

**Fire Kills Campaign  
Boat Fire Safety Week  
25 – 31 May 2013  
Briefing Pack**



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# **1. Introduction**

This year's Boat Fire Safety Week will take place from 25 – 31 May 2013.

This pack provides information specific to the risk of fire, explosion and carbon monoxide (CO) poisoning linked to boats, along with some headline figures.

This briefing has been made possible through the Boat Safety Scheme gathering and using fire and CO incident data. To help ensure that this briefing remains accurate and effective for future Boat Fire Safety Week events, the Boat Safety Scheme requests that all fire and rescue authorities share boat fire and causal information to assist the Scheme in its fire prevention work.

## ***Background – fire and carbon monoxide safety***

This country has many thousands of miles of inland and coastal waters and has a boating population of over 450,000 motorised boats, presenting a potential risk of fire, explosion and CO poisoning incidents. Many fire and rescue authorities will have some form of boating risk within their areas (marinas, canals, lakes, coastal inlets, harbours and quays) and may wish to consider boat fire and CO poisoning incidents within their risk reduction initiatives.

There is still an increasing demand for moorings in some areas and there has recently been a growth in boating on many inland waterways, particularly for residential berths.

Due to the nature of boats, you may wish to consider promoting CO safety messages alongside fire safety. In the past 20 years 60 boaters have been killed as a result of a boat fire or carbon monoxide incident. The records show that the split between fire deaths and CO deaths is exactly even – 30 in each category.

## ***Boat Fire Safety Week***

The Fire Kills campaign is again working with the Boat Safety Scheme (BSS) to help raise awareness of fire/CO safety on boats and in the boating community.

In 2013 the Week will take place between 25 – 31 May. Typically this is when the boating season will be really getting in to swing with bank holidays and weekends bringing more boaters out using their craft.

The aim of Boat Fire Safety Week is to raise awareness of how boaters on both coastal and inland waterways can prevent fire and CO incidents and how to plan to react if an incident occurs. Fire and rescue authorities can support this by engaging with boaters to promote the safety messages published in the FireKills/BSS *Fire Safety on Boats* and the BSS/CoGDEM *Carbon Monoxide Safety on Boats* leaflets – both freely available from the BSS.



### **Additional support in 2013**

This year, Boat Fire Safety Week is supported by other major national organisations: Royal National Lifeboat Institution (RNLI), the Royal Yachting Association (RYA) and The Maritime and Coastguard Agency (MCA). Here's what they say:



**Lifeboats**

*'The RNLI is happy to support Boat Fire Safety Week. In 2011 the charity's lifeboats launched to 90 incidents involving boat fires and a further 81 in 2012. If we can all help raise awareness of the actions that boat users can take to help prevent fire, and the sources of potential risk, more people can continue to enjoy their boating and avoid a potential tragedy.'*

The RYA welcomes any informative initiative that encourages the boating public to think of the less obvious dangers that they may face when they are out having fun on their boats. Boat Fire Safety Week is one such initiative that reminds boaters not only about the dangers of a fire onboard, but also the fatal effects of toxic smoke. The message is really quite simple: fit a smoke alarm on boats with accommodation and test it regularly.



**Maritime &  
Coastguard  
Agency**

*'The MCA fully supports Boat Fire Safety Week and endorses the advice to fit a smoke alarm on all recreational boats with overnight accommodation, whether you spend time afloat at sea, or on inland waterways. If you have open flame appliances or stoves then also fit a Carbon Monoxide alarm.'*

## 2. Fire and CO Risk on Boats

### **Identified risk**

Many fires and carbon monoxide incidents happen as a result of human error, poor installation of equipment/appliances and on occasion, dangerous practices by boaters.

Many people do not appreciate the risks associated with boats and their domestic equipment and installations. Even a moderate sized boat can carry hundreds of litres of diesel, dozens of kilograms of Liquefied Petroleum Gas (LPG) and 20-50 litres of petrol. These fuels are combined with readily combustible materials such as wood and glass-reinforced-plastic and they are all placed in close proximity of sources of heat and ignition such as engines, 12, 24 and 240 volt electrics and solid fuel stoves.



**Fit alarms and detectors to stay safe**



Due to the fuels, boat construction and the nature of moorings, fire can easily spread to, and damage, neighbouring crafts, adjacent jetties and nearby properties.

