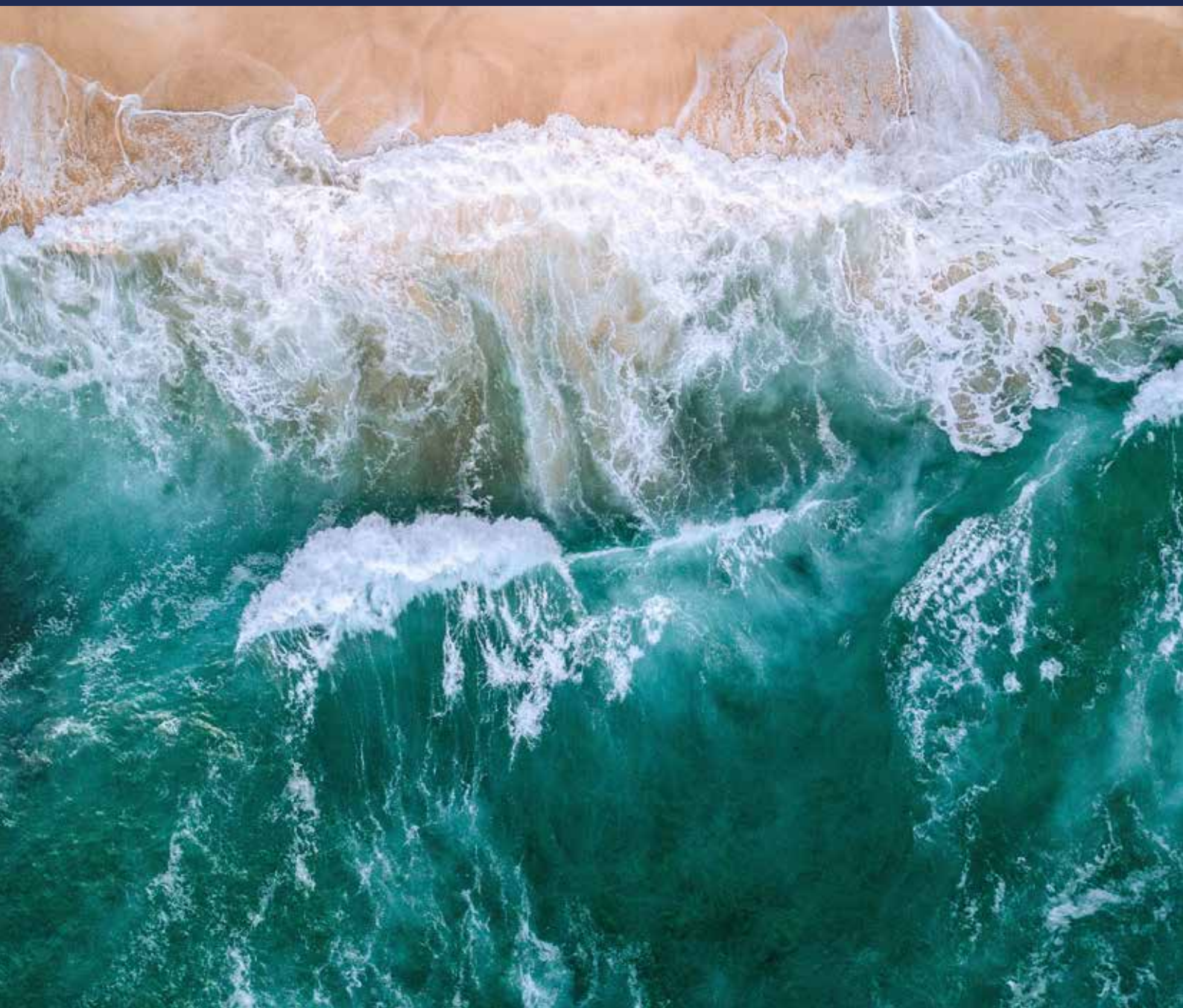




Maritime &
Coastguard
Agency

MANAGING BEACH SAFETY





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Introduction

The UK's beaches are special places, known around the world for their beauty and attracting millions of people every year. They create lifelong cherished memories for those who visit, and are vital to the economies of both local communities and the country as a whole; they generate millions through tourism, and attract new residents who are seeking a better work-life balance, contributing directly to the survival of our seaside towns and resorts.

Underpinning all of this is beach safety.

A huge amount of work goes on behind the scenes, involving local partnerships including landowners, local authorities, third sector bodies and local lifesaving and rescue organisations. This work is fundamental to the wellbeing of millions of people, and often is only highlighted following a serious accident or incident.

We have created this guide to assist those who may have duties prescribed in law, or who are in effective control of the beach, to help them ensure that safety is at the forefront of everything they do. It applies widely-accepted risk management principles that can be used to improve the safety of everyone visiting our beaches, highlighting examples of innovative

and positive approaches. It is intended to be used by local authorities, landowners, and those who oversee designated bathing waters at the coast.

Effective beach safety cannot be delivered from behind a desk, nor can it be delivered by eliminating all hazards or stopping people from enjoying the coast. Equally, those with responsibility must not wait until after an accident or incident has happened, to ensure our coastline remains the same special and unspoilt place that many enjoy and remember for the rest of their lives.



How to use this guide

This guide follows the 'Plan, Do, Check, Act' (PDCA) framework. It is important to recognise the cyclical nature of PDCA, and that it will require the organisation to adjust, refine and in some instances revisit previous steps and actions, if it is to be truly effective.

The advice is focused on reducing the risks of fatal and non-fatal drowning. Risks associated with recreational watersports are not explicitly addressed in this guide. References to current law or regulation

are included, such as those for harbours and water quality.

Each section in this guide presents a number of questions and aids for the manager to review and develop. In the Appendix we have provided a self-review tool which can be used at an early point to better understand the current position.





