

Developing a joint approach to improving flood awareness and safety at caravan and camping sites in England and Wales

Recommendations of a government-industry working group

February 2012



Llywodraeth Cymru
Welsh Government



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Contents

Executive summary	1
1. Introduction	2
2. Scope of the project	4
3. Why is flood safety at caravan and camping sites an issue?	5
4. Aims and Objectives – What we want to achieve.....	8
5. Working Together.....	9
6. The Existing Framework	10
7. Integration with Related Policies and Initiatives	16
8. Key recommendations and delivery	20
9. Suggested priorities for delivery	23
10. Communications	26
11. Next steps and tracking progress.....	27
Annex 1: Working group membership and other organisations consulted	28
Annex 2: Prioritisation of caravan and camping sites at flood risk	29
Annex 3 Data sources and data certainty	30
References.....	32

Executive summary

Many people in England and Wales choose to live or holiday at caravan and camping sites in picturesque riverside or sea-view locations. Around 28 percent of caravan and camping sites in England and Wales are at flood risk from rivers and the sea, with over two-thirds of these being at either significant or moderate flood risk.

This report details the work undertaken by a joint industry-government working group to identify solutions to enhance public flood safety at caravan and camping sites without imposing burdens on business or stifling the tourism and leisure industries' contribution to economic growth. Within the scope of this project were a range of caravan and camping sites including permanent and semi-permanent residential sites (e.g. park home estates and Gypsy and Traveller sites), holiday parks, club-owned sites and land leased to camping and caravanning touring clubs.

The working group's aim is that staff and users of caravan and camping sites at flood risk are appropriately prepared to respond to a potential flooding emergency. The occupants of caravan and camping sites are more vulnerable to flooding than occupants of houses and flats because there is less protection from fast-moving and debris-laden floodwaters.

The report sets out a number of recommendations for actions that the working group believe should be variously taken forward by Government, local emergency planners, and site owners and operators. The recommendations are grouped under six themes: increasing understanding of flood risk, tailoring emergency planning advice, raising awareness of flood preparedness tools available, improving emergency planning, encouraging and promoting responsible caravan and camping sites and enhancing flood warning services.

A prioritisation methodology is developed which targets action at caravan and camping sites with a significant likelihood of flooding and where the consequences of flooding in terms of risk to life are likely to be higher.

It is proposed that the working group should now produce a communications strategy outlining how different organisations could work to communicate key messages about flood emergency planning at caravan and camping sites. As a result the working group would publish a detailed action plan setting out the specific activities that will be undertaken under each of the six themes outlined here. The actions will ensure that staff and users of caravan and camping sites at flood risk are appropriately prepared to respond to a potential flooding emergency.

1. Introduction

The coastline and riversides of England & Wales continue to be highly sought after places for camping and caravanning holidays or longer term living. The public safety of residents on park home estates and Traveller sites, staff and holidaymakers at holiday and touring parks and individuals touring with exempted clubs in flood risk areas, is a matter of concern to those represented on this joint working group.

The group was set up in January 2011 to bring together representatives of the different caravanning and camping organisations to work collectively with the UK and Welsh Governments. The group has sought to identify robust solutions to improve public flood safety yet which do not impose burdens on business or stifle the tourism and leisure industries' contribution to economic growth.

The working group has investigated non-regulatory solutions to remove barriers and create incentives for site operators to act responsibly by making effective preparations to manage flood risk. This approach is in line with the UK Government's principles of regulation¹, which state that Government will regulate to achieve its policy objectives *only*:

- having demonstrated that satisfactory outcomes cannot be achieved by alternative, self-regulatory, or non-regulatory approaches
- where analysis of the costs and benefits demonstrates that the regulatory approach is superior by a clear margin to alternative, self-regulatory or non-regulatory approaches
- where the regulation and the enforcement framework can be implemented in a fashion which is demonstrably proportionate; accountable; consistent; transparent and targeted

This report marks the culmination of the working group's initial activities and sets out the group's findings and recommendations. The recommendations contained within this report ultimately lead to actions that the group believe should be variously taken forward by UK and Welsh Governments, local government, emergency planners, industry representatives and individual site owners and users. This is to ensure that the aim and objectives of this project are met and there is appropriate consideration of public flood safety at caravan & camping sites in England and Wales.

Whilst the working group was set up to primarily report to the Minister for Natural Environment and Fisheries in the Department for Environment, Food and Rural Affairs (Defra), this framework will be of interest to all those concerned with the safe use of caravan and camping sites in areas of flood risk. It will be particularly relevant for site owners and site users and the organisations representing them, as well as local authorities in their roles as a statutory emergency responder, planning authority and regulator of such sites.

¹ The Coalition Government's principles of regulation. Department for Business, Innovation and Skills, 2011
www.bis.gov.uk/policies/better-regulation/better-regulation-executive/reducing-regulation-made-simple/regulatory-decision-making/general-principles



Figure 1: A holiday park in Keswick (Cumbria) flooded in November 2009.



Figure 2: An example of a flood warning sign used on a club-owned caravan and camping site

2. Scope of the project

This project has looked at the current flood risk to caravan and camping sites from rivers and the sea. Caravan and camping sites will also be at risk of flooding from other sources including surface water and groundwater and reservoir failure. There is not yet nationally comparable data for all these sources of flood risk, or the nature of the flood risk is such that the risk to life or likelihood of flooding is very low and so for this reason flood risk from sources other than rivers and the sea is outside the scope of this project.

Unless specified, the term 'caravan and camping sites' is used throughout this document as useful shorthand for describing a range of sites including:

- Land and touring caravan pitches leased to touring clubs
- Privately run holiday parks and camping sites
- Residential park home sites
- Association-owned club sites
- Gypsy & Traveller sites (whether authorised or unauthorised)

These sites could be occupied by residential units including caravans, motor homes, trailer tents, mobile homes, tents or any combination of these.

Temporary camping and caravan sites² used for example for music festivals and summer conferences were outside the scope of this project although some of the recommendations made in this report may be relevant to such sites, where they are at flood risk.

In the past ten years, spatial planning policy in England and Wales has tended to discourage where possible the granting of planning permission to new caravan and camping sites in areas of greatest flood risk and future policies are likely to broadly continue with that aim. Climate projections for the UK show that flooding is likely to increase in the future due to greater winter rainfall and an increased rate of sea level rise. Thus whilst climate change may cause the number of existing sites at significant risk of flooding to increase in the future, the number of new sites being granted planning permission in flood risk areas is unlikely to be high. This project is focused on the current flood risk to caravan and camping sites, and how emergency planning could reduce the risk to site users.