In 2012, the most common causes of fires on boats were electrical fires, engine space fires and solid fuel stove fires

Anecdotal evidence suggests that carbon monoxide poisoning risks are only properly understood by a small minority of boaters. It follows that there will only be a reduction of boat fatalities when more people understand the dangers and symptoms of carbon monoxide poisoning. From the records, boaters are most at risk from the exhaust emissions of portable generators, or problems with solid fuel stoves including flue pipes.

### **Petrol**

The Boat Safety Scheme urges owners to keep their boats well maintained and to keep alert to possible leaks, poor running engines and the strong smell of petrol.

The advice to boaters is:

*“Don’t carry spare petrol on board unless it is completely unavoidable. If you must, please take every measure you can to reduce the chance of an accident.”*

- Spare petrol containers should not be carried on-board unless it is judged to be essential to assure the safe completion of a voyage or excursion or to keep a necessary generator running
- Limit the capacity! Don’t forget that UK law allows you only to carry restricted amounts of spare petrol aboard
- Use proper cans, specifically designed for petrol. Any other container not designed for petrol could allow fuel and vapours to escape
- Protect petrol containers from direct sunlight wherever you can, but never keep them in the engine or cabin space



- Store petrol cans and engines with integral tanks such as outboard motors and generators way from sources of ignition in drained lockers, or on open deck areas where any escaping petrol fuel and vapours will flow overboard
- Decanting petrol from containers should be avoided if possible, and re-filling containers or equipment should take place in the open air on the bank and away from sources of ignition
- Never use a bucket or other open receptacle to hold or transfer petrol or to mix petrol and two-stroke oil, add the oil to the engine's tank before filling with petrol
- Containers should not be overfilled, because petrol expands and vapour pressure can build up in hot weather
- Containers should be securely stowed to prevent them falling over and leaking
- Take care to protect petrol containers, any that is dropped or treated roughly could start leaking

### **Solid fuel stoves**



Solid fuel stoves continue to be a significant cause of fire on inland waterway boats. These heaters are very popular on narrowboats, coastal barges and on some classic and vintage yachts or ex-fishing boats.

There have been at least two dozen boaters hurt and five killed in using solid fuel stoves in the first decade of the 21<sup>st</sup> century. There have many other incidents where no one was hurt but the boat and belonging suffered a lot of damage.

There are four risks that must be avoided or managed, if boaters and crews are to keep safe with solid fuel stoves:

- 'Over-firing' of the stove leading to a boat fire
- Carbon Monoxide (CO) poisoning due to the escape of stove flue gases into the cabin
- Items and materials being too close and getting too hot for too long
- Poor maintenance and misuse of the stove

Good information explaining how to avoid these risks is available at:

<http://www.boatsafetyscheme.org/stay-safe/solid-fuel-stoves>

### **Liquefied Petroleum Gas (LPG)**

Fixed gas systems must be installed to accepted boat installation standards and in accordance with the appliance maker's instructions. Gas appliances and flues should be routinely serviced and maintained.

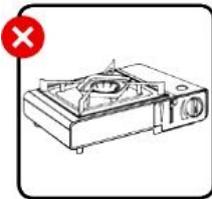
The BSS encourages owners not to allow any bodge jobs! It says always use a competent person to carry out work on LPG systems. Ask a local boatyard or contact Gas Safe Register for details.

## Further LPG advice

In addition:

- Make sure gas canisters, bottles or cylinders are stored upright and where any leaking gas will flow overboard and not into the interior of the craft. Preferably, this will be in a suitable, vapour-tight, self-draining locker
- Check flexible hoses for damage or deterioration. If you're in any doubt about their good condition, get them professionally checked and renewed
- Check your LPG system for leakage by routine observation of a bubble tester installed in the cylinder locker, or by testing all joints with leak detection fluid

## Portable 'camping style' equipment



Owners of boats without proper galley facilities are recommended to consider using a flask for hot drinks when aboard as portable camping equipment is not suitable.

Following explosions, fires and CO incidents in boats caravans and other enclosed spaces, boaters should heed any instructions for portable gas equipment that states it should only be used outdoors.

Unless any portable gas equipment is specifically designed for boat use, then its usage should be restricted to times ashore. And whatever else happens, fuel canisters should always be changed away from the boat and away from ignition sources.