PLAN

- ▶ Does the organisation hold a specific policy establishing its standards and approach to managing risks on the beach?
- ▶ Is the policy led by a named executive and is it supported by a manager or teams?

The main purpose of the planning phase is to decide on appropriate standards and control measures. Planning builds upon insights from risk assessment, lessons from the incident analysis and an appraisal of what is or is not working in practice.

Does the organisation hold a specific policy establishing its standards and approach to managing risks on the beach?

A policy is a formally approved document establishing the organisation's aims with regard to managing the beach. Fundamentally, it will reflect the level of risk the organisation is willing to accept; set out what its safety standards should be; and be mindful of legal standards (see appendix) and practice in similar locations.

The policy will clearly set out how these aims are to be met, and how the organisation will know and measure its success. Depending upon the nature of the organisation, formalising this in the policy document may be a legal obligation, irrespective of whether it is good practice to do so.

Examples of standards that should be considered for inclusion within a beach management policy

In order to achieve a safe and high-quality beach environment:

- All locations we are directly responsible for shall be risk assessed on a regular (e.g. annual) basis;
- All agreed risk assessment actions shall be completed to agreed timescales;
- Staff responsible for beaches shall hold defined qualifications and skill sets;
- Beaches with defined visitor numbers and defined risk levels shall have a lifeguard service during peak months;
- Key locations, such as beach car parks, visitor centres and websites, shall define and provide standard-compliant safety information for visitors that reflects the significant risks.

Monitoring the performance against the standard should be possible, e.g. 70% of beach spaces have been risk assessed in the period versus a 100% target rate. As indicated above, the exact clause, condition or standard will need to be included and defined in order for it to be trackable.



The precise ‘trigger’ levels and factors informing the decision to intervene, e.g. lifeguarding or signage, must be determined by the organisation’s risk appetite and resources. In the absence of a strict regulation or law, published advice and peers can help to inform this decision. We have provided an overview of existing laws in the Appendix.

The policy should reflect the findings and decisions from both the incident analysis and risk assessment, and ensure that the objectives can be adequately resourced and are realistic to implement.

At the beach, it is very easy to travel across land managed by multiple organisations. In such circumstances, policies should take into account near neighbours and the risks they face.

To create an effective policy, consultation with both internal stakeholders and the wider community is required.

Developing your policy: top tips

- Clearly identify the issues and scope that you want the policy to address;
- Identify any policies and guidance that are already established, and assess if these may conflict or link with the proposed policy;
- Identify and nominate the person(s) responsible for implementing the policy;
- Identify all of the key stakeholders;
- Get legal and technical advice on your draft policy and the way forward;
- Draft the policy in plain, precise and jargon-free language;
- Consult on the final version of your draft policy with stakeholders;
- Complete your organisation’s and stakeholders’ approval process;
- Train staff and partners on enforcement and appeals procedures, where necessary;
- Decide on any control measures required;
- Publicise and launch the policy.

Is the policy led by a named executive and is it supported by a manager or teams?

Ensuring visible leadership, with clear lines of responsibility and authority to act, is arguably the most pressing question for any organisation. Safety risks are a board-level concern, and how risks are managed needs scrutiny and evaluation.

Employees should be consulted on responsibility, authority and expectations, as they may be held to account as part of their performance reviews or following an incident.

Developing a collective and consistent approach: Aberdeen Water Safety Group

Aberdeen, the third biggest city in Scotland, is a major maritime port for the fishing and offshore oil industries. The city has a range of open water, including a busy coastline and beach, a major river and canal, all of which attract considerable numbers of visitors.

In 2016, there was a high-profile incident which involved the tragic deaths of a mother and her young son at Aberdeen's seafront. As part of a series of measures, Aberdeen Water Safety Group was set up, with representatives from the local authority, the emergency services, Sport Aberdeen, Water Safety Scotland and other national charities.

Key outcomes to date include:

- Creation of a local water safety group who are members of Water Safety Scotland;
- Risk assessment of the beach front;
- Primary and secondary signage with a unique code location;
- Safety awareness messaging and initiatives in local schools through partners;
- Development of a council-led water safety policy for all council-owned water areas in Aberdeen City.

The group meet regularly to consider progress against the collective plans, and to update and discuss insights from the jointly held incident plans. These inform the risk profile, education campaigns and search and rescue resources.

An effective beach safety policy will formalise and distil the knowledge and practice that good beach managers tacitly 'know'. Internally, it will help to communicate what is in place, or expected to be in place, in order to provide an acceptable service. Creating a good policy will help to combat overly risk-averse decisions and bring clarity to the safety and management arrangements.



DO

- ▶ Does the organisation hold a risk profile which considers the significant hazards and incidents for the beach?
- ▶ Does the organisation understand the scope of its responsibility?
- ▶ Is there an agreed delivery plan in place?

The ‘doing’ phase is focused upon implementation of the safety measures required to meet policy objectives. In this section, we will look at the elements needed to make improvements, and take a more in-depth look at risk assessment.

Does the organisation hold a risk profile which considers the significant hazards and incidents for the beach?

Risk profiling is the central step which informs and enables all subsequent activity. It is essentially a two-part process: first, the development of an incident analysis that considers past events, trends and the lessons learnt; second, the identification and judgement of significant hazards, foreseeable events and their associated risks via a structured risk assessment.

Incident analysis is the act of looking back to identify significant incidents, near misses and factors that may contribute towards a drowning event and associated harms. The use of structured data, such as the Water Incident Database and rescue datasets, internal

reports and community knowledge, describes the principal causal factors: the ‘who’, ‘how’, ‘where’, ‘when’ and ‘why’.

