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“Sportscover is delighted to be working in partnership with Surf Life Saving GB (SLSGB) and Royal Society for the Prevention of Accidents (RoSPA) in providing this important work that should help to reduce the risk of injury and loss of life. We share the commitment of our partners to making our beaches and waterways a safer place for all to enjoy.”

Steve Boucher, Director
Marketing & International Development, Sportscover
FOREWORD

The publication of this guidance document is testament to the commitment from those involved with water-based sporting events to deliver the highest possible standards for their participants. As the charity of 6000 volunteer lifesavers, there are many calls on the services of SLSGB lifeguards to support the increasing appetite for water-based events, as well as supporting our own growing life saving sport programme. There have been a number of occasions that we and our members have been concerned about varying standards of event water safety management, often driven by the need to reduce costs and therefore cover. This document aims to ease that conflict and create an overarching strategic framework that sits across a variety of sporting disciplines. Without the commitment to safety and watersports by a number of leading organisations we would not have been able to create this guide. In particular, the research, authoring and publication of this document would not have been possible without the support of RoSPA and Sportscover, to whom we offer our grateful thanks.

ESTHER PEARSON, CHIEF EXECUTIVE SURF LIFE SAVING GB

ACKNOWLEDGEMENTS

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Contributors: Mark Smith (Colwick Park Lifeguards), Robbie Warrington (Royal National Lifeboat Institution), Andy Goodsell (British Canoe Union), Peter Gaisford (UK Surf Rowers League), Uly Farrager (Event Water Safety GB), Martin Suzan (Swimsafe), Richard Gowers (British Kite Surfing Association), David Hooper (British Triathlon Association), Alex Jackson (Nova), Prof. Mike Tipton (Portsmouth University), Tom Neal (Amateur Swimming Association), Ian Reed and Marcus Baille (Adventurous Activities Licensing Authority), John Payne (HLF Law), Eddie Grant (University of Derby), Damian Hall, Dave Read (British Professional Surfing Association), Andy Cox, Chloe Paterson (No Fuss events), John Clark for initial desktop and field research, Alison Spears Health and Safety Executive.

Authors: Andrew Byatt, David Walker, Nathan Davies.
OVER THE LAST DECADE THERE HAS BEEN HUGE GROWTH IN THE VOLUME, SCALE AND TYPES OF EVENTS ON OFFER THROUGHOUT THE UK AND ABROAD. MUSIC AND LARGE SCALE SPORTING EVENTS HAVE COME TO DEFINE THE BRITISH SUMMER. CHALLENGE AND SPORTING EVENTS ARE THE FOCUS FOR TENS OF THOUSANDS OF PEOPLE – BOTH THOSE NEW TO EVENT PARTICIPATION AND THOSE LOOKING FOR AN INSPIRING CHALLENGE.

Water-based events provide benefits for the participants, organisers and wider community. They have become one of the main vehicles for charitable fundraising and raising awareness of good causes, whilst providing brand exposure for both the sport and corporate partners. Importantly, they can provide a much needed goal to challenge sedentary behaviours and lifestyles, whilst offering a route into a new sport for beginners. They are also central to how our future Olympic and elite athletes are developed and tested, through events that often cannot be found in a single club or community.

One of the less welcomed aspects of this growth is the sometimes variable safety provision that has occurred; there have been a few notable near miss events in the UK, and fatalities involving participants. Although rare, these incidents are growing in likelihood with the rise in participation and absence of national guidance for water safety at events.

Another concern is the perception, or even reality, of a risk averse culture developing. Preparatory scoping indicated that a number of events were reportedly cancelled due to non-specific ‘elf-n-safety’, insurance or civil litigation fears.

Therefore, our first priority with this project was to do no further harm; second, to address the misunderstandings and concerns when running water based events and third, to bring together and showcase the good practice that does happen within a common framework.

SCOPE

The guidelines within this document are relevant to organised or public open water sports (recreational) activity. The principal activities to which this document relates are the activities of open water swimming, triathlon, surfing, rowing, canoeing, paddle boarding, surf life saving sport and kite surfing - taking place on both inland and coastal waters.

The information contained within this document is intended to be a useful aid to managing safety at a water based event. There is no compulsion to follow this information, nor is there one single approach that should be considered as ‘best practice’.

The use of the terms; should, consider, good or best practice are the opinions of the authors only, and as such do not carry any legal compulsion. Where existing UK law, regulation or code exists we highlight these.

Voluntary organisations such as sports clubs and those running smaller events will be able to draw useful guidance from this document. However, much of the complexity that surrounds public events might not always be applicable; if in doubt, you should contact your sport’s national governing body and/or the local authority event safety advisory group who can give you further information on the local arrangements and specific permissions required.

The information which follows has been developed through a combined approach using desktop research, interviews and reviews of leading events in both the UK and abroad. Workshops with expert groups were held throughout the research and drafting to ensure a balanced approach.
LIMITATIONS
This guide is focused on the management of participants on or in the water, and those spectators who are directly adjacent to it. The water activity may be the main focus of the event, but other elements will need to be considered, most notably managing large crowds, music and noise, camping, selling alcohol and gambling. We have excluded these considerations from this document as they are covered comprehensively elsewhere. The best source of advice on these issues can be found on the HSE website www.hse.gov.uk/event-safety/

There is a great deal of existing guidance for those who are managing large scale land-based events. In this guide, we have restricted ourselves to highlighting the key principles and information required to effectively manage event water safety, whilst including only the critical elements of the broader event project management process required to deliver an event.

Where possible, we point the reader to the existing generic guidance or useful further information.

This guide is structured so that it can be read in sequence, or referred to at the relevant stage of your project.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>AALA</td>
<td>Adventurous Activity Licensing Authority</td>
</tr>
<tr>
<td>AALS</td>
<td>Adventurous Activity Licensing Scheme</td>
</tr>
<tr>
<td>ACOP</td>
<td>Approved Code of Practice</td>
</tr>
<tr>
<td>ARA</td>
<td>Amateur Rowing Association</td>
</tr>
<tr>
<td>ASA</td>
<td>Amateur Swimming Association</td>
</tr>
<tr>
<td>BCU</td>
<td>British Canoe Union</td>
</tr>
<tr>
<td>BKSA</td>
<td>British Kite Surfing Association</td>
</tr>
<tr>
<td>BSAC</td>
<td>British Sub Aqua Club</td>
</tr>
<tr>
<td>BTA</td>
<td>British Triathlon Association</td>
</tr>
<tr>
<td>CRT</td>
<td>Canal &amp; Rivers Trust</td>
</tr>
<tr>
<td>EAP</td>
<td>Emergency action plan</td>
</tr>
<tr>
<td>ENT</td>
<td>Ear, nose and throat</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Act 1990</td>
</tr>
<tr>
<td>FRRO</td>
<td>Fire Regulatory Reform Order</td>
</tr>
<tr>
<td>HASAW</td>
<td>Health &amp; Safety at Work etc. Act 1974</td>
</tr>
<tr>
<td>HSE</td>
<td>Health &amp; Safety Executive</td>
</tr>
<tr>
<td>IRB</td>
<td>Inshore Rescue Boat</td>
</tr>
<tr>
<td>MAIB</td>
<td>Marine Accident Investigation Branch</td>
</tr>
<tr>
<td>MCA</td>
<td>Maritime Coastguard Agency</td>
</tr>
<tr>
<td>METHOD STATEMENT</td>
<td>A method statement is a document that gives specific instructions on how to safely perform a work-related task, or operate a piece of plant or equipment.</td>
</tr>
<tr>
<td>MHSWR</td>
<td>Management of Health &amp; Safety at Work Regulations 1999</td>
</tr>
<tr>
<td>NGB</td>
<td>National (Sports) Governing Body</td>
</tr>
<tr>
<td>NWSF</td>
<td>National Water Safety Forum</td>
</tr>
<tr>
<td>NOP</td>
<td>Normal operating procedures</td>
</tr>
<tr>
<td>PRC</td>
<td>Powered Rescue Craft</td>
</tr>
<tr>
<td>PWC</td>
<td>Personal Water Craft</td>
</tr>
<tr>
<td>RESCUE TUBE SWIMMER</td>
<td>A swimmer trained to rescue people whilst swimming and using a rescue tube.</td>
</tr>
<tr>
<td>RESCUE WATER CRAFT (RWC)</td>
<td>A jet powered craft used to perform rescues, also known as personal water craft when not used for rescue purposes.</td>
</tr>
<tr>
<td>RIDDOR</td>
<td>Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations 1995</td>
</tr>
<tr>
<td>RLSS UK</td>
<td>The Royal Life Saving Society UK</td>
</tr>
<tr>
<td>RNLI</td>
<td>The Royal National Lifeboat Institution</td>
</tr>
<tr>
<td>RoSPA</td>
<td>The Royal Society for the Prevention of Accidents</td>
</tr>
<tr>
<td>SCA</td>
<td>Scottish Canoe Association</td>
</tr>
<tr>
<td>SLSGB</td>
<td>Surf Life Saving Great Britain</td>
</tr>
<tr>
<td>VSCG</td>
<td>Visitor Safety in the Countryside Group</td>
</tr>
<tr>
<td>WATER SAFETY COVER OPERATORS</td>
<td>Reference to individuals or groups operating as water safety cover for events.</td>
</tr>
</tbody>
</table>
MANAGING EVENT WATER SAFETY
BACKGROUND

In the UK, the law consists of legislation that is enacted by Parliament (“Statutory law”) and other principles that have developed through cases being brought before the courts (described as the “Common” or “Civil” law). Organising a water sports event requires at least a basic knowledge of some of the requirements of both elements of the law.

There is a lot of focus on HASAW. This Act will only be of relevance where there is employment and a recognised ‘undertaking’. However, the principles that are set out form a useful basis to defend against action being taken under Civil law.

Event organisers must ensure that they comply with all their legal obligations. The total legal framework is too broad to be covered in this document. The legal framework for water based events encompasses licensing acts, environmental protection, statutory nuisances such as noise and light pollution, emergency and fire. Other specific maritime and inland water laws will also apply depending on the nature of the event.

Of course, all landowners, event organisers and individuals taking part should be aware of their duties and the event management project plan should ensure that these obligations are satisfied.

KEY ROLES AND DUTIES

The roles identified below are generally identified throughout the event project life cycle. In practice, one individual or organisation can conduct more than one of these roles and they can, of course, change over the event project life cycle.

What is important is that the project team members holding these roles are aware of their obligations and that arrangements are made to satisfy them and make sure the event is safe, rewarding and enjoyable.
### Organisational Roles

**Land and Water Owners**
- Land and water owners have an obligation to ensure that activities that are carried out on their land are conducted safely and without damage to the environment.
- Those undertaking the activities should be competent.
- Statutory bodies and national organisations often have a duty to promote recreational activities on their land.

