

1 Scope

This document gives guidance for the selection and use of water safety signs as specified in ISO 7010 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.

This document does not apply to traffic signs for use on the public highway or maritime signalling. It is not applicable to flags for use on firing ranges or to flags used to indicate water quality. It does not cover means of escape signs or their possible illumination.

NOTE This document refers to water safety signs which were originally specified in ISO 20712-1.¹⁾ These water safety signs have been integrated in ISO 7010, but are not specifically identified as water safety signs.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 beach

area forming a shoreline or sloping bank at the edge of the sea or a river estuary or lake

[SOURCE: ISO 20712-2:2007, 3.1]

3.2 beach safety flag

material that gives a particular safety message by means of a combination of one or more colours and a geometric shape, and is attached by one end to a pole or rope

Note 1 to entry: A flag can have additional support, for example a horizontal support.

1) Cancelled and replaced by ISO 7010.

[SOURCE: ISO 20712-2:2007, 3.2]

3.3
factor of distance
distance factor

z
relationship between the height, *h*, of a sign and the observation distance, *l*, used to determine observation distances of signs

$$z = l/h$$

[SOURCE: ISO 3864-1:2011, 3.2, modified — "distance factor" has been added as an admitted term.]

3.4
multiple sign

two or more *safety signs* (3.7) or associated supplementary information or both on the same carrier

3.5
pool basin

water tank where water-related activities can take place

3.6
pool surround

area around a *pool basin* (3.5) for entry and exit to the pool basin and general circulation space

3.7
safety sign

sign which gives a general safety message, obtained by a combination of a colour and geometric shape and which, by the addition of a graphical symbol, gives a particular safety message

[SOURCE: ISO 3864-1:2011, 3.12]

3.8
sign height

diameter of a circular geometric shape or height of a rectangular or triangular geometric shape of the type of *safety sign* (3.7)

Note 1 to entry: Any outer border to the safety sign is excluded. See ISO 3864-1.

4 Guidance for selection and siting of signs and flags

4.1 Guidance for risk assessment

Selection and use are determined following the results of a risk assessment. The risk assessment should take into account the following specific issues:

- a) hazards and associated risks of the aquatic environment;
- b) regulations or legislation;
- c) operation and management of the aquatic environment;
- d) users and their foreseeable behaviour.

In specific situations, other issues will possibly have to be considered in a risk assessment.

NOTE The users could be in unfamiliar environments, not wearing their normal sight-correction lenses or in bare feet.

As the result of the risk assessment, a comprehensive statement of requirements should be prepared and used as the basis for the detailed design and specification for the selection and use of signs and flags.

4.2 Siting

4.2.1 Water safety signs and multiple signs

The siting of water safety signs and multiple signs should allow users to recognize hazards and take appropriate action to avoid them.

The following matters (issues, factors) should be considered:

- a) location of hazards and their signage;
- b) location of entrances or access to facilities;
- c) location of any other signs;
- d) location of architectural features, decor, structures, vegetation or people that could conceal or divert attention from signs;
- e) lighting level and characteristics under both normal and mains-failure conditions;
- f) appropriate supplementary text to water safety signs;
- g) appropriate information on multiple signs.

4.2.2 Beach safety flags

The siting of beach safety flags should allow users to recognize hazards and take appropriate action to avoid them.

The following matters (issues, factors) should be considered:

- a) nature and location of hazards and their relevant signage;
- b) zoning or boundaries of aquatic activities;
- c) location of structures, beach furniture or vegetation that could conceal or divert attention from flags;
- d) location of flagpoles;
- e) appropriate information on multiple signs, such as an explanation of the meaning of flags and the presence or otherwise of a lifeguard service.

5 Water safety signs

5.1 General recommendations for aquatic environments

5.1.1 General

The system designer should identify the locations of the hazards.

Safety signs should conform to ISO 7010. Safety signs should conform with the colorimetric and photometric requirements given in ISO 3864-4.

The required sign height of the safety sign should be determined from the maximum viewing distance under different external illumination conditions and the relevant distance factor, z , according to [Table A.1](#).

The following principles should be taken into account when planning water safety signage. Signs should:

- a) be sited conspicuously within the normal field of vision;
- b) contrast with their surroundings;

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NOTE The contrast and conspicuousness can be increased by the provision of an outer border or by mounting on a sign board with a colour contrasting with the surroundings.