A **risk assessment** is a structured process that seeks to identify hazards, evaluate the associated risks and understand if the control measures in place are adequate, or if more are needed. There are many ways to conduct a risk assessment. Irrespective of the method employed, it should be understood, particularly with natural and dynamic hazards, that these steps and observations may need to be revisited more than once, by reviewing earlier steps to clarify and refine understanding.

Does the organisation understand the scope of its responsibility?

Under UK law, a statutory duty may apply where land is owned or occupied, or a business offers a service that may affect a visitor. A duty may be owed as a result of a contract, such as employment of staff, or invitation onto land.

The ability to answer the following two questions with certainty could be a challenging aspect of beach safety, particularly where one or more occupiers of land exist.

- Is it my organisation’s responsibility to manage this risk?
- Will the risk affect my staff or my visitors?

Ideally the answers should be clearly set out, specified within the policy.

Working in partnership: A coastal local authority found that disused mines, not in their ownership, could be accessed by visitors from its nearby beaches. A fall into a mine presents a significant risk to life. Whilst recognising they were not responsible, the authority prioritised the risk to its beach visitors, coordinating the work to identify the key risk locations and owners, and supporting their improvements.

Is there an agreed delivery plan in place?

Alongside the policy document, a delivery plan with aligned resources is a key step. The plan is essentially a bridge between the findings of the risk profile versus the policy aims and standards. Particularly in the early or first pass, there will be gaps that may take significant resource or time to close, it should be recognised that all of the plan may not be achievable in the first year.

Negotiating and prioritising a response is a skilled and delicate task. It is important for the manager responsible not to allow remedial actions or decisions to drift, as this may expose the organisation to challenge if there is a review or incident in this period.

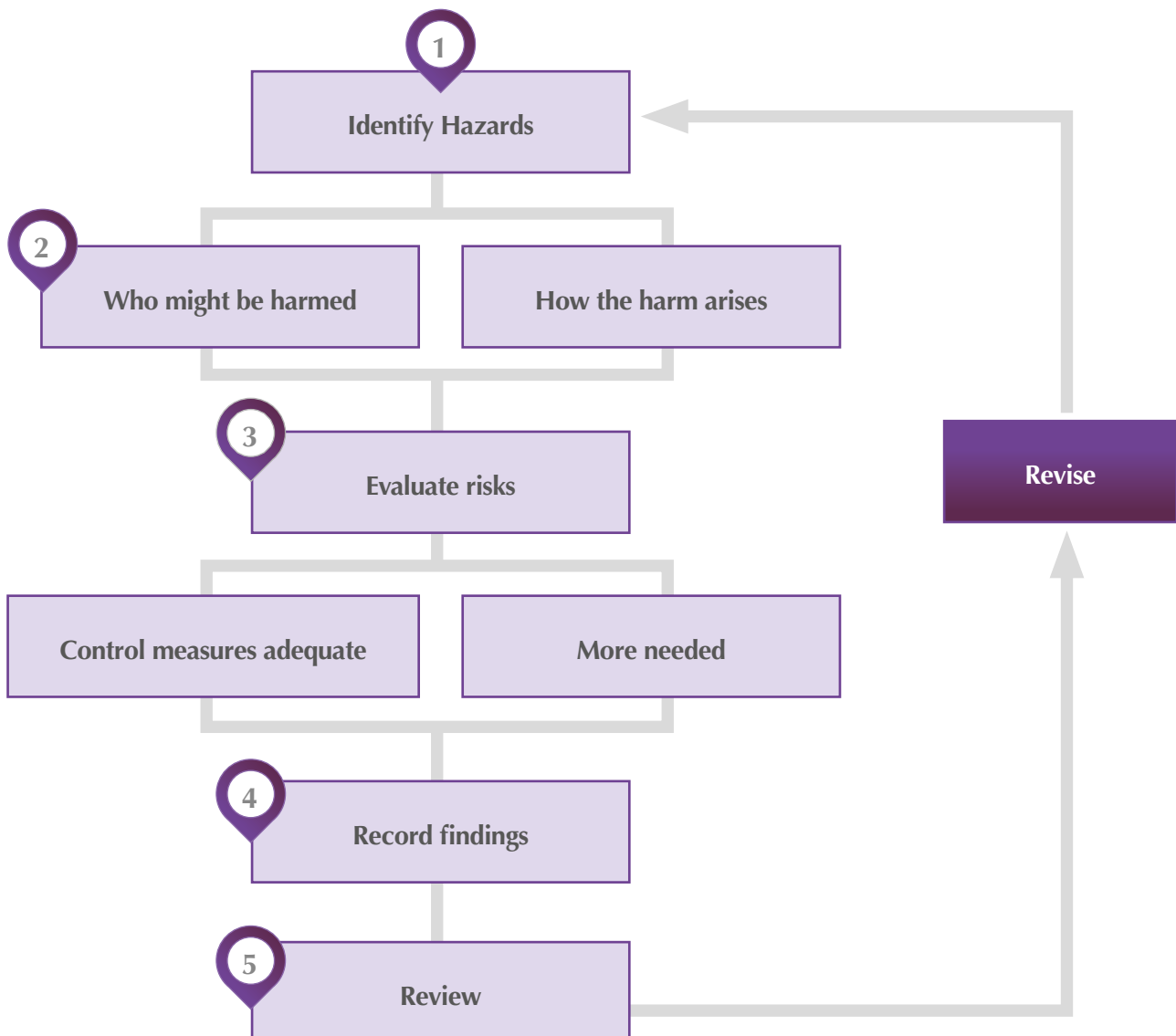
Bridging the gap: Agreed actions from the risk assessment may indicate that a lifeguard service or extension of current staff roles is the most effective way to manage the risks, alongside lower cost barriers or signage. Costs need to be considered, with staffing as a priority. If the situation is acute, time-limited authorisation may provide appropriate cover on a pilot, until the implications of the decision can be understood, and a broad range of options to achieve the improvements can be explored.