² Sites used for less than 42 days duration are not affected by the Caravan Sites and Control of Development Act 1960, and sites used for less than 28 days for tented camping do not require planning permission

3. Why is flood safety at caravan and camping sites an issue?

Flood risk

The residents of the 1.23 million houses and flats in England and Wales at risk³ of flooding from the rivers and sea (Environment Agency 2009a, 2009b), have to date been the focus of the majority of flood emergency planning efforts. Yet there are also around 1450 caravan and camping sites in England and Wales which are at risk of flooding from rivers and the sea and which together are home to many thousands of people for some duration during the year. These 1450 sites represent 28 percent of all caravan and camping sites in England and Wales. Of the sites at risk, around 40 percent are at significant risk of flooding (where the chance each year is greater than 1 in 75, or 1.3 percent) and a further 30 percent are at moderate risk (see Table 1). Sites at significant flood risk are predominantly located in south east England, eastern England and Wales.

³ Data is from 2009 Quarter 4 of the Environment Agency's National Flood Risk Assessment (NaFRA). NaFRA takes into account the extent to which flood defences reduce the chance of flooding and what might happen if they overtop or fail.

Number of sites at flood risk from rivers and the sea⁴			
Environment Agency region⁵	Significant flood risk	Moderate flood risk	Low flood risk
Anglian	113	120	218
Midlands	76	36	26
North East	52	37	23
North West	39	62	24
South West	67	55	17
South East	104	60	38
Wales	165	47	57
Total	616	417	403

Table 1: The number of caravan and camping sites in different flood risk probability bands

Risk to life

UK Government guidance on assessing the risk to life from flooding (Defra, 2008) states that the risk to life due to flooding is a function of flood hazard, area vulnerability and people vulnerability. Camping and caravan sites score highly in terms of their hazard and vulnerability under all three measures.

Flood Hazard

Flood hazard is a combination of flood depth, flood velocity and the presence of debris. It is the flood conditions in which people are likely to be knocked off their feet by floodwaters with the consequential possibility of drowning.

Flood hazard is greatest in coastal surge conditions, especially where flood defences are breached rather than overtopped. Large numbers of camping & caravan sites (including park home sites) are in coastal areas. Flood hazard is also high in 'rapid response catchments'⁶

⁴ Significant risk is where a location has an annual chance of flooding greater than 1 in 75. Moderate risk is where a location has an annual chance of flooding of between 1 in 75 and 1 in 200. Low risk is where a location has an annual chance of flooding of less than 1 in 200.

⁵ The boundaries of Environment Agency regions in England and Wales are shown in Figure 8

⁶ River catchments where the time between rain falling and peak river flows is very short leading to a flood hazard that is extreme or very extreme

where the fast onset of flooding leads to high flood depths, velocities and debris-laden floodwaters.

Area Vulnerability

Area vulnerability describes the characteristics of an area of the floodplain that affect the chance of being exposed to the flood hazard. It includes the nature of the built environment (the fabric and use of buildings in the area) and the speed of onset of flooding (which is usually dictated by the shape of the catchment and source of flooding). Caravans are unstable in high velocity flows and do not have a second floor to escape to when waters rise. Tents provide no physical protection from floodwaters.

People vulnerability

People vulnerability describes the characteristics of the people affected by flooding and their ability to respond to ensure their own safety and that of their dependants during a flood. The average age of park home users tends to be older than for the UK population as a whole⁷. Users might require more time for self-evacuation or be dependent upon assisted evacuation / rescue. There is also an inherent vulnerability to visitors to an area, as they are not familiar with the local geography, such as places of higher ground or clear escape routes.

The risk to life from flooding at caravan and camping sites is supported by evidence from recent floods where there were flood-related fatalities. Eighty-nine people died at a campsite in Spain in 1996; 5 people at a campsite in France in 2002 and 1 person at a caravan site on the Lower Avon in England in 1998 (Ruin et al, 2008; McEwen, 2002). Emergency evacuations and rescues of tens to hundreds of site users from camping and caravan sites have also been required during recent floods in Cumbria (2009), on the Atlantic coast of France (2010), and across England during the summer 2007 floods, including elderly people and those suffering from pre-existing critical health conditions.

⁷ For example, 68% of mobile home residents (other than Gypsies and Travellers, on whom there is no data), are over 60 years old (ODPM, 2002).

4. Aims and Objectives – What we want to achieve

Our aim is that:

Staff and users of caravan and camping sites at flood risk from rivers and the sea are appropriately prepared to respond to a potential flooding emergency

To achieve this aim, our objectives are that:

Owners and operators of sites at flood risk:

- (i) know where to go for information on flood risk and have an understanding of the responsibilities of key organisations
- (ii) have an accurate understanding of the flood risk they face (both the likelihood of flooding and its consequences)
- (iii) have proportionate plans in place to manage the flood risk
- (iv) communicate the potential risk of flooding and any plans in place to manage the risk to site users and staff, as appropriate
- (v) have cooperative relationships with local emergency planners and responders

Local resilience forums:

- (vi) that have caravan and camping sites at flood risk within their locality have assessed the particular challenges posed by these sites (e.g. in terms of developing community resilience, warning & informing and evacuation)
- (vii) that have caravan and camping sites at flood risk within their locality have proportionate emergency planning in place (e.g. caravan and camping sites are considered within multi-agency flood plans and/or evacuation plans)

The working group's aims and objectives apply to all caravan and camping sites, irrespective of the degree of flood risk they face. This is intentional since we believe that all sites need to have considered their flood risk and made some, proportionate arrangements to deal with the potential for flooding. For sites at lowest flood risk, such measures could be incorporated into existing health & safety planning activities. This is consistent with taking a risk-based approach. However our priority as a working group is that staff and users of caravan and camping sites at the greatest flood risk are prepared for flooding.

5. Working Together

Membership of the working group was by invitation of the UK Government Minister for Natural Environment and Fisheries. The composition of the working group reflects organisations representing different interests – residents and users of caravan & camping sites, owners of caravan & camping sites, Government, regulators and technical experts on emergency planning and flooding. In addition to the core working group, a number of expert individuals and organisations have been consulted on particular aspects of the project or been invited to attend working group meetings with a particular focus relevant to their expertise.

The working group has met five times during the course of the project. Meetings have taken place at different types of caravan and camping sites so that working group members could gain a broader understanding of the different types of sites and thus the different challenges faced in managing the risk to life from flooding at these sites.

From the outset working group members have collectively shaped the direction of the project by agreeing the project's objectives and the structure of this framework. The recommendations contained within this report have been signed up to by the individual organisations represented on the working group (details of the working group membership can be found in Annex 1).

The working group is committed to continuing to work together to help implement the recommendations made in this report. Sections eight and eleven of this report set out the recommendations of the working group and how the working group propose to continue this work. At appropriate milestones it will be right for the working group to review whether the aims and objectives are being met.