- c) be visible from any place within the vicinity of the hazard;
- d) be sited at the same height throughout the aquatic facility, as far as is reasonable;
- e) take precedence over all other signs, with the exception of escape route signing, if applicable;
- f) be placed so that they are not a hazard;
- g) be placed at sharp changes in depth;
- h) be illuminated, if applicable, to ensure that they are visible and legible.

Care should be taken to avoid over-provision of safety signs at one location as this can confuse viewers and result in individual safety messages not being noticed or understood.

5.1.2 Mounting height

The following principles should be applied to assist users of the facilities in predicting the location of successive signs, whether they are mounted on walls, on posts or overhead.

- a) Signs should be mounted as close as practicable to the observer's line of sight in the vertical plane. For a standing adult, this will be approximately 5° up or down from a point 1 500 mm above ground level in front of the observer.
- b) Signs that are freestanding or mounted overhead should be placed so that they are not a hazard.
- c) Where practical, the space in front of the sign should be clear so that people without sight-correction lenses or glasses or with visual impairments are able to approach the sign to reduce their viewing distance.

5.1.3 Lighting

If artificial lighting is provided, effective illumination is required both in normal and in mains-failure conditions.

There are various ways of ensuring the satisfactory illumination of signs.

Some types of lighting, for example low-pressure sodium, do not enable effective colour recognition and are therefore unlikely to be suitable for the illumination of water safety signs.

Where a sign is illuminated by an external artificial light source, the vertical illumination should be a minimum of 100 lx under normal lighting conditions.

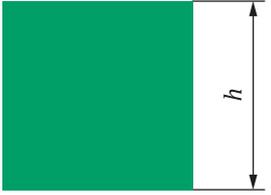
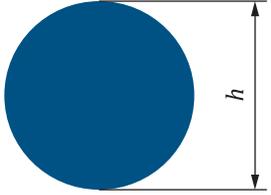
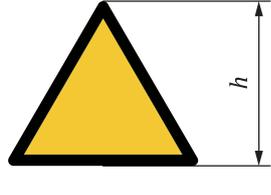
5.1.4 Sign height and maximum viewing distance

A sign should be both visible and legible at the maximum viewing distance.

NOTE 1 The sign height necessary to achieve these criteria will depend on the viewing distance and the illumination of the sign. Measurement of sign height is given in [Table 1](#).

NOTE 2 In external environments, a sign can be made more visible by provision of a larger colour contrasting border or background.

Table 1 — Measurement of sign height

Sign height <i>h</i>	Type of sign			
	Safe condition	Mandatory action	Prohibition	Warning
				

The required maximum viewing distance of a sign should be determined by its position within the area and take into account the needs of people with normal sight and people with visual impairments. Distance factors *z* for different illumination conditions and visual acuity are given in [Table A.1](#).

The recommended maximum viewing distance for a particular sign height, *h*, in millimetres (mm), can be calculated from the following formula:

$$l = zh$$

where

l is the required viewing distance, in millimetres (mm);

z is the relevant factor of distance from [Table A.1](#).

Recommended maximum viewing distances for different minimum sign heights under normal/natural illumination are given in [Table 2](#).

Table 2 — Recommended maximum viewing distance for different minimum sign heights under normal/natural illumination

Minimum sign height mm	Maximum viewing distance m	
	Normal visual acuity	Visual acuity 6/60
60	3,6	0,36
80	4,8	0,48
120	7,2	0,72
180	10,8	1,08
240	14,4	1,44

For intermediate viewing distances, the next largest available sign height should be used.

The maximum viewing distances in [Table 2](#) relate to viewing normal to the sign. When a sign is viewed at an angle of α to the normal, the maximum viewing distances are reduced by the multiplying factor $\cos \alpha$.

The relevant viewing distance should be such that the observer is informed of potential hazards and of the safety precautions and/or actions required to avoid the hazard(s) before the observer makes any contact with the hazard(s).

Any variation of the sizes of signs within a facility should be kept to a minimum.

5.1.5 Use of supplementary text

A supplementary text sign will help to ensure that the meaning of the water safety sign is fully understood and may convey additional information. For guidance on supplementary text, see [Annex D](#).

5.1.6 Construction: durability and suitability

Signs should be selected to be suitable for their operating environment.

NOTE ISO 17398 covers aspects of performance and durability of safety signs.