<table>
<thead>
<tr>
<th>PRIMARY LEGAL RESPONSIBILITIES</th>
<th>COMMON LAW</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health and Safety at Work etc. Act 1974</td>
<td>Occupiers Liability Act 1957, 1964</td>
<td>The extent of this duty depends on the nature of the location and the activity being conducted.</td>
</tr>
<tr>
<td>Sections S2, S3, S4 (HASAW)</td>
<td>Occupiers Liability (Scotland) Act 1960</td>
<td>The responsibilities for water based and land side activities are likely to be different, especially for coastal and marine activities.</td>
</tr>
<tr>
<td>Environmental Protection Act 1990</td>
<td>Defective Premises Act 1974, (S4)</td>
<td>If you own or are in sole possession of the premises you are the occupier. If you retain no rights to possession and hand over the premises, then you are no longer the occupier. If there is more than one occupier, each owes a duty of care that is in relation to the degree of control they have over the premises.</td>
</tr>
<tr>
<td>Town and Country Planning Act 1990</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Countryside Rights of Way Act 2000</td>
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</tbody>
</table>

### Event Organiser
- This body/individual is the entity which takes ultimate responsibility for ensuring that the event is suitable planned and managed in line with legal obligations.

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<thead>
<tr>
<th>PRIMARY LEGAL RESPONSIBILITIES</th>
<th>COMMON LAW</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>HASAW S2, S3, S37</td>
<td>Occupiers Liability Act 1957, 1964</td>
<td>Whoever undertakes this role must ensure that they are aware of their obligations and can discharge them fully.</td>
</tr>
<tr>
<td>Management of Health and Safety at Work Regulations (MHSWR)</td>
<td></td>
<td>As a minimum, the individual or organisation which accepts this role should be competent.</td>
</tr>
</tbody>
</table>

### Individual Roles

**Event Safety Adviser**
- This role is normally identified as a single individual who ensures that all aspects of the event are delivered safely.

<table>
<thead>
<tr>
<th>PRIMARY LEGAL RESPONSIBILITIES</th>
<th>COMMON LAW</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>HASAW S7, S8, S36</td>
<td></td>
<td>This role is normally allocated to one person.</td>
</tr>
<tr>
<td>MHSWR</td>
<td></td>
<td>This person must satisfy themselves and the other stakeholders that they are competent to undertake the role.</td>
</tr>
<tr>
<td>Environmental Protection Act 1990</td>
<td></td>
<td>They should have and be able to demonstrate sufficient experience, seniority, personal integrity and authority to deliver the responsibilities entrusted to this important safety role.</td>
</tr>
<tr>
<td>Fire Regulatory Reform Order 2005 (FRRO)</td>
<td></td>
<td>Normally this person will work under the instruction and guidance of the event safety manager.</td>
</tr>
<tr>
<td>Noise Act 1996</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Water Safety Manager**
- This role is normally identified on larger events where the event safety manager needs specific water experience and competence. This person subordinately accepts the same responsibilities as the event safety manager, but solely for activities that occur on the water.

<table>
<thead>
<tr>
<th>PRIMARY LEGAL RESPONSIBILITIES</th>
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<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>HASAW S7, S8, S36</td>
<td></td>
<td>This person is often combined with the ‘field of play manager’ e.g. umpire/referee of the event.</td>
</tr>
<tr>
<td>MHSWR</td>
<td></td>
<td>This person should have, and be able to demonstrate, sufficient experience, seniority, personal integrity and authority to deliver the responsibilities entrusted to this important safety role.</td>
</tr>
<tr>
<td>EPA 1990</td>
<td></td>
<td>Normally this person will work under the instruction and guidance of the event safety manager.</td>
</tr>
<tr>
<td>Various Marine, Port, Docks and Reservoir Legislation exists and may well apply; depending on the location of the event.</td>
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Section 2 of the HASAW establishes duties of employers to employees; section 3 establishes duties toward non employees (ie. the public) affected by the undertaking, section 4 establishes duties upon controller of premises. For more information on the HASAW see further reading information in the appendices.

http://www.legislation.gov.uk/uksi/1999/3242/contents
http://www.legislation.gov.uk/ukpga/1984/3
http://www.legislation.gov.uk/ukpga/Eliz2/8-9/30/contents
Section 37 of the HASAW covers offences by the corporate body.
# LEGAL CONTEXT

<table>
<thead>
<tr>
<th>ROLE</th>
<th>CONTEXT</th>
<th>PRIMARY LEGAL RESPONSIBILITIES</th>
<th>COMMON LAW</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>Employees are those acting under the instruction and control of the Event Manager and management staff. They may not actually be directly employed. Employees must act responsibly and make the event management team aware of anything that could affect the safety of staff and the general public. They must also ensure that they do not misuse anything provided for health and safety purposes.</td>
<td>HASAW S7, S8</td>
<td>Employees must be made aware of their obligations and responsibilities by their employer. This is normally completed via an induction and briefing session before the event starts.</td>
<td></td>
</tr>
<tr>
<td>Volunteers acting for the event manager</td>
<td>Volunteers may be organisations or individuals. They accept many of the responsibilities within the role they accept to deliver.</td>
<td>HASAW S2, S3, S4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attendees and spectators</td>
<td>Members of the public are expected to follow the instructions provided to them by the event organisers and have duties and may be held in breach of Sections 8 of the HASAW if they intentionally and recklessly interfere with, or misuse, anything provided in the interests of health, safety or welfare in pursuance of any of the relevant statutory provisions. It is expected that participants in events will act in a responsible manner and conduct themselves accordingly, particularly if they have significant experience and training. Dangerous and violent actions may also be considered criminal acts under other legislation, depending on the situation.</td>
<td>HASAW S8</td>
<td>The duty regarding the public’s actions and responsibilities to themselves and each other is an area of law that is constantly changing. The recent Poppleton versus Trustees of Portsmouth Youth Activities Committee case established the courts current attitude to people voluntarily undertaking an activity which involves some risk. If people want to climb mountains, go hang gliding, or swim or dive in ponds or lakes then it is their affair. There is no duty to protect against obvious risk or self inflicted harm. In delivering his judgement, Lord Justice May said “Adults who choose to engage in physical activities, which obviously give rise to a degree of unavoidable risk may find that they have no means of recompense of the risk materialises so that they are injured”. An increased duty of care exists for children and activity providers cannot rely on parental supervision to absolve the employer from responsibility. (Regina versus Upper Bay Ltd). Consideration should be given to “Persons other than visitors”. This includes uninvited entrants if the occupier has reasonable grounds to believe a danger exists on the premises and the consequent risk is one against which, in all circumstances, he/ she may reasonably be expected to provide some protection.</td>
<td></td>
</tr>
</tbody>
</table>
MANAGING EVENT WATER SAFETY
LICENSING REQUIREMENTS

When it comes to areas of land or water, the area covered by the licence is specific to the location, but when boats and other vessels are used as a venue these are specifically licensed.

Licence arrangements may change during 2013 but at the time of writing, licences can either be permanent or for a fixed period of time.

For one-off events, it is possible to give a Temporary Event Notice, providing that an area of land or craft is not used for more than 15 days in any calendar year and that no more than 499 people attend at any one time. Certain other restrictions apply and it is sensible to obtain legal advice and clarification from your local event safety group if there is any uncertainty.

The event you are running may have ancillary features for guests and visitors. Certain types of event require a licence under the provisions of the Licensing Act 2003. The activities that may require a licence are:

- The performance of a play
- The showing of a film
- Undertaking of indoor sports, boxing or wrestling
- The performance of dance, live or recorded music or similar
- Providing facilities for music, dancing or anything similar
- The sale of hot food after 11pm
- The sale of alcohol

Licences for these activities are location-specific and cannot be transferred from one location to another.

EVENT ORGANISERS SHOULD ENSURE THAT:

- They are aware of the local requirements for licensing by speaking with the local authority and gaining legal advice where necessary
- They have scheduled the 28-day consultation period into their event planning schedule for full licences
- They have scheduled the 10-day notification period to the Licensing authority and police

In some areas, local authorities have implemented Section 94 of the Public Health Acts Amendment Act 1907 which requires that watercraft used to carry passengers for hire must be licensed. This may well occur if watersports are organised at some distance from the shore and organisers wish to provide spectators with a closer view of the action. It is as well to check with the local authority on its specific requirements, or the Maritime and Coastguard Agency in the case of craft at sea or in certain estuaries. There are some exemptions on inland waterways, particularly those owned or managed by the British Waterways Board.
AALA LICENSING

The Adventure Activities Regulations 2004 require that a licence is obtained by anyone organising for young people under the age of 19 years water activities such as canoeing, kayaking, dragon boating, wave skiing, white-water rafting, improvised rafting, sailing, sailboarding and windsurfing which take place on the sea, in tidal waters such as estuaries, ‘turbulent’ inland waters and any other inland waters, such as large lakes, that are more than 50 metres from the nearest land. There are exemptions for voluntary organisations and educational establishments. These regulations may also not apply to sporting events. The purpose of this legislation is to ensure that such activities are undertaken in a safe manner and operations are subject to independent scrutiny by a team of specialist inspectors.

Licence applications are made to the Adventure Activities Licensing Service, which is part of the Health and Safety Executive. The HSE website (www.hse.gov.uk) contains comprehensive details of the licensing scheme, the standards expected of licence holders and the exemptions that apply.

As of April 2012, the continued existence of these regulations became currently the subject of a consultation and they may be abolished in the future in England, but continued in Wales and Scotland. It should be noted that this was never adopted in Northern Ireland.

Event organisers should ensure that:

- All organisations hold appropriate and up-to-date licences for the activities they are concerned with.
THERE ARE A NUMBER OF PRINCIPLES WHICH ARE WORTH CONSIDERING WHEN PLANNING A PUBLIC EVENT IN AND AROUND WATER AND NATURAL FEATURES.

These have been developed by members of the Visitor Safety in the Countryside Group and the National Water Safety Forum; they reflect case law, and working approaches to managing public risk. Whatever the underlying motivation, all event organisers wish to offer a challenging and enjoyable experience to their participants without exposing them to excessive risk.

No activity can be made completely risk free; it is not practical or desirable to aim for an event that is free from safety risks. Uncertainty is an inherent part of adventure and challenge – this includes the possibility of adverse outcomes.

Safety measures need to be developed and considered in their specific context; it is important to recognise that precautions for one group may be seen as undue interference by another. Equally, controls for a group may give rise to risk for others.

Risks created for others need to be informed, and voluntarily taken; those (risks) imposed on participants with little or no awareness or control can only be accepted if they are low. Equally, it is reasonable to expect participants and spectators to exercise responsibility for themselves and not put others in harm’s way.