Image credit: iStock.com/Amy Duffield

The risk assessment process

There are a number of recognised methodologies used to conduct a risk assessment. In this section, we highlight the five-step approach for controlling risks. This is an ongoing and cyclical process in order to ensure that risks are effectively controlled.



Identify the hazards

Water-related hazards can be categorised under three main headings: built, nature of the water, and people or activity.

A critical aspect to consider when identifying natural and activity-based hazards is their inherent dynamic nature. For example, a rip current on a beach can ‘move along’ the beach during the day. The methods applied to identify such hazards and their variability will need to be flexible enough to allow for dynamic factors.

The presence of multiple hazards in a single location will have a greater significance in any risk assessment. In the Appendix, we have included a selection of beach hazards to consider.

Who might be harmed and how?

The principal objective is to identify the significant hazards, the key groups and likely scenario(s) that may cause harm. Understanding the visitors and other people on site is key to a good risk assessment outcome. A range of methods, sources of data and insights will be required in order to gain a complete and balanced picture. The incident analysis will provide useful insights, alongside observations of visitor behaviour, footfall patterns and hotspots.

Useful questions to consider include:

- Where are the majority of visitors going? Both the destination and route should be considered.
- Are there distinct visitor groups? How is their use (and needs) different?
- What is happening at night, or after main operational hours?
- Could the activities and behaviours observed lead to a repeated incident?
- How are the existing control measures affecting visitors?

A key aspect of the risk assessment process is to be in the position whereby once the hazard and harm scenario is identified, control measures are put in place to address the risk. It may be useful to consider the hazard from a loss causation perspective, using the ‘drowning chain’ model, or using a simple table format, such as the one below.

The identification of hazards, and who may be harmed are the most practical elements of risk assessment. They require first-hand knowledge of the location and insight from those who work at and visit the location in all conditions. It may not be feasible to build up a thorough risk assessment in one pass; consider the site in dark and stormy conditions in October versus a warm Sunday afternoon in June.

Hazard	Scenario(s)	Harm or loss (Risk)	Immediate cause(s)	Underlying cause(s)	Control measures options
Location with significant fall height	Footfall adjacent to location, path leading to edge. Fall.	Impact injury if onto land Drowning and water related harm if into water	Damage through storm, impact or vandalism Missing or time worn barrier	No or poor inspection standard in policy Inspection regime not in place/followed Unclear asset owner No visitor reporting mechanism	Replace barrier Reroute visitors? Ensure inspection regime in place, and that monitoring of this control measure is completed Ensure policy standard in place
High tide cuts off footpath	Walkers cut off, or swept away by tide	Drowning and water related harm	Natural process Visitor behaviours	Path routing – only/best option? Path routing – tourist attraction (benefit)	Possible to reroute or other method if point to point? Improved visitor safety information. For example, clearly indicate when in safe location No further steps; monitor: current control measures are adequate Improve and test emergency/search and rescue response

Evaluate risks and decide if existing control measures are adequate

The ultimate purpose of this exercise is to prioritise action towards mitigating risks that are deemed unacceptable. Are these adequate or is more needed? If risks are deemed unacceptable, then current control measures will need review.

There will always be an element of debate as to how acceptable a given risk is, more so when this risk may be taken on voluntarily by the visitor, or it is unclear as to what extent the hazard is understood. Irrespective of the method used to evaluate risk, at this point a few aspects are critical:

- Being clear on those risks that are, or might be, unacceptable;
- Applying a proportionate but 'precautionary' approach to risks that are deemed marginal;
- Transparency with regard to judgements being made.

It is important to note that the law does not require a 'zero-risk' approach to be adopted, particularly in relation to natural hazards and risks that are taken voluntarily.

Recognising the benefits

The decision to place a control measure(s) into a largely natural environment will be influenced by findings directly from the risk assessment and more broadly from those values and policies within the organisation and community. Ideally, these discussions have been held and captured in the policy document. Recognising heritage, environment and wider public health drivers are important, and in most cases can be managed in such a way as to limit conflict with visitors' and users' demands for the location.

Members of the National Water Safety Forum have created a set of guiding principles which reflect case law and policy (see 'Useful resources'). We have included an overview of laws that may affect beach safety in the Appendix.

Selection of control measures

It is important to recognise that not all control measures are equal in their effect: some will improve safety for all visitors (such as paths or lighting) whilst some, such as rescue equipment, may have a mitigation effect after the incident has started. However, all measures will require some regime to ensure that they are working as intended; this will need to be a factor in the decision. We have set out an overview of control measures in the Appendix.

Record your significant findings and act upon them

These decisions will be framed by the water safety policy and factors such as the recognised benefits and other drivers, such as heritage designations. Making a record of your findings is important to ensure a coordinated approach, and can also be used to evidence decision-making. Depending on the nature of the organisation, there may be an obligation in law to record the findings.

Review and revise

All risk assessments should be reviewed on a regular basis to take account of changes in work practice, technological advances and on the ground conditions. A number of factors may trigger an early review: an incident or near-miss; change in, or new activities; change in visitor profile; change in law, regulation or compelling advice such as a national standard. Learning and insights from networks and peers may also prompt a review.

Setting aside the above, the most compelling reason to review will be that the beach, as risk assessed formally a year ago, will not be the same environment today. The dynamic nature of the coastline after a winter storm or changes in visitor habits and technology (e.g. low cost wetsuits leading to an effectively longer bathing season in some places) will quickly date a risk assessment.

Maintaining a positive water-safe environment in Brighton

The City of Brighton enjoys some 11 million visitors annually, with visitor numbers peaking during the summer months and on event weekends. For around 80% of visitors, the beach is the principal reason for their visit. The beach is situated close to the city centre and immediately adjacent to major attractions, including venues and bars associated with the night-time economy. The beach is an integral part of Brighton, and will have visitors most hours, including at night.