Factors that should be considered include:

- a) durability of base material;
- b) durability of graphical content;
- c) colour/light fastness;
- d) resistance to damage from bather traffic or from cleaning;
- e) resistance to exposure to water;
- f) resistance to corrosion, such as from sea spray;
- g) resistance to graffiti;
- h) flame resistance;
- i) type and suitability of fixings;
- j) resistance to wind loads.

Installed signs should be suitable for the expected environmental conditions.

Installers and designers should seek adequate assurance from suppliers in these aspects.

5.1.7 Servicing and maintenance

Signs should be cleaned and visually inspected at regular intervals, and action should be taken to remedy any defects. A sign which has been damaged or faded should be replaced.

A sign shall be removed when its function is no longer needed.

5.2 Specific recommendations for the swimming pool environment

The system designer should identify the locations of the hazards associated with the swimming pool and equipment.

The following principles should be taken into account.

- Signs should be placed in a position where they can be seen by users both before entering the water on the pool surround and once in the water in the pool basin.
- The number and location of depth markings should vary depending on the size and configuration of the swimming pool. Depth marking should always be provided at the shallow end and the deep end, and additional marking should be given along the length of the swimming pool.
- Signs may be floor-mounted. Their orientation should be for a person at the swimming pool surround looking towards the water and they should be within 0,5 m of the edge of the pool basin.
- Signs used at floor level and on the sides of the pool basin should not cause an abrasive hazard or obstruction to users.
- Signs may be mounted on the wall between the surface of the water and the edge of the pool basin and should be aligned with any floor-mounted safety signs on the swimming pool surround.

For example, the following signs may be used:

- “No running” (ISO 7010-P048) at the pool surround, including other wet floor areas.
- “No diving” (ISO 7010-P052) at appropriate locations alongside the swimming pool.
- Water depth: “Warning; Deep water” (ISO 7010-W047); “Warning; Shallow water (diving)” (ISO 7010-W048); “Warning; Sudden drop in swimming or leisure pools” (ISO 7010-W050).

Examples of signing swimming pools are given in [Figures B.1](#) and [B.2](#).

6 Beach safety flags

6.1 General

Beach safety flags used should conform to ISO 20712-2.

Beach safety flags should be positioned so that all users can view them when they are displayed.

NOTE The distance can vary due to weather and light conditions and the locations of flags will possibly need to be adjusted accordingly.

To ensure water users and members of the public are aware of the meaning of certain flags, it could be necessary to use text to explain the meaning. The text should either be fixed to the flagpole or given on multiple signs displayed along the beach and at beach entrances or access points.

Examples of positioning beach safety flags are given in [Figures C.1](#) and [C.2](#).

Application and operation of beach safety flags should be carried out by an appropriately qualified person with knowledge of local conditions.

6.2 Application of specific beach safety flags

6.2.1 Red flag BF.01

Flag BF.01 (see ISO 20712-2) should be used when there is danger of unsafe water conditions for swimming and other water activities. Examples of such conditions include strong surf or currents or both. This flag should be used to designate the area along a beach where swimmers should neither enter the water nor conduct other water activities.

6.2.2 Yellow flag BF.02

Flag BF.02 (see ISO 20712-2) should be used to designate a general warning. It is essential that a sign be placed in proximity to the flag to give additional information about the beach and swimming area and any specific updated information.

6.2.3 Red/yellow flag BF.03

Flag BF.03 (see ISO 20712-2) should be used in pairs to designate each area along a beach which is most closely supervised or patrolled, and to which it is intended that swimming and body boarding is to be confined. The positions of red/yellow flags BF.03, indicating a lifeguard-patrolled zone, should be designated by a qualified lifeguard. Where a lifeguard-patrolled zone is not used, a single red/yellow flag BF.03 may be used to indicate that a lifeguard is on duty. This should only be displayed at the lifeguard station, hut or highchair.

6.2.4 Black/white flag BF.04

Flag BF.04 (see ISO 20712-2) should be used to designate a zone or the boundary of the zone on a beach for use of surfboards and other water craft. These flags should be positioned outside of the area designated by the red/yellow flag BF.03 for swimming or body boarding.

6.2.5 Red/white flag BF.05

Flag BF.05 (see ISO 20712-2) should be used to signify that people must leave the water because of an emergency. Examples of emergencies include dangerous marine creatures, a toxic spill causing water pollution and the discovery of an underwater hazard in the area.