6. The Existing Framework

The Environment Agency along with its Local Resilience Forum partners has for some years been urging owners and operators of caravan and camping sites in areas at significant risk of flooding to take steps to ensure their residents and customers know what to do in the event of serious flooding. Likewise, a number of camping and caravanning industry trade associations and consumer membership organisations have worked to raise awareness and encourage flood risk assessments where appropriate.

Some site owners and operators have taken action to good effect and have thorough evacuation procedures in place, but many others have been slow to respond. This has particularly concerned the Chair of the Environment Agency, Lord Smith, who recently stated that:

“There is one personal issue about which I feel very strongly...It relates to the existence, especially on parts of the east coast of England, of large caravan sites that are at serious risk of flooding from the sea. If a major surge comes down the North Sea, that could put very large numbers of summertime caravan dwellers, many of whom are elderly and not very mobile, at considerable risk. One of the proposals I made was that there should be a responsibility on the owners of caravan sites to have plans for the evacuation and removal of people to safety in the event of any imminent flooding event.”

(House of Commons Environment, Food and Rural Affairs Committee, 2010)

Legal framework

The Health & Safety at Work Act 1974 prescribes measures in broad terms that employers must take to ensure a safe environment for both employees and anyone else who may be affected by the company's activities. The Management of Health and Safety at Work Regulations 1999 placed duties on businesses to carry out risk assessments.

There are currently no specific duties placed on the owners and operators of existing caravan & camping sites to produce evacuation plans or to share information on flood risk and emergency arrangements with users of the site. They do however have a general duty of care to site users through the Occupiers' Liability Act 1957 and common law.

Caravan Sites and Control of Development Act 1960

The Caravan Sites and Control of Development Act 1960 established a licensing regime for caravan sites, with local authorities being the licensing authority. The Act prohibits the use of land as a caravan site without a site license. A site licence is available to the occupier of land with planning permission.

There are however exemptions for certain organisations⁸. The license usually expires when the planning permission expires. Once licensed, sites are periodically inspected by local authorities to make sure that standards are being maintained. The 1960 Act gives local authorities the option to include conditions on the licences they grant. The conditions attached to a site licence may be altered by the local authority, having consulted the licence holder.

Model Standards in England and Wales

The 1960 Act gives Government Ministers powers to specify 'model standards' with respect to the conditions to attach to a site licence. Local Authorities must have regard to these model standards but should adapt site licence conditions to reflect the circumstances on individual sites in specific areas.

There are presently three sets of model standard applicable to caravan parks in either England or Wales as follows:

- Model Standards 2008 for Caravan Sites in England; and Model Standards 2008 for Caravan Sites in Wales (covering caravan sites with residential pitches – but not sites occupied by Gypsies & Travellers or agricultural workers)
- Model Standards 1989: Holiday Caravan Sites (covering sites with caravan holiday homes)
- Model Standards 1989: Touring Parks in England and Wales (covering sites with touring caravans and tents)

The 2008 Model Standards for caravan sites state that:

- The site owner shall establish whether the site is at risk from flooding by referring to the Environment Agency's Flood Map
- Where there is risk from flooding the site owner shall consult the Environment Agency for advice on the likelihood of flooding, the depths and velocities that might be expected, the availability of a warning service and on what appropriate measures to take
- Further guidance emphasises the importance of evacuation procedures, notifying the public and liaison with relevant organisations

Spatial planning

In recent years spatial planning policy in both England and Wales has sought to ensure that where possible, infrastructure such as caravan and camping sites which is more vulnerable to flooding is located away from areas at greatest flood risk.

In England, the UK Government has published a draft National Planning Policy Framework (NPPF) for consultation. The NPPF aims to make the planning system less complex and more accessible. It seeks to ensure that: development is located away from flood risk whenever possible; development that is needed in flood risk areas is safe and resilient; flood risk is

⁸ Exemption certificates for camping and touring caravans allow certain types of organisations to use land as a camping or caravanning site for short periods, without the need for a site licence or planning permission. Exemptions are granted to approved organisations rather than land owners.

assessed so it can be avoided and managed, and opportunities offered by new development are used to reduce causes and impacts of flooding. The NPPF also seeks to reduce the risk from coastal change by avoiding inappropriate development in vulnerable areas.

In Wales, Technical Advice Note (TAN) 15: Development and Flood Risk, sets out Welsh Government policy on development and flood risk. The TAN sets out a precautionary framework to guide planning decisions and seeks to direct new development away from those areas which are at high risk of flooding. Where development has to be considered in high risk areas, only those developments which can be justified on the basis of the tests set out in the TAN should be permitted.

Good practice

Since there are no widespread duties placed on the owners or operators of existing caravan and camping sites, either to prepare emergency plans for flooding or to communicate the plan to the users of the site, the Environment Agency and partners have tried to encourage site operators to prepare plans through awareness raising activities. This has included assisting operators with preparing evacuation plans. In some areas the Environment Agency has organised meetings with site owners, distributing leaflets and giving practical advice, as well as convening workshops in partnership with The Camping & Caravanning Club, British Holiday & Home Parks Association and tourist boards to raise awareness of flood risk.

The Environment Agency has produced an information pack for caravan and camping site owners which includes information on owners' responsibilities, details of flood warning services available and a template flood evacuation plan (see Figure 3).



Figure 3: An example of an information pack produced by the Environment Agency

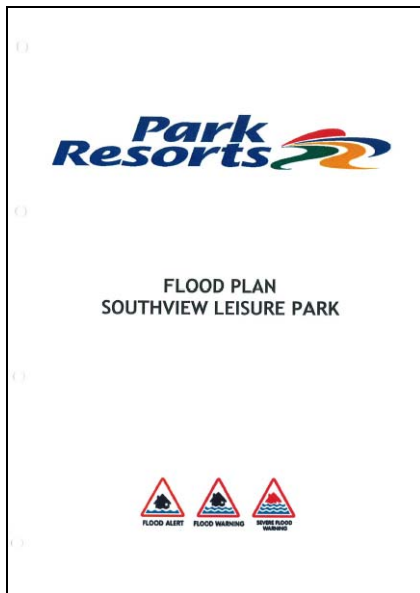


Figure 4: An example of a flood plan produced by the management of a holiday park site

Eighteen caravan and campsites at significant flood risk in Wessex were targeted by the Environment Agency with a letter and copy of the information pack. Two of the sites have subsequently developed flood evacuation plans.

In Wales, 34 caravan parks in Kinmel Bay, Towyn and Pensarn were targeted by Environment Agency Wales working with the local Fire & Rescue service. Environment Agency Wales officials spoke to all 34 site managers, presented at a Caravan Watch forum and gave out caravan safety factsheets and Local Resilience Forum Business Continuity planning guides. It resulted in 25 additional sites signing up to Floodline Warnings Direct. Two of the sites have completed flood evacuation plans and at the remaining 32 sites plans are under development.