The pebble beach and foreshore consist of an intermediate shelf with steep aspects. The prevailing southerly wind drives a wave state that, combined with the steeper shelving aspects, can produce a high-energy wave that can pick up and 'dump' people (including swimmers) unexpectedly. As with most UK waters, temperatures in the summer can regularly sit below 15oC and present the risk of cold water shock. Built structures such as piers and groynes create currents that visitors may not expect. These structures can be an attraction for thrill seekers, and jumping from them can lead to catastrophic injuries. Brighton has developed an integrated plan that successfully addresses these challenges.

Key steps taken include:

- A dedicated city council lifeguard service, operating throughout the summer months.
- Close liaison with local HM Coastguard and RNLI representatives.
- Comprehensive visitor information situated at key points, such as toilets, entrances, car parks and 'funnel points' to the beach. These adhere to accepted national good practice and are supplemented by timely information on weather conditions and information provided by the lifeguard service.
- In addition to the above, public information highlighting the hazards can be found in leaflets, on websites and in videos.
- Support for a night-time patrol service, led by volunteers and linked to the night-time economy and emergency service staff.

The campaigns and support services are informed by the risk profile, and are linked to other services in the city, such as health, wellbeing, and recreation opportunities. The programme is also shaped by a regional stakeholder group.



Brighton and Hove Council #Seasidesafety video
Image credit: Bright and Hove Council

EXAMPLE RISK ASSESSMENT: Coastal location			
Location: Sea frontage from place to place.	Hazard: High-energy wave condition, dumping near to beach. People at risk: Water-edge visitors, day/night. Informed by incident analysis. Global visitor profile.	Outcome: Impact injury, immersion and drowning injury. Serious to fatal.	
Key risks: Fall or swept into water, cold water shock, fatigue and swim failure.			
Other location factors: Location is key tourist destination adjacent to conference venues, night-time economy and key visitor attractions. Visitors up to 22 hours/day during peak summer. Wind and wave conditions highly variable and changeable by hour. 'Wave dodging' a known activity. Location may have significant numbers of visitors during peak times, and is a designated bathing water.			
Findings and options	Decision and rationale	Actions	Target
<p>Beach frontage accessible from several formal/key and informal points. Beach extends approx. <100m at mean high tide from most entrances. Pebbles with intermediate shelving edges. Groynes at numerous points.</p> <p>Options</p> <ol style="list-style-type: none"> 1. Ensure visitor safety information is in place at all key locations, is legible, and meets updated standard. 2. Review and update rescue equipment as per schedule to new standard, once adopted by board. 3. Consider night-time users/ entrance to beach via X/Y locations. 4. Ensure lifeguard service is maintained during summer window. 5. Consider additional cover for event weekends schedule. 6. Continue to support out-of-hours service/patrol. 7. Consider joint emergency planning scenario/test with partners. 	<p>In line with beach policy, updated and accepted x date.</p> <p>Options 1-3: To provide a consistent and uniform experience for visitors along the beach front within the city ownership. All visitors are informed of significant risks.</p> <p>Option 2: Agreed. To bring control measures in line with national standard/good practice.</p> <p>Options 4-5: Maintenance of lifeguard service allows response to dynamic conditions. Key control.</p> <p>Option 6: Partnership working to reduce harm associated with night-time activities.</p> <p>Option 7: Test and improve service. Lessons from other locations.</p>	<p>Options 1-3: to be implemented as part of off-season works. In-year budget allows. NB. This is aligned to the video/awareness packages update to reflect emerging activity risks.</p> <p>Option 2: Agreed. To note.</p> <p>Option 5: Board will need to understand implications and risk profile re. event/peaks before decision can be made. Consider interim mitigations.</p> <p>Option 6: Continued support, where feasible, with partners.</p> <p>Option 7: Agreed. Liaison with search and rescue and other partners.</p>	<p>When/Who/Status For example only.</p> <p>Beach manager by new season -3 weeks. Started.</p> <p>Communications lead by new season -4 weeks. Started.</p> <p>Paper to board within one month. Due.</p> <p>Decision before new financial year.</p> <p>Beach manager and emergency planning lead before calendar year end. Due.</p>
Informed by: Risk profile updated (date). Policy version (date), minutes, end-of-season review and current action/delivery plan, budget. Held by beach safety manager/stakeholder group.			
Owned by / Authorised by / Review by (date)			

Note that we have simplified and highlighted a single hazard/risk/group. In this example, the control measures may help to mitigate several identified risks.

CHECK

- ▶ Can the organisation demonstrate it has adequately controlled the significant risks?

This element considers the impact and effect of the measures taken, such as visitor information and signage, and performance with respect to the standards. Ultimately, is the visitors' safety being managed in line with the policy ambitions?

Can the organisation demonstrate it has adequately controlled the significant risks?

In practice, a broad range of insight is needed to give a clear picture of safety performance.

Are the control measures in place? Are they working? It is important to develop a range of methods to check against the risk profile findings and details of action taken. The risk profile and policy should direct the activity; the associated target should be framed so that it is trackable, providing insight into the control measures.

Has there been unintended effects? Control measures can have both positive and negative effects. Are the users behaving as expected? The use of prohibition signs and rules, or mandating a piece of safety equipment, are particular areas that may need time and education to adjust.

It is important to note that the *performance* of a control measure and its effect are two different and unique aspects to consider. For example, 100% deployment of 'bad' safety signage at key sites should not be considered successful performance, especially if the effect is to mislead visitors or place them in harm's way.

What is the effect on injury rates? Useful questions to consider are: Has the rate increased or decreased? Has the severity of the events changed? Are the events repeated scenarios? If the rate has increased, is this due to improved reporting, or is the trend 'real'?