6.2.6 Truncated orange cone

Windsock BF.06 (see ISO 20712-2) should be used when there is danger in using inflatable leisure articles in windy or unsafe water conditions. This flag should be used to designate a beach where no such articles should be used on the water.

6.3 Materials for beach safety flags

Flags should be made of fabrics which meet the specifications of ISO 20712-2.

6.4 Operation of flags

6.4.1 Mounting position

The minimum height for a flag should be such as to help try and prevent damage to the flag by vandalism and to help prevent the flag flapping around people's heads and causing injury.

Each flag should be attached to a pole and erected such that the lowest point of the flag, when it is at rest, is not less than 2,1 m above the immediate surrounding ground level. In the case of windsock BF.06, the lowest point of the flag when it is at rest should be not less than 2,3 m above the immediate surrounding ground level. Flags should be positioned so that they can be readily seen by persons on the beach and in the water. Flags should be mounted high enough to be seen above any obstructions.

Flags should be positioned so that they are visible without obstruction by other structures or by any flora and fauna that is present.

The locations of flags should be carefully selected to ensure that the flags themselves, in particular the flagpoles, do not present a hazard.

6.4.2 Size of flag

The flag should not be smaller than the minimum size specified in ISO 20712-2. The flag size should be sufficient for the flag to fly in the wind conditions yet not cause a hazard.

6.4.3 Hoisting and taking down of flags

Hoisting and taking down of flags should be carried out by an appropriately qualified person with knowledge of local conditions.

As the environmental conditions alter from day to day, and in some cases during the course of a day, conditions should be monitored and flags should be hoisted or taken down accordingly. In the case of flags used to zone a section of beach or water activity, conditions should be monitored and these flags should be moved to suitable locations as any changes in conditions dictate.

Due to the need for someone to be present to monitor the conditions, and possibly to change flags, flags should only be operated during a prescribed and well publicized period each day. The presence of flags may also relate to seasonal activity.

6.5 Flagpole

The flagpole should be of appropriate material and be securely anchored so as to be stable under the prevailing weather conditions in the area and the conditions of the site.

This may be done, for example, by means of a sand spike or by securing the flagpole to a base.

If the flag is secured to a base, this may also be used to display safety information.

6.6 Inspection and maintenance of flags and flagpoles

Inspection and maintenance of flags and flagpoles should be carried out on a regular basis. Flags can have a limited lifespan, particularly in adverse weather conditions. Any flag that has become torn or faded should be replaced.

6.7 Storage of flags

If flags are to be stored, for example at the end of the season, care should be taken to ensure that they are completely dry before they are put into storage. Flags should be stored in dry conditions away from sources of heat and chemicals. Flags that have been stored should be carefully inspected before they are put back into use.

7 Multiple signs

7.1 General recommendations

The scheme designer should identify the types of multiple signs which are required and their siting.

The guidance and principles given in [7.2.1](#) to [7.2.6](#) should be considered when compiling and designing a signing scheme. Multiple signs should conform to the basic design templates given in [7.3.1](#) to [7.3.4](#), which can be stylized to suit the needs for national consistency.

7.2 Presentation of information

7.2.1 General

The presentation of information is very important to how people understand and react to a multiple sign. The layout and presentation of information should be consistent across the family of multiple signs; this will help people to read a sign and make their decision efficiently. Grouping information into categories makes the information easier to understand. The scheme designer should apply a grid structure to the information content within the signs.

Multiple signs should be manufactured and fixed in the most appropriate manner to suit a particular aquatic environment. See [5.1.6](#) for consideration of factors relevant to the construction of a multiple sign.

7.2.2 Typeface

Recommendations on typefaces and use of upper- and lower-case letters, where appropriate to the language, are given in [Annex D](#).

7.2.3 Type size

There are several factors which determine the choice of type size on signs. Factors that should be considered include:

- a) intended viewing distance;
- b) speed at which the sign will be read;

- c) sign position;
- d) typeface chosen;
- e) sign colours.

Different types of signs and sections within signs will have different viewing distances, therefore a selection of type sizes is necessary. The minimum height of letters should take into account the needs of people with normal sight and people with visual impairments. The minimum letter height should be determined by dividing the required maximum viewing distance by the relevant factor of distance given in [Table A.2](#).

The minimum text height of upper-case letters should be 15 mm.