In the Midlands a workshop was hosted by a site owner and supported by a caravanning trade association and the local Fire & Rescue service. Representatives from 15 caravan & camping sites attended the Environment Agency run event. The workshop required thirty staff days to prepare for the event, facilitate it and respond to follow-up queries after the event. All 15 sites either began developing an evacuation plan or enhanced an existing plan. The Environment Agency has since been contacted by several sites for further information regarding flood emergency plans.

Awareness raising activities that are supported by multiple organisations and involve more personalised contact with site managers and owners seem to have been the most successful in leading to emergency plans being produced.

Recent evidence from Environment Agency shows that their local flood incident management staff are only aware that five percent of camping and caravan sites at flood risk have started work on producing a flood evacuation plan, with the majority of those being at sites in the Midlands and Wales (see Table 2) . Whilst it is likely that there are further plans in existence that the Environment Agency have not been made aware of, five percent remains a worryingly

low proportion given that local Environment Agency staff should be a key partner for site owners developing a flood emergency plan.

Flood emergency and evacuation plans at camping and caravan sites	
Environment Agency Region	Number of known flood evacuation and emergency plans in existence⁹
Anglian	5
Midlands	22
North East and Yorkshire	2
North West	0
South West	8
South East	0
Wales	34

Table 2: Flood emergency and evacuation plans at camping and caravan sites in England and Wales

Potential barriers to be overcome

Local flood risk awareness raising work has been successful but is resource intensive to carry out. The Environment Agency's experiences show that the most successful approaches include site visits, follow up communication through further visits, workshops and working with partners such as local authorities and Fire and Rescue Services.

Although there are examples of good practice, the Environment Agency considers that good practice is not widespread because:

- There is no statutory duty on site owners or operators to produce a flood emergency plan
- Site owners and operators are concerned that raising awareness of flood risk may negatively impact on their business or the cost of their insurance premiums
- Site owners and operators believe the flood risk won't materialise or that it won't have a significant impact on site infrastructure and users of the site

⁹ Based on responses to an internal Environment Agency survey with Flood Incident Management staff, June 2010. Figures quoted in Table 2 include final emergency plans and those still under development.

- Site owners and operators don't think it is practical given high staff turnover (and high customer turnover for touring sites) since there is little continuity for any emergency procedures that may be put in place or exercised
- Site owners and operators consider that the responsibility lies with someone else (for example the local authority or users of the site)

The Environment Agency commissioned research amongst businesses including caravan & camping sites located in rapid response catchments. The research found that:

- Those businesses that had made preparations and/or plans for flooding were generally prompted into this by personal experience; those without previous experience of flooding do not consider it a business priority or accepted health and safety responsibility;
- Few businesses recognised an immediate need to communicate with visitors in relation to flash flooding risk. They were concerned about scare-mongering and potentially putting off customers;
- The aspects of flooding that were most concerning to businesses were the perceived potential impacts on their insurance premiums and reduced visitor numbers (Harris interactive, 2010).

It is clear from this that there are misperceptions that could be helpfully corrected. For example the Environment Agency already makes information on flood risk available to insurance companies and in addition many insurers have their own flood risk assessment models. Rather than increasing insurance premiums, appropriate risk management activity by residents and site operators will be more likely to lead to reduced insurance premiums.

7. Integration with Related Policies and Initiatives

Improving public safety on sites in flood risk areas is important to the UK and Welsh Governments and to the organisations represented on the joint working group. There are strong links between this project and other existing policies and initiatives, some of which are listed below.

Community resilience

Community resilience is about communities being aware of the risks they face and harnessing local resources to help themselves during an emergency. The Civil Contingencies Secretariat within Cabinet Office leads the development of national guidance on community resilience in England and Wales, in cooperation with others such as the Welsh Government. Community resilience encourages communities to identify risks, assess skills and resources within the community to respond and develop community emergency plans to deal with all emergencies. There are clear links between this project and community resilience since by promoting the awareness of flood risk and encouraging the development of emergency plans, site owners and operators can improve their own resilience and that of their visitors so they are more prepared for emergencies in general and flooding in particular.

Tourism

Research has shown that the visitor economy provides a £52 billion direct contribution to the UK economy (Deloitte, 2010). Within England and Wales there are a number of bodies responsible for promoting the country and encouraging international and domestic visitors to explore Britain including Visit Britain, Visit England and Visit Wales.

In the 'Plan for Growth' (HM Treasury, 2011) the UK Government identified tourism's potential to contribute to economic recovery and noted that tourism businesses are a particularly important source of employment in rural communities.

In England camping and caravanning holidays represented 18 percent of domestic bed nights and contributed 10 percent of domestic tourist spend in the English economy in 2010 (Visit England, 2011). In Wales, they represent 38 percent of bed nights and contributed 26 percent of domestic tourist spend in the Welsh economy in 2010 (Welsh Government, 2011).

One of the current priorities is maximising the tourism benefits of the London 2012 Olympic and Paralympics games. The Olympics will bring an influx of visitors to Britain, some of whom will arrive in caravans and motor homes. In order to prepare for this influx a number of temporary campsites will be introduced. Emergency planners within local authorities need to be aware of such initiatives so that their emergency plans can take account of the temporary increase in populations on such sites.

It is vital that the working group works with tourism partners to help identify and overcome barriers that prevent site operators from taking action. The working group is committed to

ensuring sites are equipped to appropriately prepare for flooding, without such preparations causing alarm to potential customers. It is therefore important that we consider tourism and work alongside tourism partners to do all we can to ensure the activities of this project do not negatively impact on tourism potential, and where possible, enhance the contribution that caravan and camping sites can make to the UK economy.



Figure 5: A flood risk awareness and sustainability leaflet aimed at campsite operators in Cornwall co-produced by CoaST (a sustainable tourism social enterprise) and the Environment Agency

Exercise Watermark

Exercise Watermark was a recent national exercise to test the readiness for flooding in England and Wales. The exercise took place in March 2011 and was funded by Defra and the Welsh Government and delivered through the Environment Agency. Exercise Watermark set out to test new arrangements against a severe flood scenario within England and Wales. The Exercise scenario included surface water flooding, fluvial flooding, coastal flooding and a reservoir breach, which necessitated the evacuation of large numbers of people, including from caravans. The Exercise was played at local, regional and national levels with thousands of participants in the emergency services, councils, community groups, utility companies, health services, armed forces and the Government's Ministerial crisis response committee all taking part.

The aim of the exercise was to test preparedness and incident response. If communities, including caravan and campsites, are more prepared for flooding they will be more able to respond in an emergency, to help themselves and support the response of the emergency services.