## Carbon monoxide (CO)

When carbon-based, appliance and engine fuels, such as gas, LPG, coal, wood, paraffin, oil, petrol and diesel don't burn completely, CO is produced, CO build-up in the cabin can occur due to one, or a mix, of these factors:

- With faulty, badly maintained or misused appliances
- Exhaust fumes from a boat's engine or generator
- Escaped flue gases from solid fuel stoves
- Blocked ventilation or short supply of air - fuels need the right amount of oxygen to burn safely

Carbon monoxide tips for boaters:

- Install a CO alarm
- Test the alarm routinely
- Never remove the batteries
- Install fuel burning appliances properly
- Maintain appliances and engines routinely
- Use the equipment correctly
- Don't allow engine fumes into the cabin space
- Never bring a lit or cooling barbecue into a cabin or covered area (the only safe charcoal is *stone-cold* charcoal)
- Deal with problems immediately
- Don't allow bodged repairs and maintenance
- Know the signs of CO poisoning and how to react.

For more detail read the information on the BSS website:

[http://www.boatsafetyscheme.org/stay-safe/carbon-monoxide-\(co\)](http://www.boatsafetyscheme.org/stay-safe/carbon-monoxide-(co))



### 3. Detection Equipment

#### **Smoke alarms save lives**

In the absence of any British or international standards incorporating a suitable code for marine installation, the Fire Protection Association's (FPA) advice is that the alarm of choice is; an optical alarm with a long-life battery, a hush button and one that meets either BS 5446:2000 Part 1, or BS EN 14604:2005, preferably also carrying a BSI or LPCB certification mark.

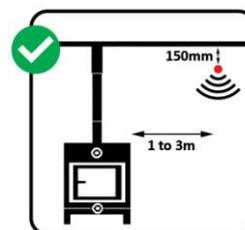
This advice recognises the confined nature of the space inside a boat and the potential for high levels of humidity and vibration, wider temperature ranges and an aggressive chemical atmosphere. These conditions may affect battery lifespan hence the recommendation for the lithium sealed alarms. Even though some boats have 230/240 V ac systems, mains powered alarms are not recommended due to the erratic and unreliable nature of the power supply.

Generally alarms should be mounted on the deckhead (ceiling), 30cm from the cabin sides and within five metres of each protected area of the vessel. On some boats this will mean installing more than one alarm, and it is recommended to choose units that can be linked together.

Guidelines produced by Boat Safety Scheme on smoke alarms in boats can be found here: <http://www.boatsafetyscheme.org/stay-safe/fire-safety-for-boats>.

#### **Carbon monoxide alarms save lives**

For boats with fuel burning appliances aboard, an engine or generator, the recommendation is to fit a suitable audible carbon monoxide alarm for an added re-assurance. 'Black-spot' colour-changing indicator cards are not good enough. Boaters will not have an instant warning of dangerous CO levels and there's no alarm to wake up anyone asleep. The BSS advice is to fit alarms approved as meeting BS EN 50291; these are best suited for boats. Alarms with life-long batteries are available.



For the best protection, follow the alarm manufacturer's installation instructions as far as the space and nature of the boat allow. But if the placement directions are difficult to meet on any boat, these are the 'best practice' points. Try to place the alarm:



- in living quarters between 1m and 3m (on plan view) from the appliance
- in living quarters fix alarms high up on a wall, but at least 150mm from the ceiling and where the indicator lights can be seen
- in sleeping quarters have the alarm in the "breathing zone", i.e. near the bed head
- before fixing, test that the alarm can be heard from any position in the boat (or buy an additional alarm)

## **4. National Activity**

Owing to the required highly targeted nature of this activity and its messages, the delivery of the messaging is likely to be more impactful when delivered at the local level by fire and rescue authorities. Activity at the local level has continued to prove beneficial with fantastic coverage regularly being secured up and down the country.

### ***Social media***

Fire Kills will promote messages throughout the Week on our established social media platforms, Twitter and Facebook.

We may well utilise our three other social media channels:

- Tumblr (a free blogging site)
- AudioBoo (for sharing audio clips)
- Pinterest (an online pin board)

Please join in and share any new ideas.

### ***Boat Safety Scheme activity***

The BSS will be promoting Boat Fire Safety Week to more than two-dozen inland navigation authorities in the UK and supplying a template news release.

The BSS will also be writing, with the aim of encouraging participation and connecting with local fire and rescue services: The Yacht Harbour Association (the national marina operators membership association), the British Marine Federation (umbrella UK boating industry membership organisation), National Association of Boat Owners, Association of Waterways Cruising Clubs, Inland Waterways Association, Residential Boat Owners Association, The (dutch) Barge Association and The Boating Association

The BSS will also be seeking support of the Isle of Man, Northern Ireland, Scottish, States of Jersey and Guernsey and the three Welsh fire and rescue authorities.