Is this documented? Documents sought to verify if there is an effective system may include: risk assessments, policy, staff and or board meeting notes, actions plans, inspection findings and remedial works. The actual level and formality of the documentation should be guided by the organisation's core safety policy standards and other drivers, such as insurance conditions.

Here, the ultimate aim for the manager is to be assured that the policy is in place and driving action as expected and, more importantly, that users are acceptably safe. If the answers at this point are 'no' or 'unsure', then a review of controls and risk assessments is a good starting point.

ACT

- ▶ Has any activity been undertaken in the last year to improve beach safety?
- ▶ Has the topic been subject to scrutiny, audit and external review?

The purpose of this element is to ensure there are ongoing improvements.

Has any activity been undertaken in the last year to improve beach safety?

In practice, especially during the earlier phases, attention is naturally, and rightly, focused on improving the control measures on the ground. As the approach matures and confidence in the control measures improves, refinements to the underpinning system (such as documentation, self-audit and policy refinements) should become a normal part of business improvement for beach safety.

An ideal situation will show efforts to refine or introduce control measures, affecting the risks on the ground and driven by the risk profile, alongside improvements to the system driven by internal reflection, with some peer or external review.

Has the topic been subject to scrutiny, audit and review?

Formal review is a useful tool to improve performance. Ideally, this should be considered a normal part of business, but it is often triggered after a significant incident.

There are a number of ways to achieving this, including internal review by colleagues or an informal benchmarking exercise that compares similar organisations. Formal audit or review can be undertaken at set periods to gauge performance.

External or senior manager scrutiny can provide an opportunity to clarify responsibilities and resourcing.



Freshwater West Beach

Glossary

We have used the following definitions for the purposes of this guide:

Bathing waters: those waters categorised under The Bathing Water Regulations.¹

Beach safety: is the application of risk management principles to the environment with the intention of achieving acceptable levels of risk to all beach users.²

Cold water shock: is the body's short-term, involuntary response to being suddenly immersed in cold water. It is considered to be a significant causal factor in many drowning deaths. 'Cold water' in this context is below 16°C.

Control measures: interventions taken to reduce risk.

Drowning: is the process of experiencing respiratory impairment from submersion or immersion in liquid. The outcomes of drowning can be fatal or non-fatal.³ Anoxic or hypoxic brain damage can be a severe injury associated with non-fatal drowning.

Hazard: something that could cause harm.

Incident analysis: the act of identifying information and data which describe and profile events that might cause or have caused harm.

Policy: is the document which sets out the safety standards for the beach, the level of risk the organisation is willing to accept for its staff and visitors, and how and by whom the policy will be delivered.

Risk: the likelihood of a hazard occurring and the impact/severity if it does.

Risk assessment: is a structured method that considers the hazards; who may be harmed and how; what control measures are in place; and what else, if anything, could reasonably be done.

Risk profiling: is the combination of risk assessment and incident analysis alongside the lessons learnt to improve or inform control measures or the policy.

Beach: the stretch of land and short section of sea or tidal water, including the foreshore, that people commonly visit to walk, swim or paddle, independent of any designation as bathing waters.

Foreshore: land between the mean low water and mean high water marks, which throughout the day will be covered by water of varying depths, depending on the tidal position, weather conditions, and topology of the beach.

Sea: that water beyond the mean water line.

¹ www.legislation.gov.uk/uksi/2013/1675/regulation/3/made#f00008

² Adapted from Wilks, J (2006) Beach safety and the Law: Australian Evidence, Sydney: Surf Life Saving Australia

³ https://www.who.int/violence_injury_prevention/other_injury/drowning/en/

Useful Resources

Bierens, J (Ed.) **Drowning: prevention, rescue, treatment.** 2nd edition. 2014.

Department for the Environment and Rural Affairs: **Bathing water advice and guidance.** www.gov.uk/government/collections/bathing-waters

Local Government Association. **Water safety toolkit.** www.local.gov.uk/topics/community-safety/water-safety-toolkit

Health and Safety Executive: **Leading and managing for health and safety.** www.hse.gov.uk/managing/leading.htm

Health and Safety Executive: **A brief summary of Plan, Do, Check, Act.** www.hse.gov.uk/managing/plan-do-check-act.htm

International Lifesaving Federation: **Position statements.** www.ilsf.org/position-statements

International Organization for Standardization. **ISO 13009:2015: Tourism and related services** – Requirements and recommendations for beach operation. www.iso.org/standard/52329.html

International Organization for Standardization. **ISO 20712-1:2008: Water safety signs and beach safety flags.** Parts 1-3 cover specification, guidance for use and performance. www.iso.org/standard/39682.html

National Water Safety Forum. **Principles for managing water safety.** 2009. www.nationalwatersafety.org.uk/about/principles/

National Water Safety Forum. **The UK drowning prevention strategy 2016–2026.** 2016. www.nationalwatersafety.org.uk/strategy

RoSPA. **Managing safety at inland waters.** www.rospace.com/leisure-safety/water/inland

RoSPA. **Managing safety on beaches.** www.rospace.com/watersafety

Tipton M and Wooler A. **The science of beach lifeguarding.** 2016.