The activity should benefit all participants; it should also take into consideration the standing community, environment and their needs. Events which could damage ongoing activity need to be carefully considered and developed in partnership, if at all.

Safety is a matter of judgement – very rarely an absolute matter – and perceptions of the same hazard or risk can vary enormously depending upon the person or group considering it.
MANAGING EVENT WATER SAFETY

[Image of people in the water, possibly during a water safety training exercise.]
THE APPROACH TO PLANNING AND ORGANISING IN ORDER TO MANAGE RISKS TO SAFETY IS ESSENTIALLY THE SAME AS IS NEEDED TO MANAGE THE FULL RANGE OF RISKS THAT THE EVENT MANAGER TAKES ON. IN THIS CHAPTER WE OUTLINE A MODEL AND EXPLORE SOME OF THE KEY QUESTIONS AND MILESTONES THAT NEED TO BE ADDRESSED.

In short, to plan a safe and successful event the event manager needs to have arrangements in place to be able to answer these questions, at each key stage:

- What?
- Where?
- When?
- Who?
- How?
- Why?

RESPONSIBILITIES AND PERMISSIONS

The event organising body is primarily responsible for ensuring safety at the event. It may engage and direct the services of an event manager, safety adviser and water safety manager to lead on certain areas in larger events. In smaller events, the roles may sometimes be combined; for example, the safety adviser and water safety manager may well be the same person, but they may refer to other groups or individuals for further advice.

LANDOWNER / TEAM AND STEWARDS

Depending on the nature of the event the following planning points are important to consider:

TIMESCALES

It is good practice to start organising several months before the event; with large events the time period may need to be longer, for smaller events the timescales may be much shorter.

Events that require permission from landowners, statutory authorities (police, fire, local authority, etc.) or the local event safety group will invariably need a greater length of time to develop.

The following is an example of a timeline for a larger scale event; smaller scale events may have significantly adjusted timescales.

An honest and realistic evaluation of time and resources required for the scale of the event must be completed prior to holding an event.

(for extent of legal duties when adopting any of these roles, please see Chapter 4)
DEVELOPMENT STAGE:

At the earliest opportunity...

- Generate an event concept, mapping appropriate aims, benefits, stakeholders, locations, timings, resources, needs and an action plan

Between nine and six months prior...

- Have in place your key organising roles, and start to identify others you may need
- If appropriate, ensure that the local safety advisory group and other statutory authorities have been notified (will you need a temporary event licences, road closures, police presence etc.?)
- Start to think about and plan for significant safety issues (i.e. crowds, novices in water, fire, welfare facilities etc.)
- Notify your sports governing body, speak to the regional or event adviser for the latest guidance or advice (has anyone else run an event like this, can you speak to them and learn from their experiences?)
- Ensure you have appropriate permissions from the landowner or navigation authority
- Develop/update your whole event risk assessment (i.e. how will you fund/market/staff/steward the event)
- Consider seeking/procuring specialist advice on areas that are not within your knowledge or competence
- Check that your dates are viable and don’t clash with other activities in the location or region, and environmental factors such as tide/expected weather (tip: it might be worth holding additional dates in hand)
- Check that your insurance will cover the activities planned
- Think about the profile of competitors and spectators, and with the former consider what approaches (such as age/ability waves) would be best

At this stage it pays to be clear about the what, when and who elements of your plan. The how will change to some extent.

Up to three months prior...

- Start to draft and finalise the event management plan (i.e. who is leading, how and when key elements will arrive/leave, lines of reporting, emergency plans etc.)
- Confirm there are no significant changes (planned or otherwise) to the location, that will impact upon the event
- If appropriate, update the local safety advisory group with firm plans, including any changes since the initial/last contact
- Confirm the numbers of volunteers, stewards and staff, spectators, competitors needed and identify/address gaps in training instruction
- Confirm that you have made all the necessary declarations to your stakeholders (i.e. NGB, insurance broker, landowners, local authority etc.)
- Familiarise yourself with the location, site and physically re-check the site (this can be done as part of the risk assessment process)
EVENT PLANNING

This is often the last-good opportunity to make a big change of plan (the how), after this point, the focus moves onto delivering to your agreed plan, particularly if you need the local safety group to sign off.

Six weeks prior…

- Ensure participants/competitors have the necessary information: travel, parking, prerequisites, or any changes (blogs, mailing lists or Facebook pages are useful for last-minute change notifications)
- Check for any emerging environmental issues such as water temperature, water quality and biological issues such as blue green algae

Two weeks prior…

- Start to finalise the competitor list, and have stand-by or extra competitors in reserve
- Profile competitors and place into waves
- Check that your officials, marshals, stewards, water safety team and equipment are still available and ready
- Confirm your headquarters and key locations are still OK to use

THE LEAD IN:

One week prior…

- Check that the activity on the ground is in line with the event management plan and that the risk assessments are in place
- Monitor the course, weather and local conditions to check if the course or controls need adapting
- Consider running smaller test/training events (such as small group swims, rescue practice)
- Establish if the various contractors are working to plan

THE EVENT:

Immediately before…

- Confirm that the key safety team members understand roles, limitations and communications
- Verify that the controls from the event plan are in place
- Ensure that the key indicators – triggers that something is wrong – from the risk assessment are understood and you are able to act upon them – dynamic assessment – (i.e. a high percentage of non-finishers in early swim waves may indicate a problem with the swim course)

During…

- Monitor performance of the teams and competitors and be prepared to adapt your plans
- Ensure the site breakdown and hand back is run as per the event management plan

After…

- Review against your key milestones (what was good, could have been better or poor?)
- Think about the following points: did you and your suppliers meet contractual obligations; how effective were you in meeting objectives and targets; how effective were you at recognising problems, did you implement learning from previous events?
- Check what the various stakeholders thought?

Questions adapted from BS8901:2007: Specification for a sustainable event management system
THOSE ORGANISING THE EVENT MUST BE IN A POSITION TO MAKE ACCURATE AND EFFECTIVE DECISIONS ON HOW TO PLAN, IMPLEMENT AND ACT, TO ENSURE SAFETY IN THE FACE OF COMPETING DEMANDS.

Those organising the event must be able to demonstrate that they have planned the event adequately and that arrangements are in place.

Planning is critical to success. The purpose of planning is, of course, to ensure adequate arrangements and controls have been implemented. In terms of ensuring the health, safety and welfare of staff, competitors and the public, the action of planning is commonly called 'risk assessment'.

There are many ways of conducting risk assessments. Normally risk assessments will be conducted during three main project elements:

1. **Development stage** – To assist with identifying and mitigating whole event risks (i.e. those factors which could stop the event before it starts such as having no insurance or permissions in place).

2. **Planning stage** – To remove and reduce specific risks with specific elements and activities within the event (i.e. environmental features that have resulted in incidents in the past).

3. **Dynamic stage** – To identify, monitor and deal with conditions and incidents that arise throughout the course of the event (i.e. a change of conditions, emergency events, or a change in resources).

It is critically important to recognise that risks are fluid and that good event managers will constantly balance speculative risks (the cost/benefit of running the event in terms of enjoyment/health/profit etc.) against negative risks (activities leading to death, damage, prosecutions, reputation loss etc.).

There is no 'one size fits all' solution to balancing these risks, but the event manager and risk assessors must understand how to make a balanced and robust decision.

**DEVELOPMENT STAGE**

Good risk management for event managers requires balancing of the risks for the event as a whole and the impact of **water-based** and **land-based** activities.

At this stage, a number of criteria need to be considered and evaluated to determine the viability and parameters for the event. For example:

- **Financial** - Can the event and requirements be financed within reasonable budget?
- **Permissions** - Do you have relevant permissions to use the land?
- **Scheduling** - Are other events likely to negatively affect the risk?
- **Location** - Viability of the scale and type of the event and likely conditions to be experienced?
- **Competencies** - Capability of those running the event operations and relevance to the type of event to be delivered

There may be more to consider at this stage, subject to the needs of your organisation and event to be delivered.

Once these parameters have been agreed, the controls are usually recorded in an event management plan. This written document is then updated in line with changes and amendments to the event.

**A useful approach to help manage these types of issues is to form a stakeholder group.**
PLANNING STAGE
The following four topics are commonly included in effective land-side event management plans:

- Basic information
- Management arrangements
- Location specific arrangements
- Emergency arrangements

These topics have a number of specific elements which should be considered as part of the plan: please see fig. 2.0.

Once these parameters have been agreed, the controls are usually recorded in an event management plan. This written document is then updated in line with changes and amendments to the event.

Consideration should then be given to the specific hazards and risks involved in the water activity. The actual level of risk is specific to each activity and location, but our study identified that critical risk factors can be separated into four distinct elements:

- Water factors
- Physical and biological factors
- Environmental conditions
- Human factors
These topics have a number of specific elements which should be considered as part of the plan:

### DYNAMIC ASSESSMENTS

Even the best laid plans are subject to change. People, weather conditions and other factors can result in unexpected situations developing. Event managers can put in place strategies to help cope with low probability events at the development stage. This could include setting clear limits on controls and identifying triggers for action.

Ultimately, the event manager and water safety manager should be in a position to know how to identify unusual situations and when the capacity to manage is near its limit. A dynamic assessment should then be taken to adapt and apply resources as needed. This could include changing or pausing the event, obtaining extra resources, and even initiating the emergency plan.

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**Fig. 3.0**

In order to evaluate these factors effectively, organisations should consider the expected actions and behaviours of those that will be exposed. This knowledge should then be used to evaluate the level of risk present.
ASSESSING RISK IN PRACTICE

The formal risk assessment process attempts to: enable a proper understanding of potential safety issues; check if measures in place to control are adequate; judge if risks are at an appropriate level; and, most importantly drive action on risks that will cause unacceptable harm. The risk assessment process is an essential part of planning and running a successful event.

The HSE endorses a simple “5 Steps” approach. This approach has its limitations but many organisations find it works. There are many acceptable ways of conducting a risk assessment. It need not be a complicated process.

Assessments usually follow a simple process:

1. Identify hazards
2. Identify who might be harmed and how
3. Evaluate the risks and decide on precautions
4. Record findings and implement them
5. Review your assessment and update if necessary

Whichever risk assessment process is used, the outcome should be that all significant risks are identified and that effective controls are identified.

All risk assessors should remember the following points:

- The aim of risk assessment isn’t to stop any activities, but to enable reasonably foreseeable risks to be reduced and managed to an acceptable level
- The risk assessment document should demonstrate how you are controlling your risks
- The risk assessment should be accurate – this means up to date and based upon relevant standards and facts, where reasonably practicable, and not well intentioned guesswork. It should be conducted by person(s) that are competent – this means they should be aware of the nature of the event, the location and the inherent hazards that can result
- The effort that is needed to conduct the assessment should be proportionate with the level of risk that could result, i.e. higher risk activities will need a more detailed assessment to ensure it is accurate
1. **ESTABLISHING THE LEVEL OF RISK**

The risk assessor needs to decide if there are any significant risks that need to be controlled.