The BSS will also send a notice to the various specialist boating media.

The BSS will be using its twitter account @BSS\_BoatSafety to promote various messages and themes as contained in this briefing.

It will also draw attention to the week and suggesting that boaters look in their local newspapers and listen to local radio stations to see where Boat Fire Safety Week activities are happening.

### ***RNLI activity***

The RNLI is disseminating information about BFSW to all its member stations in the country. Any fire service with a RNLI station in its area may be contacted by the local lifeboat team to discuss possible joint activities depending on local circumstances.

## **5. Suggested Local PR and Engagement Activity**

If Boat Fire Safety Week is an opportunity relevant to your service and as something that you would like to use as a hook for local activity within your area, the following information may be helpful background.

### ***Opportunities for FRA engagement with the boating community***

There are many opportunities for fire and rescue authorities to engage with the boating community. However, you should be aware of the strict protocols that exist with Navigation, Harbour and Marina authorities in relation to fire and rescue authority personnel working on or near waterways – so always seek to arrange your events well in advance with the appropriate management.

Marina developments are ideal locations to undertake such activities due mainly to the number of boats present and the ease of access for appliances. Permission from the Marina Manager should be sought in advance of the activities.

In addition to marinas there are also popular areas where boaters congregate, these are termed as 'Honey Pot' sites by people in inland boating circles and are also an important area to target. Canal/river banks, town moorings, slipways, marina and harbour locations all provide the opportunity to engage with boaters.



It should be noted that those who live aboard are the most vulnerable and these may benefit from the provision of detector alarms. In particular, boat dwellers, many of whom fall into the most at risk categories in terms of geography, income and societal classifications, are the people most at risk on boats. If you intend using a rescue boat why not ask the local river navigation authority to point out groupings of boat dwellers to ensure your message gets to where it may be most needed.

From this year, Boat Fire Safety Week has the support of the RNLI, RYA and MCA. So, if relevant to you, local liaison with lifeboat stations, RYA clubs and Coastguard Stations is recommended.

### ***Press release***

Fire and rescue authorities are also encouraged to use the attached press notice on page 14 to raise local media awareness. The press notice can be used as a template and adapted as necessary to include local fire and rescue authorities logo, key messages and themes.

### ***Data collection to support the ongoing work***

Data is vital in correctly attributing risk and moving the issue of boat fire safety forward to the same degree of improvement as domestic fire safety. When reporting incidents on IRS ensure to emphasise the word 'boat' to allow data searches. Please also co-operate with any requests for fire incident reports from the Boat Safety Scheme as the effectiveness of their risk management activity depends upon accurate and complete incident data.

We would welcome any feedback or suggestions on our plans for PR activity at either a national and local level, or any suggestions to improve this briefing.

We would love to receive examples of coverage achieved. If you can offer any support by way of social media, case studies, spokespeople or resources – such as leaflets or images that may be useful in supporting the campaign – please do get in touch with the DCLG Fire Kills campaign team.

## 6. Supporting Leaflets and Artwork

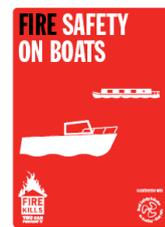
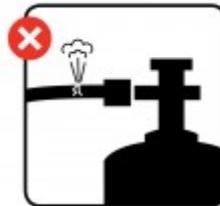
### **Material available on the new DCLG fire extranet**

The new Fire Kills Extranet hosts all of the Fire Kills artwork, which is available to all fire and rescue authorities - <http://extranet.firekills.gov.uk>.

The standard Fire Kills top tips and positive and negative illustrations are available under 'Images' – <http://extranet.firekills.gov.uk/images/> – and the artwork for the new leaflets (both InDesign and PDFs) can be found under 'leaflets' – <http://extranet.firekills.gov.uk/leaflet/>.



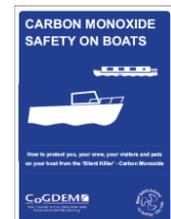
**Maintain your boat's engine and fuel systems regularly**



If your fire and rescue authority has produced material that you believe will be beneficial to other authorities and you are happy for this to be made available to them, we can house this on the new Extranet. There are already some examples on there where a fire and rescue authority has kindly produced material to be shared nationally. If you have artwork that you would like to be added to the Extranet, please send it to [James Webb](mailto:James.Webb).