Local Resilience Forums not involved in the core command and control exercise could also bolt-on to the test and develop arrangements not included in the core exercise such as specific local arrangements. Exercise Enterprise held on the North Wales coast was a bolt-on exercise to test

and develop community flood plans for businesses in the North Wales area. Representatives from two caravan parks at flood risk took part alongside other local businesses, voluntary organisations and emergency responders. Some useful issues were identified related to evacuation of caravan and camping sites, in particular regarding whether touring caravans should be evacuated from a site, who needs to be informed of such a decision to evacuate, and the practicality of site operators keeping records of the number of users on-site at any given time.

Business Continuity Management

Business Continuity Management is a process that identifies potential threats to an organisation or business. Plans are then put in place to build resilience and capability to respond in order to reduce the impacts of the threats on the business or organisation. Business Continuity Management therefore includes planning for emergencies and also responding to them and recovering from them.

The Civil Contingencies Act 2004 places a duty upon local authorities to promote business continuity to companies - in particular small and medium sized enterprises.

Business Continuity Management very clearly links with the work of this project to increase preparedness for flooding. The flood emergency plans which we believe site owners and operators need to develop, should also consider business continuity in the event of flooding. Even sites that are not flooded themselves could be affected if, for example, their employees or suppliers are affected by flooding elsewhere. Sites need to identify how they would manage the impact on their business and recover as quickly and efficiently as possible. It is therefore important that when communicating with sites at risk of flooding site operators receive coordinated messages and information on flood preparedness and business continuity.

Flood Warning Service Improvements

The Environment Agency constantly strives to improve the Flood Warning Service it provides, both in terms of the number of properties that can receive flood warnings and the quality of these warnings. In 2010 significant improvements were made to the Environment Agency's warning service, including developing the publicly available three day forecast of flood risk, the publishing of river level information on the internet, the introduction of new flood warning symbols, codes and messages and the inclusion of more locally specific information in the warning messages themselves. The purpose of these changes was to provide better information on forecasts and clearer warnings so that people are better prepared for flooding and can take effective action.

The Environment Agency has also introduced a tailored flood warning service for the owners and operators of infrastructure. This service allows operators and owners to access flood warning data and receive frequent status updates. This information can be tailored to the location of their assets and infrastructure therefore contributing to more targeted and effective response during floods.

Caravan and campsites should be encouraged to register to the service, wherever a warning service is provided. The communication strategy leading on from this work should promote the flood warning service where it is available and also raise awareness of sources of information on potential flooding to caravan and campsite owners, operators and users.

Flood Awareness

Flood Awareness Wales is a programme which aims to ensure that communities at risk of flooding know how to prepare and how to respond when it happens. Environment Agency Wales work with individuals, businesses and whole communities to raise awareness of flood risk and help people take actions to prepare. In England, the Environment Agency also undertakes flood awareness activities which are targeted at the most vulnerable people in areas most at risk of flooding.

Research indicates that in order for people to take appropriate action to prepare for flooding, they need to be aware of and accept the risk before they feel motivated to prepare for it. It is therefore important to remove some of the barriers preventing site owners and operators from taking action, by promoting flood risk awareness and encouraging the operators and owners of sites at risk to accept and prepare for the risk of flooding.

8. Key recommendations and delivery

The working group has identified a package of measures they believe will together deliver the project's aim that caravan and camping sites are appropriately prepared for a flooding emergency. The measures are grouped around six themes:

- Increasing understanding of flood risk
- Tailoring existing advice on emergency planning
- Raising awareness of existing flood emergency preparedness tools available
- Improving emergency planning
- Encouraging and promoting responsible caravan and camping sites
- Enhancing flood warning services

Figure 6 shows how these six themes interrelate.