In order to do this correctly, the risk assessor should make sure that they know the standards that are applicable for the event. These standards will likely have been established by:

- Law
- Activity body
- Individual organisations
- Customer expectations
- Local authorities

This knowledge enables you to establish an expectation of the optimum conditions for running the event. When you know this, you can start to evaluate the risk levels.

These risks will be assessed when considering the expected actions and behaviours of those involved in the event.

The most common way of conducting risk assessments is to identify the two main elements of risk:

- The likely **severity** of the harm that might result
- And
- The **likelihood** of that harm occurring.

The likelihood of harm occurring is difficult to predict, however it can be approximated by considering a range of factors:

- Frequency and duration of exposure
- Number of people exposed
- Susceptibility of the individual to the hazard
- Current or (if considering a future event) anticipated level of control exercised over the circumstances in which people are exposed
- Previous history of incidents.

Assessors need to be particularly aware of the interaction between different hazards. For example, in isolation the following may not be significant, but they will have a cumulative effect:

- Low water and air temperature
- Long waiting times
- Strong currents
- Poor visibility
- Low ability levels
- Possibility of minor injuries and in-water obstacles

Assessors need to be aware of the effect of cumulative deviations from the optimum conditions, so that effective assessments can be made on the necessary control measures.

3.1 **The use of risk ratings**

Event risk assessors commonly use a method to score and then rank the risks. The most common method is a 5x5 matrix. Some organisations use 3x3 (High, Medium, Low).

The following example shows a 5 x 5 numerical matrix approach.

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>3</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Severity**

1. Minor damage
2. Minor injury/ill health
3. Serious injury/ill health
4. Major injury/major damage
5. Fatal/catastrophic

**Likelihood**

1. Very unlikely
2. Unlikely
3. Likely
4. Very likely
5. Certain
What is important is that the risk assessor and the event manager agree the action to be taken when particular scores are reached.

Example: 20-25 = completely unacceptable.

Risk assessors must make sure that they are aware of the implications of the scoring system. For example, a certain minor injury scores the same as an unlikely fatality (both score 10), but both hazards clearly have different implications. The number is purely there to assist you to make an informed decision on what controls are needed, if any.

The concepts of ‘reasonably practicable’ and ‘adequate control’ are not always easy to determine and require further exploration.

Determining the correct level of control to apply to a hazard is perhaps the most difficult part of a risk assessment. It is also the most vital.

Each situation and event is different. To get your risk controls correct, the risk assessor requires sufficient knowledge to determine the acceptable risk level to meet.

Competency comes from an understanding of the activities that are to be risk assessed and an understanding of risk assessment techniques, together with judgement in the selection and implementation of suitable controls. These skills come from training, knowledge and experience and are informed by:

Minimum legal requirements (i.e. so far as is reasonably practicable)

Or

Best practice for the Industry (the best examples from within the industry)

This kind of information is generally found from the following sources:

- HSE Regulations
- Approved Codes of Practice and guidance i.e. advice about risk management is available at www.hse.gov.uk/risk/
- Guidance notes
- British Standards (BS, EN, ISO)
- Relevant trades associations and technical literature
- Relevant NGB technical literature
- CD ROM databases and commercial information systems
- The internet, which now provides access to a wide range of technical information
EXAMPLE

Imagine the scenario of an 800m swimming race for 50 elite athletes taking place on a beach. There is clearly a measure of risk associated with swimming in open water. What safety cover would be appropriate?

In order to determine the nature of the safety cover, it would be appropriate to look at the following criteria (as a minimum):

- The venue
- The nature of the course including distance of the swim
- The type of participant

You might conclude that a motorised safety craft together with rescue staff at 50m intervals along the course is appropriate safety cover.

It would be possible to reduce the risk still further by having additional rescue craft, doubling the water rescue personnel and having a helicopter standing by. However, it would be hard to argue that this additional level of control is reasonably practicable in these circumstances.

Now: consider the same event being run at the same location, for the following groups:

- 100 elite athletes
- 50 elite athletes in 10°C water
- 50 junior athletes
- 50 keen amateur swimmers
- 50 elite athletes in water at 5°C

As you know, the event is the same, but the risk is significantly different for each group. The severity of drowning is, of course, the same, but the numbers of people potentially drowning and the likelihood of this occurring dramatically affects the level of risk. Therefore, the appropriate safety cover will be specific and may well be different in each case.
EXAMPLES

The risk assessment process developed by the Scottish Canoe Association for its National Slalom Programme has three components:

1. The generic risk assessment, the control measures for which are largely dealt with by following the SCA control measures

2. A site specific risk assessment completed for each location used by the person in charge of training, coaching or competition

3. The dynamic risk assessment which is on-going throughout the training, coaching or competition and is monitoring such variable hazards as changing weather, water levels, ability and morale of the group etc. This third element of the risk assessment is not documented

[A copy of this assessment template is included in the appendix. With links to case studies].

Surf Life Saving GB has a similar, but slightly different approach for its water-based activities. A full generic risk assessment of activities is undertaken for the event during planning. On each of the event or training session days an SLSGB Analytical Risk Assessment form is completed. This format identifies key factors that have positive and adverse effects on safety and assists the assessor on actions to be taken. Then, during the event, the safety team dynamically assess risk and act accordingly. Typically, this will not be recorded in most events, but larger events may record significant occurrences in an event log.

[A copy of this assessment template and event log is included in the appendix].

Further information on the risk assessments models can be found in HSG195 Event Safety Management and ING 163 (rev 2) – Five Steps to Risk Assessment.
# Example Section of a Risk Assessment for a Swim Event

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activity</th>
<th>Hazard</th>
<th>Likely Harm</th>
<th>S</th>
<th>L</th>
<th>Risk Score</th>
<th>Controls to be Implemented</th>
<th>S</th>
<th>L</th>
<th>Risk Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event phase</td>
<td>Race start – entering the water.</td>
<td>Air temp and humidity.</td>
<td>Hyperthermia</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>Marquee has been provided at start/transition together with water and cold drinks. Waiting time not to exceed 30 minutes on land, any additional time wetsuits removed, or wait in water as appropriate.</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Narrow access and egress from</td>
<td>Injuries due to jostling and</td>
<td>Additional pontoon provided to widen access and</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td></td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>water for swimmers at slipway.</td>
<td>tripping/slipping. Congestion</td>
<td>egress point with sufficient space for participants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Swimming the course 800m.</td>
<td>Exhaustion while competing.</td>
<td>The water temp will be tested on the morning of the swim. Participants have been advised to wear wetsuits; swimming caps are mandatory. Race start location controls and water conditions checks implemented to ensure core temperature managed. Waiting times limited as noted above. First aid and lifeguards patrol route as per event scheme.</td>
<td>4</td>
<td>3</td>
<td>12</td>
<td></td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Poor water quality showing high</td>
<td>ENT infections, stomach upsets.</td>
<td>The event organiser to check existing water samples for analysis prior to the event. Final decision on water quality considered by the organisers and safety team 24 hours in advance of the event.</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td></td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>coliform count.</td>
<td>Increased level of fatigue</td>
<td>Water conditions checked on morning and 2 hours prior to event. Water safety manager to evaluate suitability of conditions before start.</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Wave height unknown but likely</td>
<td>En trance, impalement, spinal</td>
<td>Pre-swim survey will be conducted, including surface and sub-surface checks at the entry and exit points. Route marked by water safety staff and buoys. Beach cleared by volunteers at previous low tide. Canoes stationed at any non-removable debris hazards.</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td></td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>to be approx 2ft.</td>
<td>injury from impact.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Debris likely from flotsam/</td>
<td>Swept off course, exhaustion,</td>
<td>Exact tidal conditions will be checked on day. Alternative course to be identified. Lifeguard patrols to follow group as per rescue plan.</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td></td>
<td>5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>jetsam, fishing nets etc, likely</td>
<td>additional stress on safety team.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>to be found on beach and moving</td>
<td>Marine life e.g. weaver fish</td>
<td>Swimmers advised of the presence. Access egress point and pontoon minimises likelihood of weaverfish. Wetsuits minimise jellyfish stings. First aid to include provision for anaphylaxis treatment. Alternative location as identified above to be checked for these as necessary.</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: This is purely an example of how an assessment could be formatted and contains only a few of the issues that could be considered in a theoretical stage of a triathlon event.
There is usually more than one acceptable option to control risks. When developing controls the following points should be taken into consideration:

- Various options should be evaluated
- Consultation with staff and competitors should take place, to gain their viewpoint
- Ease of management and maintenance of the arrangements
- Effectiveness of the arrangements

Finally, consider the consequence of failure of the control measures, what if they don’t work as expected? Is there a contingency?

**IMPLEMENTING**

The organisations and individuals should be made aware of the contents and recommendations of the risk assessment. Ensure that the assessment doesn’t sit in a folder gathering dust. It contains valuable information. The risk assessment will usually be used for training and assisting contractors and volunteers to be aware of key safety issues. It should, of course, be recorded in the event management.

**MONITORING**

After the assessment has been completed the work to actually implement the controls starts. The event manager and the event water safety manager should work together to develop a programme of monitoring for the controls which have been implemented. Higher risk elements should benefit from closer monitoring to ensure that the controls remain effective. Effective monitoring will be a mix of actions that the controls are in place and working.

They may include a mix of:

- Regular inspections
- Walk rounds/tours of the site
- Inspecting equipment
- Checking that logbooks and/or competitor documents have been correctly completed.

The most effective and simple level of monitoring is conducting regular communications with the event staff. This is critical to effective monitoring.

The event safety manager and the event water safety manager do not have to conduct all these activities themselves, but should be happy they are being done correctly and be aware of the results in good time, so that any necessary actions can be taken.

Some event planners choose to create a physical monitoring plan and a written record that they have successfully conducted monitoring arrangements. This can be useful for reviewing performance and identifying improvements in future events.

**REVIEWING**

The risk assessment should be kept under regular review (see section on dynamic risk assessment). The assessment should be reviewed as part of the event debriefing to check how effective it was in planning and managing the event. A review should also be conducted when there is a reason to suspect that it is no longer valid, or that a significant change has taken place, such as:

- A serious incident
- A serious complaint
- An accident
- A significant change of event, system or methods of control
- A change in the people taking part, or those managing the event
- Updated information from landowners, weather stations etc.
- Relevant local news or information

Copies of the old assessments should be recorded and the findings of the reviewed assessment communicated to the relevant parties.
USEFUL INFORMATION WHEN UNDERSTANDING VARIABLES IN RISK AND CONTROLS

Water-based events provide hazards that are not commonly encountered in many other events or most people’s day to day lives. Many of the hazards are interrelated and may compound or complement each other. Additionally, conditions are likely to be variable from day to day. At the current time, it is not possible to provide generic evidence-based guidance for the specific levels of prohibition in events, especially as the majority of events are based upon the challenge provided by the environment.