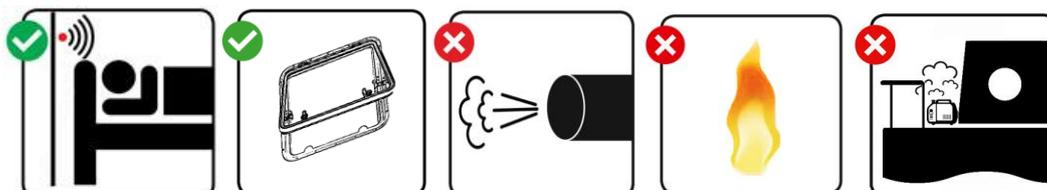
### **Leaflets freely available from the Boat Safety Scheme**

The BSS can supply boxes of both the *Fire Safety on Boats* and the *Carbon Monoxide Safety on Boats* leaflets (in boxes of 400 leaflets) free of charge to fire and rescue authorities upon request. Put your request to Rob McLean at [bss.enquiries@boatsafetyScheme.org](mailto:bss.enquiries@boatsafetyScheme.org).



### **Carbon monoxide related artwork is available** from the BSS Office

([bss.enquiries@boatsafetyScheme.org](mailto:bss.enquiries@boatsafetyScheme.org)) or call 0333 202 1000 and speak to Robert McLean.



The text of the BSS/CoGDDEM leaflets is free to use. It has all been reviewed and approved by boating stakeholders, alarm companies and Health Protection England. Please acknowledge the BSS/CoGDDEM as the source.

## 7. Template Press Release

A SAFETY MESSAGE FOR BOAT OWNERS THIS BOAT FIRE SAFETY WEEK!

- **[Local FRA]** Wise up to boat fire and carbon monoxide (CO) risks



**[Local FRA]** and the Boat Safety Scheme are asking local boat owners to make vital safety checks and learn more about fire and carbon monoxide risks to stay safe this summer.

In the past 20 years thirty boaters were killed in boat fires and another thirty lost their lives to the 'silent killer' carbon monoxide.



The message, timed for the start of the boating season, is that owners should understand the risks, make regular, basic checks, and follow their engine and appliance operating guidelines, as the essential steps to deal with the fire and carbon monoxide threat.

During Boat Fire Safety Week, [local] firefighters will be talking to thousands of boat owners in [area] and across the country, handing out leaflets to alert people to the risks and help them protect themselves and their passengers.

The *Fire Safety on Boats* leaflet provides tips on how to protect your boat and, most importantly, your crew from fire, as well as what to do if a fire breaks out.

This leaflet together with *Carbon Monoxide Safety on Boats* is available at boatyards and marinas.

People can also get safety advice on the go, with the top 10 tips to keep you safe from carbon monoxide available for smartphones, tablets and laptops at [www.boatsafety.org/stay-safe/carbon-monoxide-\(co\)](http://www.boatsafety.org/stay-safe/carbon-monoxide-(co))

This year's Boat Fire Safety Week has the support of the Royal National Lifeboat Institution (RNLI), the Royal Yachting Association and The Maritime and Coastguard Agency.

RNLI Campaign Manager Will Stephens said *"The RNLI is happy to support Boat Fire Safety Week. In 2011 the charity's lifeboats launched to 90 incidents involving boat fires and a further 81 in 2012. If we can all help raise awareness of the actions that boat users can take to help prevent fire, and the sources of potential risk, more people can continue to enjoy their boating and avoid a potential tragedy."*

For more information about events in your area please contact **[FRA press office contact details]** or look in your local press.

For further information about general boat fire and CO safety, visit <http://www.boatsafetyscheme.org/stay-safe>.

- ENDS -

### ***Notes to Editors***

For more information on fire safety please visit: [www.gov.uk/firekills](http://www.gov.uk/firekills) or speak to your local fire and rescue authority by calling **[insert FRA contact details]**

The Boat Safety Scheme's role is to minimise the risks of fires or explosions on boats cruising the UK's inland waterways network, by specifying a set of requirements that most boats must meet before they can be granted a navigation licence. The Scheme also recommends a number of 'safety best practice' measures which enhance the personal health and safety of those on board privately owned boats.

For further information, please contact Rob McLean, Communications Manager at the Boat Safety Scheme, on 0333 202 1000 or email on [robert.m@boatsafetyscheme.org](mailto:robert.m@boatsafetyscheme.org).