7.2.4 Colour

The use of colour in a signing scheme can establish a visual look for the scheme. Colour selection is important as a multiple sign needs to be easy to find in the aquatic environment. The colour contrast between the colour of the text and the colour of the sign background should be carefully considered to ensure legibility.

Safety signs, including warning, prohibition, mandatory action and safe condition and their associated text, should be displayed on white section(s) of the multiple sign. The selected background colour for displaying other information, for example public information symbols, should ensure legibility of the symbols and text. Examples of multiple signs are shown in [Figures 2](#) and [3](#).

7.2.5 Use of symbols

Safety signs should conform to ISO 7010. Beach safety flags should conform to ISO 20712-2. Public information symbols should conform to ISO 7001.

The positioning of symbols on a multiple sign should be given careful consideration; their positioning will affect how successfully the sign is read and understood. It is advisable to use supplementary text alongside symbols to explain their meaning and this text should clearly relate to the safety sign or beach safety flag symbol which it accompanies.

The minimum height of symbols should take into account the needs of people with normal sight and people with visual impairments. Relevant values for distance factor z are given in [Table A.1](#). The minimum height of symbols should be 65 mm.

7.2.6 Terminology and language

The scheme designer should consider any terminology issues and policies agreed for national beach signing. Terms used on multiple signs should be understandable to first-time users through to frequent beach users. Consideration should also be given to whether more than one language needs to be displayed on multiple signs.

7.3 Types of multiple sign

7.3.1 Approach signs

Approach signs should, most commonly, be consistent with relevant traffic sign standards. Usually these traffic signs are directional but they can also be purely informative, warning of a hazard or pointing out regulations. An outline drawing is not given for this sign type as its design and style will vary between countries.

[Figure 1](#) gives examples of approach signs.



Figure 1 — Approach sign design examples^[10]

7.3.2 Primary access signs

Primary access signs should be placed at each main entrance to an aquatic environment and should be used at pedestrian entrances; the exact position will depend on the nature of the environment.

[Figure 2](#) shows examples of primary access signs. The dimensions, proportions and exact shape are not fixed.

Panels can be single or double and information can be displayed on both sides if appropriate. A hierarchical structure should be created within the sign to group information. The recommended information content for primary access signs is:

- location name;
- emergency contact information;
- safety signs (includes safety hazards and safety prohibitions, mandatory actions and safe condition);
- lifeguard service information or additional information related to public safety or both.

Additional information content may include additional prohibitions, local area information and public facilities.



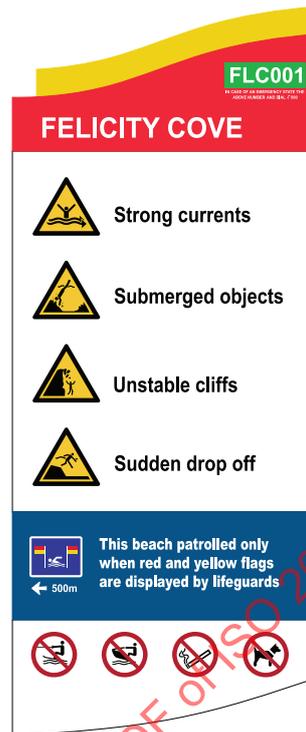
a) Example 1

Red background
Location name and emergency information

White background
Safety signs

Yellow background
Lifeguard service information

Blue background
Local area information



b) Example 2

Red background
Location name and emergency information

White background
Warning signs

Blue background
Lifeguard service information (if an information symbol in this area uses blue then that symbol should have a prominent white outer border)

White background
Prohibition signs

NOTE In example b), further white sections could be necessary for safe condition signs and mandatory action signs.

Figure 2 — Primary access sign design examples

7.3.3 Secondary access signs

Secondary access signs are commonly used at pedestrian entrances. These signs should be placed at each entrance that is not a main entrance, for example a small footway, dune access or coastal path access.

These signs can be used at main entrances if the location is small and rural. These signs can also be used to reinforce an entrance area such as a promenade and are fixed at regular intervals along an open promenaded beach.

Figure 3 shows examples of secondary access signs. The dimensions, proportions and exact shape are not fixed. The signs can also be of horizontal format instead of vertical format as illustrated. A hierarchical structure should be created within the multiple sign to group information. The recommended information content for secondary access signs is:

- location name;
- emergency contact information;
- safety signs (includes safety hazards and safety prohibitions, mandatory actions and safe condition);
- lifeguard service information.