The following are common areas that are considered specific to event water safety. The table aims to highlight the nature of variability within each hazard and provide some commentary/advice for individuals who may not realise the level of complexity of managing a water based event. It is important to recognise that a competent water safety officer should lead on controls for this environment. It is also crucial to recognise that certain combinations of the items mentioned may alter the considerations highlighted. This could be in positive or negative ways and require a judgement to be made for the specific situation. For further details regarding sport specific information and safety training requirements for specific environments, please refer to the organisations listed in useful contacts.
Table 1 – Examples of variability in risk effects

<table>
<thead>
<tr>
<th>ITEM</th>
<th>EXAMPLE OF VARIABILITY</th>
<th>RISK EFFECTS</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of sport</td>
<td>Body surfing and surf swimming, Canoeing, Kite surfing, Open water swimming, Paddle boarding, Rowing, Skim boarding, Ski paddling, Stand up paddle boarding, Surf boat rowing, Surfing, Wave ski, Windsurfing</td>
<td>Data not available at the current time for level of risk</td>
<td>Note typical risks and implement rules highlighted by sporting NGB and sub categories of activity. If no NGB, then analyse the type of activity for significant risks. A key area of concern is swimming ability. It is good practice to ensure the swimming ability of craft users to enable self rescue in prevailing conditions. Water confidence can be equally important e.g. in rowing where competitors, ideally, should have carried out a practice capsize drill. Scutineering of a sample of equipment to ensure it meets required safety standards is used by some organisers.</td>
</tr>
</tbody>
</table>
| Type of participant           | Novice for conditions and sport, Basic competence for conditions and sport, Experienced in conditions and sport, Advanced for conditions and sport, Highly advanced for conditions and sport | Decreased risk | Check current level according to prevailing environmental conditions and type of sport according to:  
- Physical readiness  
- Technical and tactical skill readiness  
- Mental readiness  
- Self-rescue and swimming capability  
- Capability to communicate/signal for assistance  
Note: when participants are likely to be unable to swim/self rescue, buoyancy aids should be worn. |
| Number of participants in the water at any one time | 2000+, 1000-2000, 500-1000, 200-500, 100-200, 50-100, 10-50, 0-10 | Decreased risk | Separate groups out into waves of similar ability participants or increase level of safety cover.  
It may also be appropriate to consider transition areas on land or in water, for multidiscipline events. |
<p>| Past history of event         | First time event, High casualty/severity rates, Moderate casualty/severity rates, Low casualty/severity rates | Decreased risk | Ask organisers of similar events for advice and experience to guide level of controls. Where unable to gain access, analyse similar events as available. |
| Distance of event             | More than 15000m, Up to 15000m, Up to 2000m, Up to 400m, Up to 200m, Up to 50m, 5-20m | Decreased risk | Events covering longer distances may benefit from check points. Water based events should log participant in and out. An EAP and search strategy for multi day events to be implemented for any individuals not accounted for. Some events may be considered at increased risk of accidents if distance is reduced. For example, large numbers of participants within a short distance course could elevate risk of collisions. The numbers given as an example here are indicative of increased duration and distance and may be considered to increase risk combined with other variables. |
| Medical conditions identified | Yes, No                                                                               | Increased risk | Check whether evidence is available pertaining to high risk medical conditions for the participants. For example, epilepsy is a high risk medical condition for swimmers and surfers. Individual safety cover may be required. Previous heat related illness has a high risk of recurrence in hot conditions. |</p>
<table>
<thead>
<tr>
<th>ITEM</th>
<th>EXAMPLES OF VARIABILITY</th>
<th>RISK EFFECTS</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Swell Size</strong></td>
<td>Surf more than treble over head high</td>
<td>Decreased risk</td>
<td>Topography, swell period and swell height may determine how severe the conditions are and combine with other factors.</td>
</tr>
<tr>
<td></td>
<td>Surf up to double over head high</td>
<td></td>
<td>Level of participant and safety cover competency for conditions is key. Increase safety cover ratios for lower ability levels.</td>
</tr>
<tr>
<td></td>
<td>Surf up to head high</td>
<td></td>
<td>Selection of appropriate equipment for conditions is important, e.g. IRB, paddle boards, RWC for more severe conditions. White water and blue/green water can make it difficult to see participants. Use bright colours such as fluoro-yellow or pink for hats or upper body, where appropriate.</td>
</tr>
<tr>
<td></td>
<td>Surf/chop up to waist high</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flat water</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Wave type</strong></td>
<td>Surging</td>
<td>Each has unique hazards</td>
<td>As per swell size, Selection of tube swimmers is more appropriate than craft in large packs of swimmers than placing craft in the middle. Craft should have the ability to deploy competent rescue swimmers, where craft would be unsuitable/unable to affect rescues.</td>
</tr>
<tr>
<td></td>
<td>Spilling</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plunging</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water depth</strong></td>
<td>Under 1m</td>
<td>Each provide unique hazard and level of risk</td>
<td>Identification of shallow areas is key to avoid impact. e.g. buoys identify shallow areas for kite surfing events. Events out of depth may need to check swimming ability of participants using craft or implement other controls.</td>
</tr>
<tr>
<td></td>
<td>1 - 2m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3m - 4m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5m+</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Strength of currents, rips, flow, tide</strong></td>
<td>Very strong</td>
<td>Decreased risk</td>
<td>Some events use currents, rips and tides as part of the challenge or for tactical reasons and are accepted, providing other controls are in place.</td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td></td>
<td>The areas are often good spots for members of safety cover to be placed to allow rescue of stray participants. Some event organisers choose to start races into the prevailing current. Also, timing events with tidal changes is sometimes of benefit.</td>
</tr>
<tr>
<td></td>
<td>Moderate to strong</td>
<td></td>
<td>Loggimg of participants in and out of the water is standard practice at events to ensure that all participants are accounted for.</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weak to Moderate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None to weak</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sea/river bed and beach conditions</strong></td>
<td>Soft sand</td>
<td>Each provides unique hazard and level of risk</td>
<td>Briefings should highlight entry and egress point hazards. Courses may attempt to avoid or highlight areas with markers such as coloured buoys. Note: special rescue equipment and skills to release people from muddy/silt conditions are required.</td>
</tr>
<tr>
<td></td>
<td>Firm sand</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sand and stone</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stone</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reef and rock</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mud/silt</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Wind direction</strong></td>
<td>Onshore</td>
<td>Each provides unique hazard and level of risk</td>
<td>Wind has the potential to create different surface conditions. Choppo conditions may make craft more difficult to handle and breathing more difficult when swimming. May blow craft towards rocks or cliffs. Offshore conditions can look safer, but blow participants away from shore and make returning on a final leg more difficult.</td>
</tr>
<tr>
<td></td>
<td>Cross shore</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Off shore</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Wind strength</strong></td>
<td>Very strong</td>
<td>Decreased risk</td>
<td>Starting events into prevailing winds is good practice where appropriate, but may be contradicted by other environmental conditions such as currents or tide.</td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td></td>
<td>Have limits for wind strength e.g. the British Kite Surfing Association implements a minimum wind speed of 8knots and maximum of 30/35knots.</td>
</tr>
<tr>
<td></td>
<td>Moderate - strong</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Light - moderate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None - Light</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### ITEM EXAMPLE OF VARIABILITY RISK EFFECTS CONSIDERATIONS

#### Water quality*

<table>
<thead>
<tr>
<th>EXAMPLE OF VARIABILITY</th>
<th>RISK EFFECTS</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td></td>
<td>Check with the Environmental Agency regarding quality and advice for designated bathing waters. For other waters, the local authority health department should be contacted as the body responsible for guidance on water related health issues. Provide advice to participants and safety cover. Recommend showering/good hygiene after participation. Events should not be held in water of questionable quality. Organisers should seek expert advice/ensure appropriate water tests are undertaken where water quality is highlighted as a significant risk.</td>
</tr>
<tr>
<td>Sufficient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Water temperature

<table>
<thead>
<tr>
<th>EXAMPLE OF VARIABILITY</th>
<th>RISK EFFECTS</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate-warm</td>
<td>Caution</td>
<td>Cold water shock is a danger on sudden entry to water, causing a sharp inhalation (potentially of water) which could result in drowning. Also both hypo/hyperthermia are risks in high and low temperature. Wetsuits or acclimatisation periods may be required to certain temperatures. See NGB guidance. E.g. controls should be considered when swimming in under 14°C for more than 350 metres or over 20°C. Provide drink stations and shade in hot conditions.</td>
</tr>
<tr>
<td>Cold (typically below 14°C)</td>
<td>Both have potential to lead to death</td>
<td></td>
</tr>
<tr>
<td>Warm/hot (typically above 20°C)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Physical objects, other water users

<table>
<thead>
<tr>
<th>EXAMPLE OF VARIABILITY</th>
<th>RISK EFFECTS</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powered marine water traffic or personal water craft in area</td>
<td>Increased risk</td>
<td>Avoid powered craft without prop guards coming in close contact with swimmers. Map significant underwater hazards at low water levels or tides and mark out with buoys or safety cover or identify with safety briefings. Zone areas where certain craft may not enter. Have EAPs in place if debris arrives on course during event. Check course pre event and engage with other water users to highlight requirements, as appropriate.</td>
</tr>
<tr>
<td>Hidden hazards underwater</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solid debris</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sail or hard non-powered craft in area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other water users in area with or without equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sea or river weed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Adverse weather

<table>
<thead>
<tr>
<th>EXAMPLE OF VARIABILITY</th>
<th>RISK EFFECTS</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storms</td>
<td>Increased risk</td>
<td>Ensure that all competitors are visible on the course. Note that water users are struck by lightening each year, in the UK. Implement a 30/30 rule for lightning i.e. events do not continue until thunder and lightning are more than within 30 seconds of each other, for a period of more than 30 minutes.</td>
</tr>
<tr>
<td>Thunder and lightning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fog/mist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Man made and surrounding structures

<table>
<thead>
<tr>
<th>EXAMPLE OF VARIABILITY</th>
<th>RISK EFFECTS</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sluice gates</td>
<td></td>
<td>Briefings to highlight these hazards and how to approach/ not approach them should be in place. Courses may attempt to avoid or highlight areas with markers or have restricted access. As with all areas, check to see if the safety team and adviser’s competencies cover such risks, as appropriate.</td>
</tr>
<tr>
<td>Weirs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strainers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridge parapets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pontoons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harbours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inlets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groynes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** in some events there may be considered to be a significant effect on the wider ecology of the area for factors such as fisheries, biodiversity and impact on wildlife. Check locally to see if there are special considerations for your event, relative to its scale and sensitivity of the environment being used.