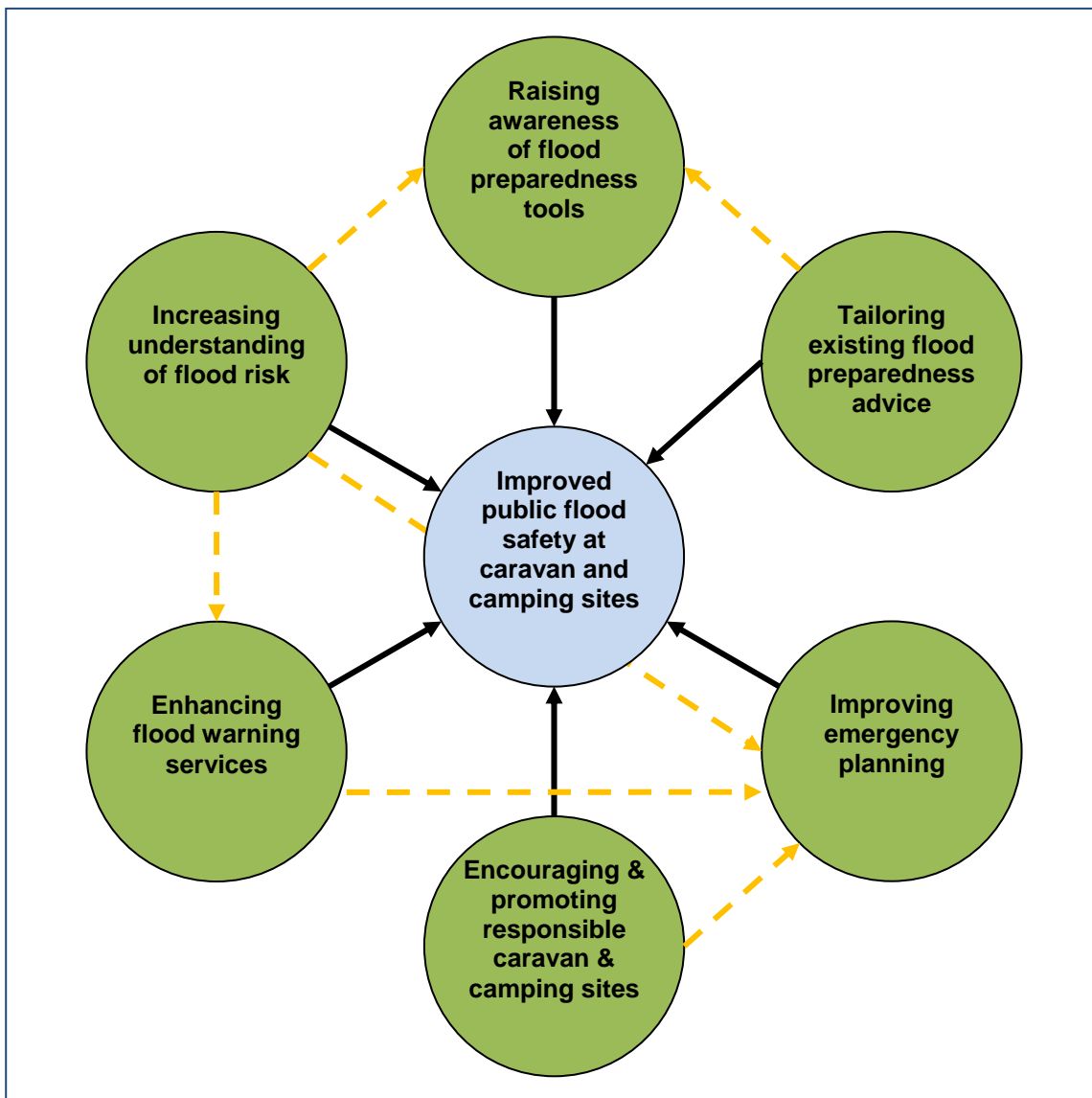


Figure 6: Improving public flood safety at caravan and camping sites

Key recommendations

Increasing understanding of flood risk

The working group believes that carrying out the following actions will enable objectives concerning improved signposting of information and clarity of roles and responsibilities to be met. They will help site owners and operators have a better understanding of the risk of flooding at their sites:

The UK and Welsh Governments, the Environment Agency, lead local flood authorities and caravanning & camping organisations should;

- (i) Ensure that where practicable, information on flood risk is made directly available to the owners and operators of caravan & camping sites; this is in line with the UK Government's support of the public's 'right to data'.
- (ii) Ensure that the roles and responsibilities of different organisations with respect to flood risk management are clearly communicated to caravanning & camping site owners and operators.
- (iii) Encourage longer term users of caravan and park home sites to find out whether the site is at flood risk before buying or siting their caravan/mobile home.

Tailoring existing advice on emergency planning

The working group believes that carrying out the following action will help enable objectives concerning site owners and operators having proportionate plans in place to manage the flood risk at their sites, to be met:

- (iv) Local resilience forum partners should consider whether they can better tailor existing emergency planning guidance given to caravan & camping site owners and operators, to reflect the differing nature of the flood risk they face, and differing appropriate actions for their site users to take in the event of a flood emergency.

Raising awareness of available flood emergency preparedness tools available

The working group believes that carrying out the following action will help enable objectives concerning site owners and operators having proportionate plans in place to manage their flood risk, to be met:

- (v) Local resilience forums should review whether within their area the owners and operators of caravan & camping sites at significant flood risk are sufficiently aware of the existing flood emergency preparedness tools available to them.

Improving emergency planning

The working group believes that the following actions will help local resilience forums in assessing the emergency planning challenges posed by caravan and camping sites and putting in place proportionate emergency planning arrangements to respond to those challenges:

- (vi) Local resilience forums, assisted where necessary by the UK and Welsh Governments, should share good practice examples of evacuation plans and caravan sites' flood emergency plans so that emergency planning expertise can be shared and a benchmark established to develop fit-for-purpose plans.
- (vii) Local resilience forums should consider including flooding at caravan and camping sites within the scenarios they develop for flood emergency exercises
- (viii) Local resilience forum partners should engage with local authority site licensing teams to seek opportunities to modify site licence conditions such that they take account of flood risk where the risk is significant and not currently considered
- (ix) Caravan & camping site owners and operators should consider whether they have proportionate plans in place to manage their flood risk

Promoting responsible caravan and camping sites

The working group believes that the following action will help cooperative relationships to develop between local emergency planners and site owners and operators:

- (x) Caravan & camping site owners and operators should cooperate with local emergency planners by providing information on actual or estimated on-site vehicles and populations (and seasonal variations) so that this can feed into LRFs' multi-agency flood plans and evacuation plans

Enhancing flood warning services

The working group believes that carrying out the following actions will help meet the objective that site owners and operators are aware of their flood risk and are communicating this to site users and staff.

- (xi) The Environment Agency should investigate whether it can provide tailored flood warning services to caravan & camping organisations with multiple sites.
- (xii) Owners, operators and residents' associations of caravan and camping sites at flood risk should investigate appropriate means of alerting site users to flood warnings in place (whether through automated signage, flood wardens or other means)

9. Suggested priorities for delivery

In order to target scarce resources the working group has developed and applied a methodology to prioritise action targeted at camping and caravanning sites in areas of greatest flood risk; that is where the likelihood and consequences of flooding pose the greatest harm to humans. Table 3 below shows the matrix developed to prioritise sites. The likelihood score correlates directly with the flood risk categories given in the Environment Agency's NaFRA dataset, where for example a location with an annual chance of flooding greater than 1 in 75, is classed as at 'significant' flood likelihood whereas a location with an annual chance of flooding less than 1 in 200 is classed as at 'low' flood likelihood. The consequence score is a qualitative assessment of the perceived consequences of flooding in terms of risk to human life. We contend that if flooding were to occur in rapid response catchments or a coast-side location was subject to flooding from the sea, the consequences for risk to life would be higher owing to the higher flood hazard (see section 2).

Prioritisation matrix for caravan and camping sites					
Flood likelihood score		Flood consequence score			
		Lower	Higher		
		1	2	Key	
Low	1	1	2	Priority 1a	
Moderate	2	2	4	Priority 1b	
Significant	3	3	6	Priority 2	

Table 3: Method for determining priority scores of caravan and camping sites

Based on the matrix in Table 3, camping and caravan sites at flood risk have been divided into Priority 1 (higher priority) and Priority 2 sites (lower priority). As shown in figure 7, we are proposing a two pronged approach incorporating:

- actions which will help towards meeting this project's aim and ensure that staff and users of all caravan and camping sites at food risk (priority 1 and 2) have access to resources that enable them to be better prepared for flooding
- actions which are targeted at the sites at highest risk (priority 1 sites) that will help ensure that these sites are especially aware of flood risk and prepared for flooding