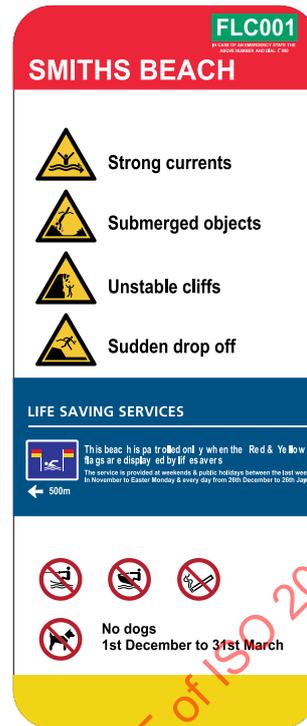


Red background
Location name

White background
Safety signs

Yellow background
Lifeguard service information

Red background
Emergency information



Red background
Location name and emergency information

White background
Warning signs

Blue background
Lifeguard service information (if an information symbol in this area uses blue then that symbol should have a prominent white outer border)

White background
Prohibition signs

a) Example 1

b) Example 2

NOTE In example b), further white sections could be necessary for safe condition signs and mandatory action signs.

Figure 3 — Secondary access sign design examples

7.3.4 Directional signs

Directional signs display precise information and are small in size. These signs can be displayed temporarily depending on conditions or local circumstances. Directional signs should commonly be used to direct users to the lifeguard service unit or public rescue equipment. These signs are commonly fixed at a low level, with a distance of around 1,5 m from the base of the sign to ground level. These signs should be fixed at regular intervals to provide a sequence of signs for people to follow. It is advisable to display the appropriate symbol, text and distance, in metres, to the facility.

Figure 4 is an example of a directional sign. The dimensions and proportions are not fixed, nor is the exact sign shape; the signs can also be of horizontal format instead of vertical format as illustrated.

A hierarchical structure should be created within the multiple sign to group information.

The recommended information content for directional signs is:

- symbol;
- supplementary text;
- directional arrow.

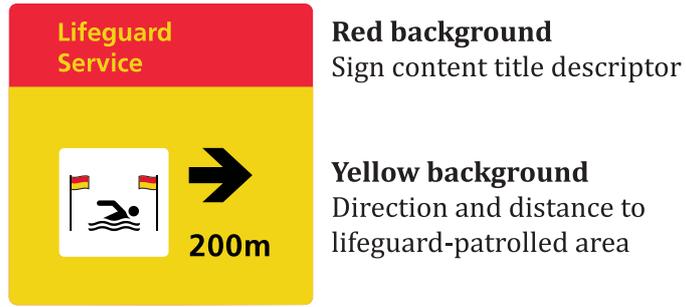


Figure 4 — Directional sign design example

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Annex A
(informative)

Distance factor z

The z factors in [Table A.1](#) relate to normal viewing of the sign. z factors depend on the angle of viewing such that at an angle of α to the normal, the z factors in [Table A.1](#) should be multiplied by $\cos \alpha$. For example, when viewing a sign at 30°, 45° or 60° to the normal, the z factors in [Table A.1](#) should be multiplied by 0,87, 0,71 or 0,5, respectively.

Table A.1 — Distance factor z for externally illuminated safety signs based on ordinary materials

Illumination condition	Distance factor z	
	Normal visual acuity	Visual acuity 6/60
Normal/natural illumination	60	6
Emergency lighting in buildings/ low illumination	30	3

NOTE 1 [Table A.1](#) does not apply to signs which are displayed underwater, where the effects of refraction and water conditions need to be taken into account.

The z factors in [Table A.2](#) relate to normal viewing of the letters. z factors depend on angle of viewing such that at an angle of α to the normal, the z factors in [Table A.2](#) should be multiplied by $\cos \alpha$. For example, when viewing a sign at 30°, 45° or 60° to the normal, the z factors in [Table A.2](#) should be multiplied by 0,87, 0,71 or 0,5, respectively.

Table A.2 — Distance factor z for externally illuminated letters

Illumination condition	Distance factor z for upper-case letters		Distance factor z for lower-case letters	
	Normal visual acuity	Visual acuity 6/60	Normal visual acuity	Visual acuity 6/60
Normal/natural illumination	250	25	350	35
Emergency lighting in buildings/ low illumination	120	12	170	17

NOTE 2 [Table A.2](#) does not apply to letters which are displayed underwater, where the effects of refraction and water conditions need to be taken into account.