* Water quality information is now available as part of bathing beach water quality classifications and from 2015 will be required to be displayed at all designated bathing beaches under terms of the revised EU bathing water directive. Details can also be found on the EA Website http://environment.data.gov.uk
WATER SAFETY COVER

Water safety cover at events is usually broken down into a number of functions to be provided across a team, typically of at least two persons, consisting of:

- Lead water safety officer
- Water safety cover operators

The cover should provide both pro-active and reactive functions:

**Pro-active:**
- Undertaking a risk assessment of the venue and proposed event
- Provision of information to the event team and competitors
- Directing competitors in the water
- Advising the event manager on course layout and site suitability
- Conducting a pre-event survey
- Removal of objects from a course
- Steering competitors away from hazards
- Supervision of spectators
- Provision of method statements and an SOP and EAP to the event manager for water safety
- Liaison with emergency services

**Reactive:**
- Support of exhausted competitors
- Extraction of a participant/casualty
- Medical emergency response
- Emergency evacuation of a specified area
- Missing person protocol
MANAGING EVENT WATER SAFETY
COMPETENCY CONSIDERATIONS AND THE WATER SAFETY TEAM

An individual acting as water safety cover has a duty to be able to complete water safety cover functions. Where the competency of an individual in a water safety team function has not been assessed, they should be considered to potentially add to the liability of the safety cover. Experienced water safety teams often use qualified and experienced safety cover to ensure minimum standards are in place, and complete the relative functions. Competence to undertake relevant functions should be measured. This should ensure suitable and sufficient skills, knowledge and experience. For example, within the expected environmental conditions for the event, the following should be considered:

All members of the water safety team must evidence appropriate:

- Fitness and skill requirements for safety cover function and equipment used in the prevailing conditions
- Knowledge and understanding of the environment in which the event is taking place.
- The ability to recognise potential problems and act proactively
- Use of appropriate equipment and clothing
- Equipment checks and handling
- Self-rescue in the prevailing conditions
- Communication for assistance required

The water safety team is a collective unit. Within it, there must also be suitable and sufficient competence to:

- Identify signs of those in difficulty or requiring further first aid and medical assistance
- Undertake appropriate surveillance of those in, on or near the water
- Communicate appropriately using agreed methods
- Follow an agreed safety plan and emergency action plan
- Releases and/or avoid dangerous situations with a panicking casualty/casualties
- Dive to investigate a submerged object or casualty (to reasonable depths, where there is significant risk of individuals needing recovery from below the surface of the water)
- Safely support a conscious casualty
- Safely support an unconscious casualty using appropriate equipment
- Rescue unconscious casualties to safety/shore
- Competence in relevant water based rescue and resuscitation protocols
- Undertake first aid and resuscitation skills
- Carry/transport a casualty for further attention

COMPETENCY RELATED TO PERSONAL SAFETY IS PARAMOUNT. IT IS A REQUISITE TO BEING AN EFFECTIVE MEMBER OF THE WATER SAFETY TEAM.
• Co-ordinate water safety team and transfer to emergency services
• Demonstrate knowledge of the sport or activity for which they are providing a service
• Monitor situations and make appropriate changes to optimise safety
• Report and record incidents

Typically, each member of the water safety team may demonstrate a level of competence in all areas above. However, it is possible for the functions to be distributed across a number of members in the water safety team. Please note that some of these may be considered interdependent in certain situations and may not be separated.

NGBs and national life saving organisations have a great deal of experience in advising on the appropriate standards of good practice in their respective disciplines, related to the above functions/competencies. Such bodies are a useful resource for event organisers to enable access to pre-qualified and experienced individuals, but please check to ensure relative needs are met for your specific type of event and environment. Examples of these bodies are listed in the appendices.
When providing water safety cover, there are a number of features to take into account guiding the type and level of cover to be provided. This is largely based upon the risk assessment of the event, but is also related to characteristics of the cover around the following:

### Table 2 - Safety cover profile

<table>
<thead>
<tr>
<th>ITEM</th>
<th>EXAMPLES OF VARIABILITY</th>
<th>RISK EFFECTS</th>
<th>CONSIDERATIONS</th>
</tr>
</thead>
</table>
| Participant proximity to safety cover | Participant more than 5 mins and out of sight of safety cover  
Up to 5 mins from safety cover  
Up to 3 mins from safety cover  
Up to 1 min from safety cover  
Within <15 seconds of safety cover | Decreased risk | Propellers without prop guards should not be used to rescue amongst groups of swimmers. Individual swimmers or craft should be utilised to ensure adequate proximity within crowds. When participants go out of sight of safety cover, it is good practice for them to carry additional means of communication. |
| Capacity of safety cover to support conscious participants | 0 participants  
1 participant  
2 participants  
3 participants  
4+ participants | Decreased risk | A swimmer with a rescue tube may be able to support 1 individual, whilst a paddle board with handles may support, for example, 2-3 swimmers. Individuals in craft that are not rescue trained to assist a swimmer may have difficulties in certain situations. Use of check points and logging of competitors passing such marks is essential on long distance, long duration or multiple activity events. |
| Capacity of safety cover to rescue unconscious participants to shore | 0 participants  
1 participant  
2 participants  
3 participants  
4+ participants | Decreased risk | A novice paddler/non qualified paddler acting as safety cover in a canoe may be pulled out of their boat or may not be able to get an unconscious casualty onto their boat and rescue them to shore. They may also not know how to ensure appropriate patient care in the situation. Ensure suitable and sufficient craft are capable of taking casualties to shore safely. |
| Communications | Not able to communicate with team or emergency services for further support using agreed methods.  
Able to communicate between team members or services for further support using agreed methods within visible distance.  
Able to communicate between team members or services for further support using agreed methods beyond visible distance. | Decreased risk | Use internationally recognised standards for signalling and communications to avoid confusion. Use additional equipment where appropriate e.g. use of radio, flares, whistle. |
| Safety cover competence to complete functions | Competency not assessed for function and conditions.  
Below national standard competencies assessed for function and environmental conditions.  
National minimum competencies for function and conditions.  
Advanced competencies for function and conditions.  
Highly advanced competencies for function and conditions. | Decreased risk | Ensure crews are able to complete minimum functions highlighted in this literature under safety cover competencies. Consider ensuring specific higher competencies for more challenging conditions and situations. |
| Confidence of safety cover to deal with situation | Low  
Sufficient  
Good  
Very good | Decreased risk | Members of the safety cover should not be forced to deal with conditions that they have low confidence for. It is normal for some members to be more confident than others and provide cover if they have suitable skills, knowledge and experience. |
A competent lead water safety officer must be selected and be able to evaluate these features relative to the nature of the event. Then select cover accordingly, so the event can become ‘as safe as necessary’.

There is often a mutual dependency between the different types of cover available. An appropriate mix of cover is usually necessary to meet the individual needs of an event. The following tables provide some common examples of cover used in events and some of the associated positive and negative features. They are split into:

- Powered craft (Table 3)
- Manual powered craft (Table 4)
- Swimmers and shore based spotters (Table 5)

Please note: these tables do not provide a comprehensive list, because there are many sub types of safety cover in these examples and many individual considerations that need to be thought out on a case-by-case basis.

### Table 3 - Powered vessels used for water safety cover at events – some commonly associated advantages and disadvantages

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
</table>
| Rescue water craft (RWC) | • Speed of craft allows coverage of large distance in short timeframes  
|                       | • Can be advantageous over propeller driven craft in significantly aerated water or where fast acceleration may be required. e.g. very large surf  
|                       | • Rescue sleds allow a water level access platform for rescue of conscious and unconscious casualties  
|                       | • Increased height increases viewable area compared to using swimmers or lying down on boards  
|                       | • Able to carry communication and additional equipment  
|                       | • Good for providing support to man-powered rescue craft  
|                       | • Only requires a single operator  
|                       | • Useful for conducting searches for missing persons over large areas  
|                       | • Competency assessed driver meeting minimum standards for rescue methods, first aid, communication, risk assessment, manual handling, safe handling and equipment checks  
|                       | • Able to operate in relatively shallow locations compared to some boats.                                                                 | • Heavy, hard craft can cause serious injury on impact even at low speeds  
|                       |                                                                                                                                           | • Requires acceleration and continued movement in a forwards or backwards direction to turn, making it a potential danger and reduces functionality in crowds  
|                       |                                                                                                                                           | • May become a hazard itself when driven at speed or around crowded areas  
|                       |                                                                                                                                           | • Access to craft can be difficult and expensive  
|                       |                                                                                                                                           | • Launching can be difficult and time consuming, as well as requiring specialist equipment/vehicles  
|                       |                                                                                                                                           | • Not as easy for carrying equipment compared to many powered rescue, recreational or commercial vessels  
|                       |                                                                                                                                           | • May require man-powered craft or additional operator/swim based rescuer for support in crowded events  
|                       |                                                                                                                                           | • May not be able to perform surface dives to investigate submerged objects or casualties  
|                       |                                                                                                                                           | • Some areas do not allow RWC or PWC to operate  
|                       |                                                                                                                                           | • Water contamination  
|                       |                                                                                                                                           | • Where there is significant debris in the water, this can be sucked up into the impeller and impair or prohibit function.  

### Rescue boats

- Speed of craft allows good distance to be covered in shorter timeframes than man-powered alternatives.
- Good capacity for rescuing unconscious and multiple casualties to shore.
- Can carry an array of communications and additional equipment.
- A competent crew meeting national standards is able to perform rescues and appropriate techniques in the given environment.
- Useful for conducting searches for missing persons over large areas and sometimes useful in rescuing of larger craft.
- Has two people i.e. coxwain and crew.
- Competency assessed coxwain and crew meeting minimum standards for rescue methods, first aid, communication, risk assessment, manual handling, safe handling and storage and equipment checks.
- Soft hulls or sponsons may reduce risk.

### Recreational or commercial powered vessels and personal water craft (PWC)

- Increased accessibility of available vessels.
- Able to cover reasonable distance in short time frames.
- Able to keep up with faster man powered craft travelling extended distances.
- May potentially carry multiple unconscious casualties and/or craft to safety.
- Able to carry an array of communications and additional equipment.
- Useful for conducting searches for missing persons over large areas.
- Often increased accessibility and affordability compared to a rescue boat and crew.
- Soft hulls or sponsons may reduce risk.