Water Safety Scotland. **Scotland's drowning prevention strategy.** www.watersafetyscotland.org.uk/strategy

The Water Incident Database (WAID) tracks and reports on drowning and other water-related fatalities. Annual and bespoke reports, including community incident analysis, can be accessed via www.nationalwatersafety.org.uk/waid

APPENDIX

Beach safety self-review tool

	Question	Score	Your comments
P	Does the organisation hold a specific policy establishing its standards...?	/10	
	...and approach to managing risks on the beach?	/10	
	Is the policy led by a named executive...?	/6	
	...and is it supported by named managers or teams?	/4	
D	Does the organisation hold a risk profile which considers the significant hazards...?	/20	
	...and incidents for the beach?	/10	
	Does the organisation understand the scope of its responsibility?	/5	
	Is there an agreed delivery plan in place?	/10	
C	Can the organisation demonstrate it has adequately controlled the significant risks?	/10	
A	Has any activity been undertaken in the last year to improve beach safety?	/5	
	Has the topic been subject to scrutiny, audit and external review?	/5	
Total		/100	

Notes: This is self-review to help prioritise your action; it is not indicative of legal or other compliance. In each case, a top score means you have everything in place, documented and up to date. If you are uncertain that you have a policy for example, then score zero. If you have started something but have not documented it, then score no more than a 6/10 or 3/5.

Score guide			
95-100	Almost so good as to be unbelievable!	80-94	Excellent. Have you been subject to formal/external review?
60-79	Good. Have you compared to other departments and peers?	50-59	Good start. Does the policy direct the effort? How good/complete is your risk profile?
30-49	Consider developing or focusing on the actions from our risk profile.	<30	Consider the risk profile as a first step.

Types of beach hazards

Specific hazards at the beach There are many hazards at the beach. Some of these are excluded from this guidance but are included as examples to consider during the risk assessment process.

Water-based hazards	Environmental	Land-based	People or activity based	Other
Sharply shelving sea-bed	Extremes of temperature	Steep cliffs	Footfall and crowding features, pressure, crush and falls	Unexploded ordnance
Holes	Strong winds	Unstable cliffs/Rock falls/Mud slides	Powered and fast boats	Utilities infrastructure
Rock shelves/reefs	Offshore winds	Unstable and/or eroded dunes	Sporting activities	Building ruins/remains – military, industrial
Submerged rocks/objects/debris	Storms/Hail/Heavy rain	Unsafe beach access	Commuting and transit activities, walking, running and cycling	Storm water outlet
River mouth	Fog/Mist	Unsafe walkways and lookouts	Adjacent activities, i.e. night-time economy spill over from bars and clubs	Sewage outlet
Groynes	Lightning	Partially buried or undermined fencing	Vandalism and other signs of negative activity	Biological hazards/Animal excrement/ Agricultural run-off
Jetties/Piers	UV radiation (Sun)	Unsafe buildings and structures		Dogs/Other (uncontrolled) domestic animals
Rock swimming and paddling pools		Sudden drop-off/Steep slope		Stinging fish (Weaver fish)/Rays
Tidal currents		Shallow sand banks		Common marine stingers (jellyfish)
Surf zone currents/rips		Headland		Other dangerous marine life
High surf		Mud/Quicksand		Fire safety
Dumping waves				Electrical safety
Varying and extensive tidal range				Hazardous or explosive substances
Potential to be cut off by the tide				Dangerous litter (glass, disposable BBQs)
Buoys and lines				Natural/Man-made disasters

Overview of legal duties

Outline of duties related to the management of beach safety.

Health and Safety at Work etc Act 1974 (HASW)

HASW sets out the duties between employers and employees and, via the subordinate Management of Health and Safety at Work Regulations, the requirements to plan for, assess, and manage safety and health risks.

Of particular note are:

General duties

- (2) of employers to employees
- (3) toward non-employees (such as visitors and contractors)
- (4) of persons concerned with premises other than their employees
- (7) of employees at work
- (8) not to interfere or misuse things provided [for safety purposes]
- (33) various offences, including failure to comply with an official notice, or to make a false record, among others
- (36) offences due to fault of other person [i.e. managers' duties]
- (37) by body corporations [i.e. directors' and senior managers' duties]
- (40) onus of proof [upon duty holder]

Miscellaneous and supplementary' (47) civil liability [no longer automatically applies]

www.hse.gov.uk/simple-health-safety/index.htm

www.legislation.gov.uk/ukpga/1974/37/contents

Management of Health and Safety at Work Regulations 1999

Subordinate to the HASW, it sets out a range of requirements. The HSE provides a number of guides depending upon the complexity of business and the role you play, to help you be compliant.

Of note are Regulations:

- (3) to carry out risk assessment for (a) his employees and (b) persons not in his employment [affected by his work]
- (5) to make arrangements to establish control of safety operations
- (7) to appoint competent staff
- (11) to cooperate and coordinate in shared [occupiers'] settings

www.legislation.gov.uk/uksi/1999/3242/contents/made

www.hse.gov.uk/pubns/books/l21.htm

Construction (Design and Management) Regulations 2015

The law that applies to the whole construction process on all construction projects, from concept to completion, and what each duty holder must or should do to comply with the law to ensure projects are carried out in a way that secures health and safety. Sets out the requirement for designers to consider significant risks at construction and during lifetime use.

www.legislation.gov.uk/uksi/2015/51/contents/made

www.hse.gov.uk/pubns/books/l153.htm

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

Sets out requirements for reporting injuries for staff and members of the public. The reporting triggers for situations involving the public are not the same as those for employees.

www.legislation.gov.uk/uksi/2013/1471/contents/made

www.hse.gov.uk/riddor/

Occupiers' Liability Acts 1957 and 1984

The Occupiers' Acts 1957 and 1984 establishes duties towards visitors and trespassers on land.

www.gov.uk/guidance/open-access-land-management-rights-and-responsibilities

www.legislation.gov.uk/ukpga/Eliz2/5-6/31/contents

www.legislation.gov.uk/ukpga/1984/3/contents

Public Health Act 1936

Gives local authorities the power to regulate water users. Sections 231–234 cover the creation of byelaws to manage bathing, including protection of bathers from dangers, placement of life rings, and effective zoning of craft/bathers.