Annex B
(informative)

Examples of signing — swimming pools

Figure B.1 and Figure B.2 show examples of the positioning of swimming pool signs.

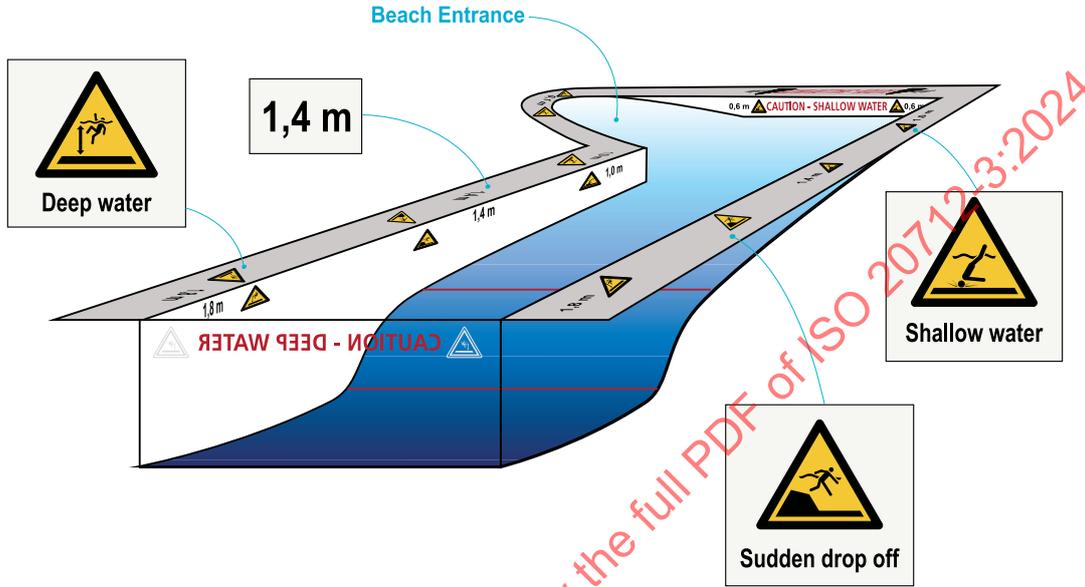


Figure B.1 — Example of positioning of signs (not to scale) on pool surround and pool basin with beach entrance

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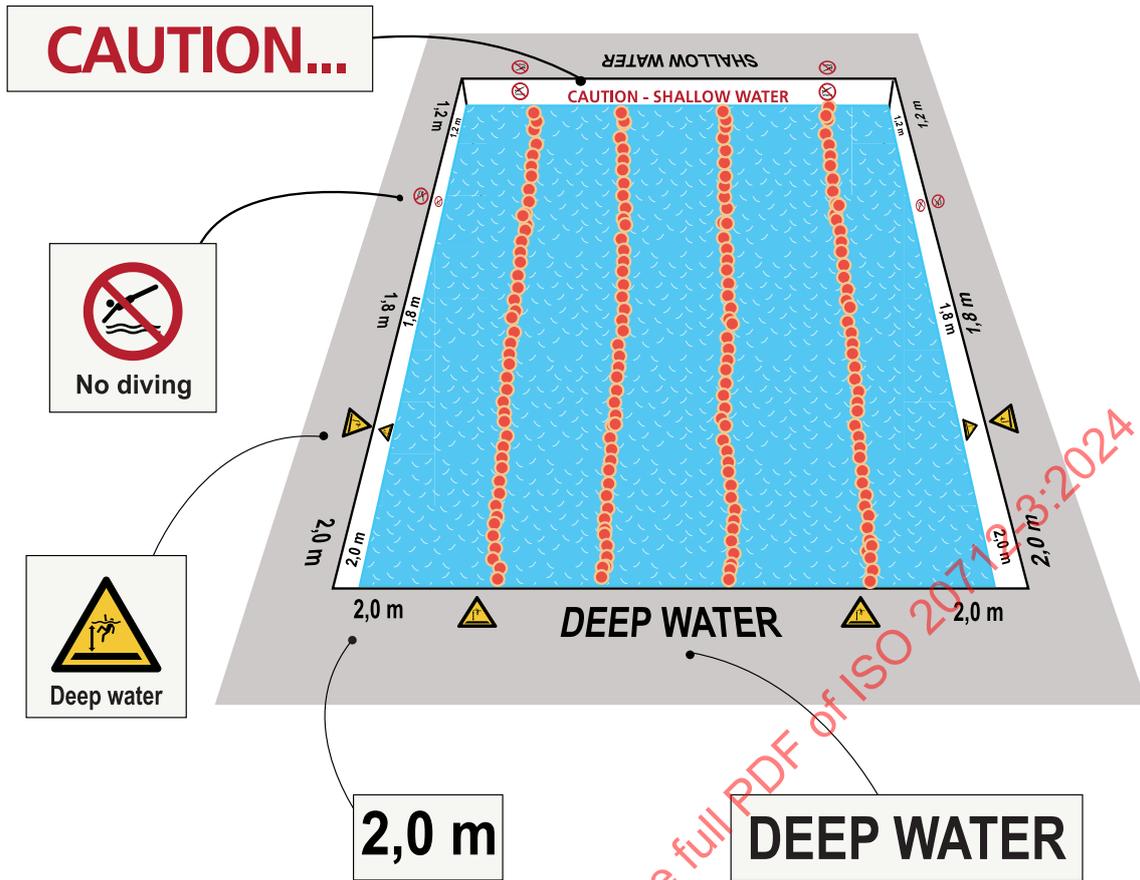