<table>
<thead>
<tr>
<th>Rescue boats</th>
<th>Recreational or commercial powered vessels and personal water craft (PWC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Speed of craft allows good distance to be covered in shorter timeframes than man-powered alternatives.</td>
<td>• Increased accessibility of available vessels.</td>
</tr>
<tr>
<td>• Good capacity for rescuing unconscious and multiple casualties to shore.</td>
<td>• Able to cover reasonable distance in short time frames.</td>
</tr>
<tr>
<td>• Can carry an array of communications and additional equipment.</td>
<td>• Able to keep up with faster man powered craft travelling extended distances.</td>
</tr>
<tr>
<td>• A competent crew meeting national standards is able to perform rescues and appropriate techniques in the given environment.</td>
<td>• May potentially carry multiple unconscious casualties and/or craft to safety.</td>
</tr>
<tr>
<td>• Useful for conducting searches for missing persons over large areas and sometimes useful in rescuing of larger craft.</td>
<td>• Able to carry an array of communications and additional equipment.</td>
</tr>
<tr>
<td>• Has two people i.e. coxwain and crew.</td>
<td>• Useful for conducting searches for missing persons over large areas.</td>
</tr>
<tr>
<td>• Competency assessed coxwain and crew meeting minimum standards for rescue methods, first aid, communication, risk assessment, manual handling, safe handling and storage and equipment checks.</td>
<td>• Often increased accessibility and affordability compared to a rescue boat and crew.</td>
</tr>
<tr>
<td>• Soft hulls or sponsons may reduce risk.</td>
<td>• Soft hulls or sponsons may reduce risk.</td>
</tr>
</tbody>
</table>

- May become a hazard itself when driven at speed or around crowds due to potential impact with prop guards, propeller or solid hulls.
- Reduced function and manoeuvrability compared to boards or swimmers in dense crowds.
- May be unable to provide cover to investigate submerged objects/casualties.
- Water contamination from the boat itself.
- Accessibility and expense.
- Launching can be time consuming, difficult and require specialist equipment/vehicles.
- Powered craft without prop guards are a significant hazard to swimmers.
- Height of the boat side can affect the ease of bringing a casualty aboard requiring additional specific equipment and/or training.
- Requires coxwain and crew to operate.
- Where there is significant debris in the water, this can impair or prohibit the boat’s function.
- Some craft may not be able to operate in shallower locations.
- The boat may pose risk to participants due to potential impact with the prop guard or propeller.

- Pose risk to participants due to potential impact with the prop guard, propeller or solid hulls.
- Powered craft without prop-guards and solid hulls increase the risk to water users.
- May have high sides and require specific equipment to enable easy extraction of casualties from the water.
- Water contamination.
- Personal water craft have similar disadvantages to rescue water craft.
- No measurable competence of users demonstrated and may add to the liability of event safety in certain situations.
- Some craft may not be able to operate in shallower locations.
NATURE OF AN EVENT MAY AFFECT THE CHOICE OF SAFETY COVER

There are specific considerations with the operation of powercraft that should be understood. Different sports may require special training or knowledge. For example, there are specific methods used to rescue kite surfers and their lines, specific methods used around cliffs, specific methods to avoid damaging rowing and canoeing vessels or causing them to capsize, specific methods to pick people up between sets of waves in surf and many more. Make sure your cover understands the nature of the event.

It is important to ensure that the competency of the crew and drivers are adequate for the events to be completed.
Table 4 - Man-powered water safety cover used – some commonly associated advantages and disadvantages

<table>
<thead>
<tr>
<th>MAN POWERED VESSELS FOR SAFETY COVER</th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
</table>
| Trained operators of rescue paddle boards and canoes | • Versatile over short and longer distances  
• Relatively easy to manoeuvre amongst dense groups of individuals  
• Greater height enables greater distances to be seen than when in a swimming position  
• Able to use as a floating platform to support multiple conscious casualties  
• Boards are able to rescue unconscious casualties  
• Boards paddlers are able to investigate submerged objects/casualties and they have demonstrable swimming ability to cover significant distances and timescales  
• Able to implement first aid when taken to shore  
• Competency assessed individuals typically meet minimum standards for fitness and skills, rescue methods, first aid, communication, risk assessment, manual handling, storage and equipment checks. | • Require physically fit operators or support from boats for transportation in longer events or for travelling significant distance at speed is needed  
• Travelling significant distance with an unconscious casualty is better with support of a boat  
• Canoes have limited use in affecting rescues within significant surf conditions and paddlers may not be competency qualified to be able to investigate submerged objects  
• Boards have limited use in affecting rescues within significant white-water rapid conditions  
• Standard single person canoes have limited capacity to rescue an unconscious casualty to safety. |
| Recreational paddle boarders, surfboard users, windsurfers, kayakers | • Can supplement qualified and experienced water safety cover, if appropriate competency to perform the required functions are demonstrated.  
• Easily accessible  
• Can have many individuals providing cover along a course with their craft acting as floating platforms  
• Easy to manoeuvre amongst dense groups of individuals, provided the user is competent  
• Provide floating platform for participants to be supported on. | • May add to the liability of the safety cover if competency levels not demonstrated  
• May not be able to spot or support someone in difficulty  
• May be at risk from the casualty if attempting a rescue  
• May not be able to safely support an unconscious casualty  
• May not be able to communicate appropriately with rescue team  
• Must be supported by qualified competent rescue cover  
• May not be able to investigate submerged objects/swimmers  
• May not be familiar with communication methods  
• May not be able to assure suitability of equipment for its function. |
## Table 5 - Swimmers and land based spotters used for water safety cover at events – some commonly associated advantages and disadvantages

<table>
<thead>
<tr>
<th>SWIM OR SHORE BASED SAFETY COVER</th>
<th>ADVANTAGES</th>
<th>DISADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained rescue tube swimmers</td>
<td>• Able to access difficult to reach areas, that are less suited to craft</td>
<td>• Not able to travel considerable distances or at significant speed</td>
</tr>
<tr>
<td></td>
<td>• Provide buoyancy to support a conscious or unconscious casualty</td>
<td>• Low in the water so ability to see distance is restricted when swimming</td>
</tr>
<tr>
<td></td>
<td>• Able to perform surface dives and retrieve submerged objects and casualties</td>
<td>• Often require support of safety craft to complement their function in a number of situations.</td>
</tr>
<tr>
<td></td>
<td>• Able to support multiple conscious casualties</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Able to support and rescue unconscious casualties</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lifeguard trained individuals able to rescue conscious and unconscious casualties</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Competency assessed individuals typically meet minimum standards for fitness and skills, rescue methods, first aid, communication, risk assessment, manual handling, storage and equipment checks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ability to recognise participants in difficulty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ability to communicate using common methods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Trained to recognise hazards and reduce risk to self.</td>
<td></td>
</tr>
<tr>
<td>Rescue divers</td>
<td>• Very good for investigating submerged objects and casualties</td>
<td>• Not able to travel considerable distances or at significant speed</td>
</tr>
<tr>
<td></td>
<td>• Trained individuals able to support and rescue conscious and unconscious casualties</td>
<td>• Low in the water so ability to see distance is restricted when swimming</td>
</tr>
<tr>
<td></td>
<td>• Competency assessed individuals typically meet minimum standards for fitness and skills, rescue methods, first aid, communication, risk assessment, manual handling, storage and equipment checks</td>
<td>• Often require support of safety craft to complement their function in a number of situations.</td>
</tr>
<tr>
<td>Public rescue equipment e.g. throw bags, throw buoys, lifebuoys</td>
<td>• Useful for rescues from water’s edge when in close proximity to potential casualties</td>
<td>• Limited use in supporting casualties further than 20m from the thrower</td>
</tr>
<tr>
<td></td>
<td>• Able to support a conscious casualty</td>
<td>• Limited use with unconscious casualties, unless water based safety cover is used as an adjunct</td>
</tr>
<tr>
<td></td>
<td>• Can be used by non-trained individuals or the public (with appropriate instructions)</td>
<td>• May injure casualties when thrown to them</td>
</tr>
<tr>
<td></td>
<td>• Useful for safety team when having to access areas not easily accessible by normal means, such as weirs or hydraulics</td>
<td>• Ropes may get tangled and snagged</td>
</tr>
<tr>
<td></td>
<td>• Public spotting may be able to communicate emergencies to water safety cover.</td>
<td>• Public may not be able to communicate or be competent to attempt rescues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Specialist training to use the equipment may be required for certain situations such as weirs and hydraulics.</td>
</tr>
</tbody>
</table>
An example of safety cover at a mass participation swim event

The following shows an example of the mix of cover provided at an event and some of the factors of mutual dependency. This is a point to point swim for 500 novices, over a one-mile course. It is based close to shore and in relatively flat conditions on a sandy beach.

- 3 RWC and Powered Rescue Craft (with prop guards) provide function of covering the large distance of the swim and extracting casualties that may be identified by lifeguards on paddle boards. Also providing post site check and radio communications for water based operators.

- Beach lifeguards on paddle boards allocated in teams per powered craft. Paddle boarders paddling in close proximity to participants and monitoring those in surrounding area as well as giving advice and support, as appropriate (within the event rules).

- Spotters, one placed every 150m along the shore, monitoring any stray swimmers and logging them out of the event if they return to shore, as well as reporting rescue needs to water safety cover, so they can act as appropriate.

- Administrators logging competitors in and out of the event at the beginning and end points.

All teams were briefed on their rescue responsibilities, procedures and EAP.
IT IS ESSENTIAL THAT EMERGENCY ACTION PLANS (EAPS) ARE DEVELOPED FROM THE OUTCOMES OF THE RISK ASSESSMENT PROCESS AND THAT THEY CONSIDER THE EMERGENCIES AND SERIOUS INCIDENTS THAT COULD RESULT FROM HOLDING A SPECIFIC EVENT. THEY ARE IN ADDITION TO ANY NORMAL OPERATING PROCEDURES THAT ARE IN PLACE.

EAPs are fundamental to ensuring that there is no further harm or deterioration of conditions. For them to be effective they need to be adequately communicated to all event staff. Also advice should be sought from relevant external agencies and thorough liaison should be carried out with any applicable rescue service.