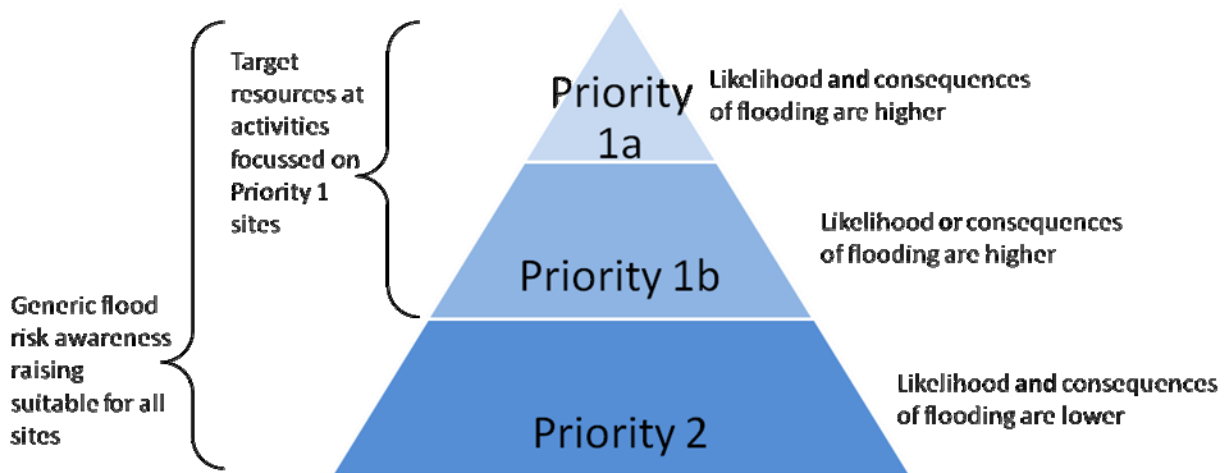


Figure 7: Prioritisation of caravan and camping sites

By combining several different datasets, the Environment Agency has determined that there are around 840 priority 1 sites (of which around 325 are priority 1A) in England and Wales and 600 priority 2 sites (see Annex 2). This data should be considered as a broad estimate; for further discussion of the data quality issues see Annex 3.

Furthermore, in coastal areas it might be appropriate for further prioritisation at a local level, on the basis of whether sites are open during the winter and early spring when high tide levels and meteorological conditions mean a storm surge is more likely.

Figure 8 shows the spatial distribution of camping and caravan sites at significant, moderate and low flood risk and rapid response catchments containing one or more caravan sites. It indicates that areas with a large number of Priority 1 sites include the north Wales coast, the Kent/East Sussex border, and north Somerset coasts and the catchment of the rivers Severn and Avon. Whilst the Lincolnshire coast appears to have the highest density of caravan sites at risk, most of these sites are at low risk of flooding owing to the presence of defences, and therefore fall within the Priority 2 category. That is not to suggest however that the concentration of a large number of (nationally) lower priority sites in an area does not present acute difficulties for local emergency planners and responders, for example in planning for large-scale evacuation of an area. Such issues will rightly affect local prioritisation by emergency planners.

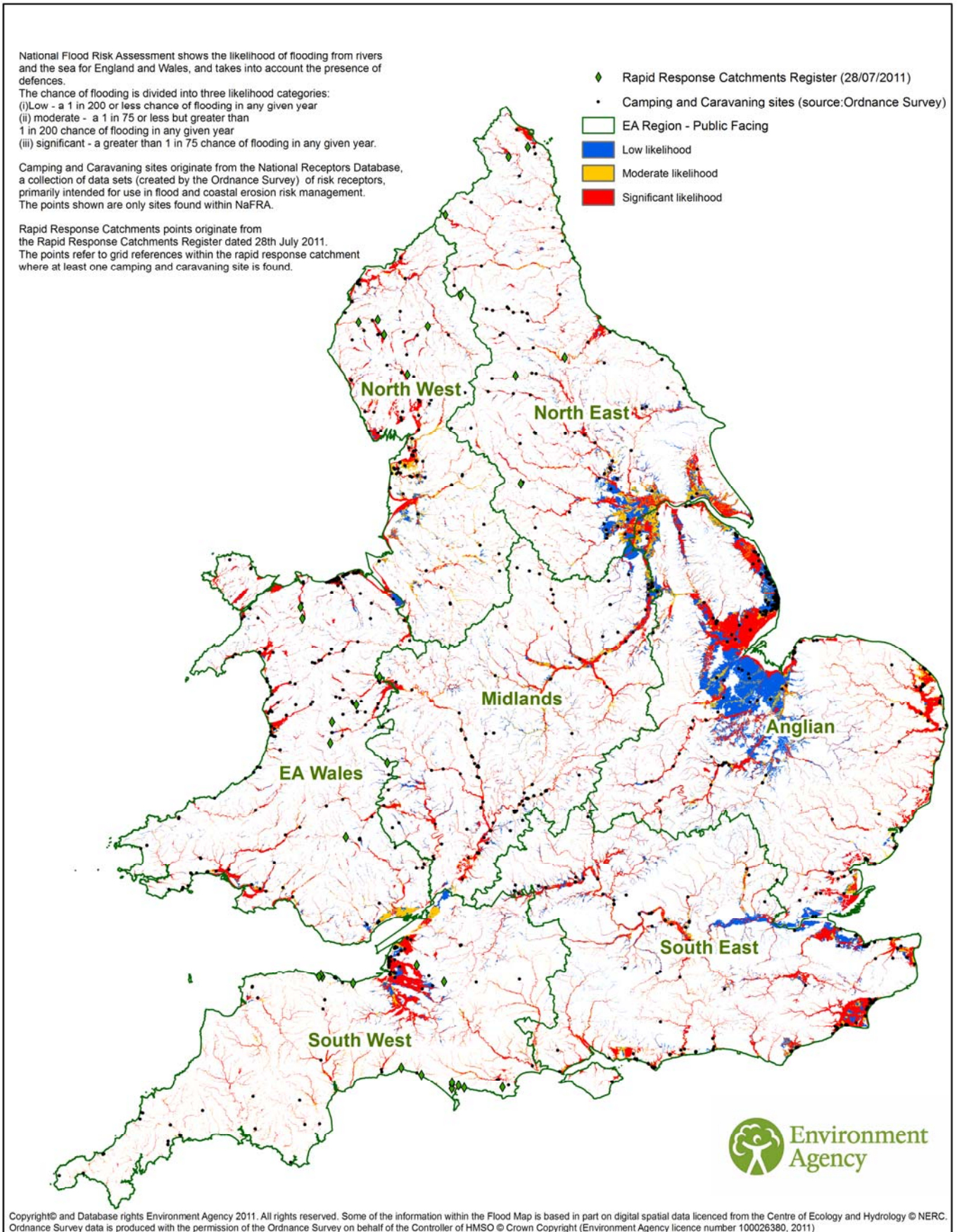


Figure 8: Camping and Caravan sites at flood risk from rivers or the sea

10. Communications

On behalf of the working group the Environment Agency is currently leading on the development of a communications strategy to address how we can encourage staff and users of caravan and camping sites to be better prepared for flooding.

The strategy is being developed in partnership with the working group that has informed the development of this report. Outputs from the communications strategy will be delivered in partnership with others and implemented in two key phases.

Phase one will focus on targeting the industry itself by identifying opportunities to communicate our key messages with our key audiences using established and trusted channels.

Phase two will focus on consumers (i.e. visitors to and residents of caravan and camping sites) to ensure that they know what to do in advance of, and in the event of a flood. We will look to involve trusted organisations that have experience of working with individuals at flood risk.