Figure B.2 — Example of positioning of signs (not to scale) on a pool surround and pool basin

Annex C
(informative)

Examples of positioning — beach safety flags

[Figure C.1](#) and [Figure C.2](#) show examples of the positioning of beach safety flags.

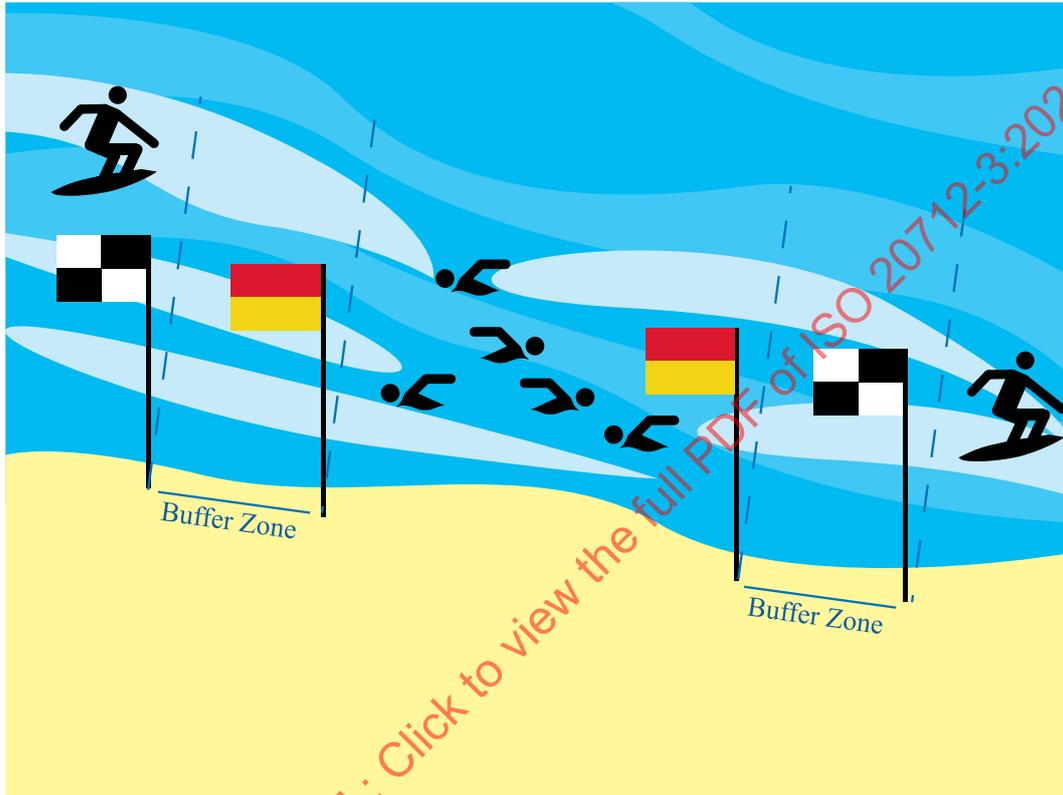


Figure C.1 — Example of positioning beach safety flags for swimming area between surfing areas with buffer zones