An EAP typically involves carrying out the following:

- Checking for danger and prevent harm
- Assessing the situation
- Communicating a plan of action
- Implementing action (that includes aftercare)
- Monitoring and controlling
- Reviewing and reporting

POINTS TO CONSIDER WHEN DEVELOPING AN EAP

- An EAP needs to ensure that the event management staff remain calm, react quickly, work together efficiently and communicate clearly, thereby making participants aware of evacuation procedures or event curtailment. Rehearsals and training along with clear simple written instructions will make this response more likely
- An EAP needs to include step by step procedures for each member of the team involved
- Ensure that a clear chain of command is in place and understood i.e. someone is clearly in charge and able to halt the event, clear the water etc.
- The plan of action should cover both the event management team and the involvement of external agencies, specifically rescue services which may well take over at an appropriate stage
- The implementation of action that deals with the emergency should if needed provide continuity in the supervision of the event participants often incidents occur that distract staff from their core role
- Consideration of after care should realise that those involved in potentially traumatic and upsetting incidents should be offered support and counselling
- There is likely to be media interest in emergency situations so it is important to have a briefed spokesperson to deal with enquiries.
ACCIDENT INVESTIGATIONS AND LEARNING FROM SERIOUS INCIDENTS AND EMERGENCIES

Internal investigations

Incidents of drowning and serious injury are extremely costly in both human and financial terms but, if investigated correctly, can represent valuable learning opportunities to help inform future prevention methods and strategies.

Good investigations can provide unique opportunities for learning and change within organisations. Also, investigation can be a powerful educational experience for those directly involved, by improving their understanding of risk management principles and embedding the resulting lessons in the memory of the organisation and wider community. Accident investigations will often start quite soon after the incident and will result from and be part of both the emergency planning and incident reporting.

The following steps should be considered:

• Taking prompt emergency action: provide first aid, make things safe as per EAP
• Prompt reporting within the organisation and to other agencies where necessary as per incident reporting
• The need to halt or end the event and the resulting communication to and subsequent management of spectators and competitors
• Securing the scene and preserving evidence
• Deciding on the level of investigation required and establishing terms of reference and allocating responsibilities in the investigation process, if more than one person is carrying it out
• Gathering the evidence
• Analysing and integrating the evidence
• Identifying gaps in the evidence and seeking further evidence and clarification by studying previous events that may be relevant
• Developing and testing hypotheses: what happened? how? why?
• Generating conclusions and recommendations
• Communicating recommendations and tracking closure with stakeholders.

It is important to remember that the prime objective in an emergency situation is to secure the casualty, in a safe manner which doesn’t result in more people becoming injured. Once the immediate situation is managed, the securing of the scene and investigation follow.

It is important that any internal investigation does not remove any evidence or prejudice any official external investigations.

It is good practice for organisations to set out a clear policy and approach to accident investigation. For example, determining if you wish to have privileged information, in case of investigation or prosecution, is much more manageable before any investigation commences.

Recording and reporting accidents, serious incidents and emergencies

It is good practice to formally record the occurrence and detail of accidents, serious incidents or near-miss events - these are a valuable source of information which can inform learning and improve the management of your event.
Timely analysis of incidents is essential, especially if there is a series of events. Ideally, causes of incidents should be known prior to running the next event. Serious incidents may require the postponement of future events.

Depending upon the nature of your organisation, fatalities, accidental injuries, harm and other dangerous occurrences including significant near-miss incidents will need to be reported to regulatory and enforcement authorities.

The Health and Safety Executive RIDDOR system only requires employers, the self-employed and people in control of work premises (the Responsible Person) to make a report.

If in doubt, you should check the HSE RIDDOR website, your national governing body or local authority.

External investigations

If the incident was deemed serious enough to possibly, or actually cause significant harm, or it resulted in a fatality, an external investigation can be launched to determine the causes, learn lessons to prevent reoccurrence, and ascertain if there was negligence involved, that led to the incident.

If the incident involved a fatality, the police and coroner will investigate. If the event was for profit or run by a company then the HSE or local authority enforcement team will need to be notified and may choose to investigate.

Maritime incidents of all severity can be investigated by the Marine Accident Investigation Branch (MAIB), solely for the purposes of learning lessons.

The specific circumstances of the event will determine who is included and what level of investigation takes place. The investigation may involve all of the above organisations.
APPENDICES & FURTHER INFORMATION

RISK MANAGEMENT, LEGAL FRAMEWORK:

Adventure Activity Licensing Regulations
www.hse.gov.uk/aala

Health and Safety at Work etc. Act 1974
The Health and Safety at Work etc. Act 1974 is the primary piece of legislation covering occupational health and safety in the United Kingdom. The full text of the Act is available at:

Management of Health and Safety at Work Regulations 1999
This Approved Code of Practice and guide is aimed at employers, managers and other dutyholders for health and safety, including self-employed people. It explains their duties under the Management of Health and Safety at Work Regulations 1999, which requires them to assess the risks posed to workers and any others who may be affected by their work or business.

Successful health and safety management
HSG65 (Second edition, published 1997)
This book describes the principles and management practices which provide the basis of effective health and safety management. It sets out the issues which need to be addressed, and can be used for developing improvement programmes, self-audit or self-assessment.
www.hse.gov.uk/pubns/priced/hsg65.pdf

Safety signs and signals
The Health and Safety (Safety Signs and Signals) Guidance on Regulations
L64, (Second edition, published 2009).
ISBN 978 0 7176 6359 0
A free download is available at:
www.hse.gov.uk/pubns/priced/l64.pdf
International Life Saving Signals available from
www.slsgb.org.uk and www.lifesavers.org.uk

EVENT MANAGEMENT AND PLANNING:

New guidance from the HSE for event organisers is now available online from their website:
www.hse.gov.uk/event-safety/index.htm
where there is also a link to a free pdf download of the Event Safety Guide HSG 195.

The Event Safety Guide (HSG195)
Provides 'tried and tested' advice on which to organise health and safety at music events, although many chapters may also apply to other gatherings sharing similar characteristics. Intended to enable organisers, local authorities, emergency services and HSE to work together to improve safety.

Managing crowds safely (HSG154)
Practical guidance on the systematic management of crowd safety in order to protect both attendees and those involved with event operations.

Sports specific guidance
(NB. Not all of the listed are web-based)

The management of open water swimming, British Swimming & ASA: www.swimming.org/asa/facilities/management-of-open-water-swimming-events

British Triathlon Rulebook
OTHER GUIDANCE:

BS ISO 20712-1:2008, Water safety signs and beach safety flags – Specifications for water safety signs used in workplaces and public areas. (Published September 2011).
Available to buy from ISO at: www.iso.org/iso/catalogue_detail?csnumber=39682

Available to buy from BSI: http://shop.bsigroup.com/en/ProductDetail/?pid=000000000030132723

Available to buy from ISO at: www.iso.org/iso/catalogue_detail?csnumber=39684

BS ISO 3864-1:2011 Graphical symbols. Safety colours and safety signs. Design principles for safety signs and safety markings (Published September 2011).

A guide to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995. This new edition includes changes to the over-three-day reporting requirement under regulation 3(2) that became law on April 6, 2012. www.hse.gov.uk/pubns/priced/l73.pdf

Noise at work
Guidance for employers on the Control of Noise at Work Regulations 2005 INDG362 (rev1), revised 10/05
This leaflet is to help you as an employer understand what you need to do under the Control of Noise at Work Regulations 2005 (the Noise Regulations 2005) and how you can protect your employees from noise.
www.hse.gov.uk/pubns/indg362.pdf

Workplace Health, Safety and Welfare Regulations 1992
This book explains the requirements, under the Workplace (Health, Safety and Welfare) Regulations 1992, which dutyholders should follow to ensure appropriate working conditions are provided for employees.

PUBLIC REALM AND VISITOR MANAGEMENT:

Managing visitor safety in the countryside
VSCG (2nd ed) : http://vscg.co.uk/publications/

RoSPA Safety at Inland Water Sites – Operational Guidelines
Available on request from leisurehelp@rospa.com

Safety on Beaches Operational Guidelines
It aims to alert operators to their responsibilities for public safety on beaches and the range of safety measures available to them:

Regulatory Reform (Fire Safety) Order 2005 - A short guide to making your premises safe from fire
This booklet provides simple and practical advice to people responsible for fire safety in small and medium businesses. It provides entry level guidance on how to make sure you are meeting the Regulatory Reform (Fire Safety) Order 2005. www.communities.gov.uk/documents/fire/pdf/144647.pdf
APPENDICES & FURTHER INFORMATION

FOR FURTHER ADVICE IN USING THIS GUIDANCE OR QUERIES ABOUT IT PLEASE CONTACT:

Surf Life Saving Great Britain
1st Floor, 19 Southernhay West, Exeter, EX1 1PJ
www.slsgb.org.uk

The Royal Society for the Prevention of Accidents
RoSPA House, 28 Calthorpe Road, Edgbaston, Birmingham, B15 1RP
www.rospa.com

OTHER USEFUL ORGANISATIONS:

Adventure Activities Licensing Authority
www.hse.gov.uk/aala

Amateur Swimming Association
SportPark, 3 Oakwood Drive, Loughborough, Leicestershire, LE11 3QF
customerservices@swimming.org
www.swimming.org/asa

British Canoe Union
British Canoe Union HQ
(also the offices of Canoe England)
18 Market Place, Bingham, Nottingham, NG13 8AP
www.bcu.org.uk

British Kite Surfing Association
Manor Barn, Stottingway Street, Weymouth, Dorset, DT3 5QA
www.britishkitesurfingassociation.co.uk

British Rowing
GB Rowing Team Office,
British Rowing,
6 Lower Mall, Hammersmith,
London, W6 9DJ
www.britishrowing.org/about-us

British Sub Aqua Club
Telford’s Quay, South Pier Road,
Ellesmere Port, Cheshire, CH65 4FL
www.bsac.com/

British Triathlon Federation
PostPO Box 25, Loughborough,
LE11 3WX
www.britishtriathlon.org/about

British Waterways
64 Clarendon Road, Watford,
Herts, WD17 1DA
www.britishwaterways.co.uk

Environment Agency
National Customer Contact Centre,
PO Box 544, Rotherham,
S60 1BY
www.environment-agency.gov.uk

Health and Safety Executive
www.hse.gov.uk/contact/index.htm

Maritime and Coastguard Agency
Spring Place, 105 Commercial Road,
Southampton, Hampshire,
SO15 1EG
www.mcga.gov.uk

National Water Safety Forum
www.nationalwatersafety.org.uk

Royal Lifesaving Society UK
River House, High Street,
Broom, Acelester,
Warwickshire, B50 4HN
www.lifesavers.org.uk

Royal National Lifeboat Institution
Prevention and Lifeguards,
West Quay Road, Poole,
Dorset, BH15 1HZ
www.mli.org.uk

Royal Yachting Association
RYA House, Ensign Way,
Hamble, Hampshire, SO31 4YA
www.rya.org.uk

Sportscover Europe
3rd floor, PO Box HQ 420,
St Helens, 1 Undershaft,
London, EC3P 3DQ
www.sportscover.com/contact.asp

Surfers Against Sewage
Unit 2, Wheal Kitty Workshops,
St Agnes, Cornwall, TR5 0RD
www.sas.org.uk/contact

Water UK
1 Queen Anne’s Gate,
London, SW1H 9BT
www.water.org.uk