www.legislation.gov.uk/ukpga/Geo5and1Edw8/26/49/contents

Corporate Manslaughter and Corporate Homicide Act 2007

In the event of a death or a 'gross breach' of a relevant duty, a charge may be brought under this Act. No additional duties created. However, additional and considerable penalties are available.

www.legislation.gov.uk/ukpga/2007/19/contents

Flood and Water Management Act 2010

The Act makes provisions for the management of risk in connection with flooding and coastal erosion.

www.legislation.gov.uk/ukpga/2010/29/contents

Bathing Water Regulations 2013

The regulations require monitoring and assessment bathing water for a number of bacteria. They also require that the public be informed about bathing water quality, at designated bathing locations, the public should be provided with information about beach management and water quality. The information must be provided during the bathing season, which is 15 May to 30 September.

www.legislation.gov.uk/uksi/2013/1675/made

Bathing Waters (Scotland) Regulations 2008

The regulations implement the European Bathing Waters Directive (2006/7/EC), which lays down provisions for the monitoring, classification and management of bathing water quality and the provision of information to the public on bathing water quality. The regulations outline the responsibilities of Scottish Ministers, local authorities and the Scottish Environment Protection Agency, among others.

www.legislation.gov.uk/ssi/2008/170/regulation/7/made

Health and Social Care Act 2012

Local authorities were given a core role for public health in England under the Act. Priorities include protecting the public health, community safety, and promoting active lives and green spaces. The national priorities are provided by the Public Health Outcomes Framework, which includes themes such as injuries to children, falls, and green space. At the time of writing, drowning was not an explicit indicator, but many local authorities will track and address the issue through this framework.

www.legislation.gov.uk/ukpga/2012/7/contents/enacted

Civic Government (Scotland) Act 1982

Permits a local authority to provide public rescue equipment at places it sees fit.

www.legislation.gov.uk/ukpga/1982/45/contents

Land Reform (Scotland) Act 2003

Permits a local authority to make byelaws in relation to land to which access rights are exercisable. The local authority may take steps (such as putting up fences and signs) if appropriate to warn the public of danger. It can provide written notice to a landowner to require that owner to take reasonable action. It may also provide staff and/or equipment for life-saving purposes.

www.legislation.gov.uk/asp/2003/2/contents

Occupiers' Liability Act (Scotland) 1960

Imposes a duty of care to any visitor for the purpose of which they are visiting. At water sites, the operator may be relieved of liability if a hazard is brought to the visitor's attention.

www.legislation.gov.uk/ukpga/Eliz2/8-9/30/contents

Public Health (Scotland) Acts 1897 and 1945

Offer local authorities the power to regulate water users. Local authorities can create byelaws to regulate areas and times of swimming, as well as provide public rescue equipment.

www.legislation.gov.uk/ukpga/Geo6/9-10/15/contents

Control measure options

Design and environment

Public realm design

The positioning of paths, lighting levels, the placement of car parks and facilities, the use of well-designed surfaces and barriers – all contribute towards a well-managed and safe environment. Although the opportunity for change is less frequent, these measures have a profound effect on visitor activities and behaviours. Engineering measures, such as groynes or river outlets, can create hazards (dangerous currents) at a beach; flood measures designed to protect whole communities can have a smaller but negative effect on the safety of a location. Challenges for managers are to: help planners and senior decision makers to recognise these risks; ensure the impact on the natural or historic/listed environment is minimal.

Rescue equipment

Rescue equipment can be effective in offering buoyant support to someone who may be in the water for a while, or extend the reach of a person on land. Life-rings, throwlines and poles are the most common equipment used. Challenges to overcome for the manager include theft and vandalism, effective inspection and monitoring regimes. At the time of drafting, a British Standard working group has convened to develop guidance.

Activity and people based

Lifeguarding

Active supervision by way of trained, qualified and adequately staffed lifeguards has shown to be an effective strategy to prevent drowning.

Zoning

Zoning can be particularly effective in managing conflict in terms of visitor needs and strict safety terms, for example dog walkers not allowed on beaches at set times, and the separation of swimmers, watersports and powered boats. Zoning can be fixed and reactive; as such, it will require some level of staffing resource to monitor. Communicating the zoning decision at an early and correct point will offset conflict and unwanted behaviours. For example, it is far preferable to inform people that there should be 'no swimming at this spot' when they arrive at the car park, rather than after the 10-minute walk to the beach.

Emergency response

Although not strictly a control to be counted upon by the manager, emergency plans should be developed and tested for foreseeable incidents. This will allow the duty holder to be clear on the steps that will be taken, when and by whom, and create good partnerships ahead of a major event. Further advice and support are available from the local Coastguard and Civil Contingencies Forum.

Information based

Safety signs and flags

Flags and safety signs are a familiar and important communication method on beaches. Their use requires active staffing to maintain the information so that it is accurate and timely. The accepted norms for flags are set out by the International Lifesaving Federation, and guided by the International Standard ISO 20712-3:2014.

Safety signage is the symbols, images and short text informing of a hazard, action to take, or rule or safe condition. These can be fixed permanently; as such, the level and detail of information need careful thought as to how it will be perceived and acted upon. Caution needs to be exercised with regard to informing of obvious or 'non-actionable' messages, for example a hazard warning for 'water' opposed to 'dangerous current'. Symbols are subject to ISO 20712-1:2008.

Community awareness and resilience

Ensuring that visitors can undertake risks voluntarily is largely dependent on them being aware of and understanding the risks, and messages conveyed – such as a 'red flag' relating to the beach – so that they can make an informed decision on the risks they choose to take. This information is distinct from, but aligned to, safety signs and flags, seeking to convey accepted norms and explaining what and why a hazard can be life threatening. Ensuring that the messages given are evidence-based, and can be clearly understood by a broad range of visitors, are essential.



Maritime &
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