The communications strategy will explore how we can develop and deliver a general awareness campaign aimed at our target audiences. To support this, it will also include details of a more targeted campaign or pilot aimed at caravan and camping sites which are at significant risk of flooding from rivers or the sea. Wherever relevant, the communications strategy will also work to promote this report and the working group that has developed it.

It will be important that, where possible, the content and form of communications are tailored to the different audiences such as Gypsy and Traveller site residents and landowners leasing pitches to touring clubs.

11. Next steps and tracking progress

Figure 9 sets out the anticipated timetable for activities that implement this framework. The working group hope to agree a communications strategy which will propose how different organisations will work to communicate key messages about flood emergency planning at caravan and camping sites. This work would support the implementation of the strategic framework outlined in this report. This will be followed by the publication of a detailed action plan and two phases of communications activities later in 2012, setting out the specific activities that will be undertaken under each of the six themes identified earlier in this document.

Activity	Year, quarter							
	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4
Comms strategy agreed		▲						
Comms - phase 1 (industry)			■					
Comms - phase 2 (general public)					■			
Detailed action plan published		▲						
Review period				■				■

Figure 9: Anticipated timetable

To ensure that real lasting benefits are delivered on the back of the recommendations, the individual actions in the detailed action plan will be trackable so that the working group, and Government ministers, can assess whether they have been successful in helping to achieve the aim and objectives set out in this framework. There are several evaluation techniques that could be used to evaluate the success of actions, including ‘hard’ measures (e.g. the number of sites signed up to Floodline Warnings Direct or the number of downloads of guidance documents) and ‘soft’ measures (e.g. running a survey asking site owners and operators about their level of preparedness and what the potential barriers to action are).

The working group recognises that given the risk to life at these sites, regular formal and informal reviews throughout the duration of the project will be required. It is suggested that during the implementation phase the working group conducts an annual review of the agreed measures to ensure that benefits are being delivered on the ground. The timing of any annual review will need to take account of site opening seasons. By conducting a regular review of the activity resulting from this report, the group will be able to establish which activities have been most effective in delivering positive change. Such an analysis would then enable the group to adjust and improve its future approach where necessary. The working group will cooperate with independent bodies in the review of the effectiveness of the action plan.

Annex 1: Working group membership and other organisations consulted

- UK Government (Working group chaired by the Department for Environment, Food and Rural Affairs)
- Welsh Government
- Environment Agency
- The Caravan Club
- The British Holiday & Home Parks Association
- The Camping and Caravanning Club
- National Caravan Council
- The Association of Caravanning and Camping Exempted Organisations
- National Association of Park Home Residents
- Lincolnshire County Council
- East Lindsey District Council
- Alcester Town Council
- Somerset County Council
- Friends, Families and Travellers

Annex 2: Prioritisation of caravan and camping sites at flood risk

Prioritisation of caravan and camping sites at flood risk			
Priority category	Description of risk	Explanation	Number of sites in England & Wales
1A	High likelihood and higher consequences	Sites at significant likelihood of flooding which lie in coastal flood risk locations	307
	High likelihood and higher consequences	Rapid Response Catchments that contain at least one site at significant likelihood of flooding	19
Priority 1A total			326
1B	High likelihood and lower consequences	Sites at significant likelihood of flooding which are not in coastal flood risk locations or in rapid response catchments	290
	Moderate likelihood and higher consequences	Sites at moderate likelihood of flooding which lie in coastal flood risk locations	217
	Moderate likelihood and higher consequences	Rapid Response Catchments that contain at least one site at moderate likelihood of flooding	6
Priority 1B total			513
2	Moderate likelihood and Lower consequences	Sites at moderate likelihood of flooding which do not lie in coastal flood risk locations or rapid response catchments	194
	Low likelihood and Higher consequences	Sites at low likelihood of flooding which lie in coastal flood risk locations	264
	Low likelihood and Lower consequences	Sites at low likelihood of flooding which are not in coastal flood risk locations (includes those in Rapid Response Catchments)	139
Priority 2 total			597
Total			1,436

Table 4 Caravan and camping sites at flood risk in England and Wales in each priority category

Annex 3 Data sources and data certainty

Number of caravan and camping sites

The data on caravan and camping sites presented in this report originates from the Environment Agency's National Receptors Dataset which in turn uses Ordnance Survey data. The Ordnance Survey data does not include:

- unauthorised Gypsy and Traveller sites,
- unlicensed land which is used for temporary sites by touring clubs (under their exemption certificates issued by Natural England and the Countryside Council for Wales under the Caravan Sites and Control of Development Act 1960);
- and is unlikely to include some smaller sites such as authorised privately owned Gypsy and Traveller sites.

The National Receptor Dataset was overlain with National Flood Risk Assessment (NaFRA) data to determine the number of caravan and camping sites in a given flood risk category. In addition to the results shown in table 1 of the main report around 20 caravan and camping sites are known to be at flood risk but for these sites more detailed data was not available in order to categorise the site as being at low, moderate or significant likelihood of flooding.

These gaps in these data sets mean that there is some uncertainty in the quoted statistics regarding the number of caravan and camping sites in England and Wales at flood risk (it is likely that this report underestimates the number of sites at flood risk). Nevertheless the National Receptor Dataset is considered robust and as such is being used by Environment Agency and Lead Local Flood Authorities in preparing national and local flood risk assessments.

Overall we consider that the data certainty is considered medium-high¹⁰.

Prioritisation of caravan and camping sites

For the purposes of manageability in the prioritisation methodology, the working group decided to include just two factors indicative of a high flood hazard (and hence risk to life). The prioritisation methodology used the following datasets:

The datasets used to determine flood likelihood were:

- NaFRA (2008)
- National Receptor Dataset (pre-determined OS base functions only)

The datasets used to determine flood consequences were:

¹⁰ Based on a description of certainty with five grades: low, medium-low, medium, medium-high and high

- Flood Zone 3 data (equating to locations with an annual chance of flooding of 0.5% or greater, ignoring the presence of flood defences) from August 2011 was used to determine areas at risk of flooding from the sea
- Environment Agency Rapid Response Catchment database as at July 2011

Rapid Response Catchment (RRC) data is currently only available as point data rather than polygon data in Geographical Information Systems. Consequently once it was determined which RRCs contained a caravan or camping site it was necessary to manually cross-check the flood likelihood category of that site based on its postcode. RRCs contain at least one caravan/campsite at flood risk although they may contain more than one site. More detailed information on RRCs is likely to be available at a local level which could inform local prioritisation by Local Resilience Forums and local branches of caravanning and camping organisations.

The data certainty is therefore considered to be medium and suitable for its intended purpose.

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