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**BSS reaction to MAIB report into the double fatal carbon monoxide poisoning on Windermere**

The report into the deaths of the mother and daughter from carbon monoxide (CO) poisoning on a boat on Lake Windermere was published today by the Marine Accident Investigation Branch (MAIB).

The report mentions the Boat Safety Scheme (BSS) in several places including the recommendations of the Chief Inspector of the MAIB, one being that the Lake District National Park Authority (LDNP) adopts the BSS as a means of improving safety.

Chair of the BSS management committee Vince Moran in welcoming the report said:

*'The report shines a bright light on the risk from carbon monoxide poisoning in boats and the challenges there are to tackle the issue.*

*'We owe it to everybody affected over the years, including victims, friends and families, to intensify our efforts to get the message out.*

*'If everybody plays a part, skippers, crews, the boating industry, navigation authorities and the Boat Safety Scheme, it will be much more likely that such terrible events will cease.*

*'We have already begun a dialogue with the Lake District National Park Authority and have offered our support in their consideration of the Chief Inspector's recommendation.*

*'We will work closely with the Authority to see what action can be undertaken to reduce the likelihood of carbon monoxide poisoning incidents in the future and we are confident that adoption of the BSS by LDNP, as recommended by the MAIB, has the potential to also reduce the number of incidents of boat fires and explosions'.*

*'We have a good record of spotting potential risks early and persuading owners to tackle problems before harm occurs- protecting not just the boat owners, but other people visiting or working on the UK's inland waterways as well.'*

The MAIB report recognised that BSS boat examinations help identify potentially dangerous CO-emitting installations, highlight the risk and trigger key warnings with relevant recommendations for the boat owners.

Also agreeing with the MAIB finding, the BSS believes it would be helpful to see suitable CO alarms supplied with boats from new. It would send a strong message to owners about the importance of carbon monoxide safety.

The Scheme is moving forward the Chief Inspector's recommendation for the BSS that its examiners highlight any issues, explain the nature of the risk and promote the fitting and testing of CO alarms certified as meeting the recognised standards whenever a boat owner attends an examination.

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This will be in conjunction with the BSS building a stronger co-operative approach of the various agencies including navigation authorities, emergency services and others to influence boaters understanding and where boat owners will act to remove or not introduce unnecessary risk.

The BSS aim is for all inland boaters to understand the following seven core points, as these will help reduce the number of CO related deaths on boats. Boaters should recognise: -

1. what the symptoms of CO poisoning are and what to do if anyone suspects that people aboard may be suffering the effects of this gas
2. the nature of CO and how it builds up in a cabin including how to spot the dangers signs
3. why equipment with problems should not be used and must be fixed without delay
4. that fuel burning installations must be fitted maintained and run according to the manufacturer's instructions
5. the need to provide and maintain adequate ventilation
6. that charcoal BBQs and generators emit huge amounts of CO fumes so need to be used well away from the boat
7. why it is critical as a lifesaving backstop, to install CO alarms certified as meeting the latest standards, currently BS EN 50291-2, and have a routine for pressing the test button.

Underpinning these key points, Graham Watts, Boat Safety Scheme manager explained what CO is and how it affects people;

*'Appliance fuels need the right amount of oxygen to burn safely. Without enough air, the burn process is inefficient and the by-product changes from carbon dioxide to carbon monoxide.'*

*'Once in the lungs, carbon monoxide will replace the oxygen in your bloodstream that is vital to keep life going.'*

*'CO cannot be seen, smelt or felt. It has taken the lives of boaters even in moderate concentrations. If it starts to leach into a cabin, crew members can succumb before they realise there is a problem. The risk is even more serious when people are asleep.'*

*'The early symptoms of poisoning are similar to flu or food poisoning, and can include headaches, nausea and dizziness.'*

*'Anyone showing these symptoms when aboard, but feeling better when ashore should seek medical advice. If CO poisoning is confirmed, have any equipment checked over before it is used again.'*

The Scheme's belt and braces advice is to fit a CO alarm approved as meeting BS EN 50291-2 as these are best suited for boats.

Alarms need testing when first boarding the boat and weekly when staying aboard. Batteries should be changed if they do not work when tested and a new alarm must be fitted if the 'replace by' date marked on the alarm has passed.

The advice is to have one in the cabin or living quarters placed just below ceiling or deck-head height. When asleep, for best protection, have an alarm in the breathing zone i.e. around the bed-head area.

The BSS has the latest, more detailed essential advice for boaters on [www.boatsafetyScheme.org/CO](http://www.boatsafetyScheme.org/CO) and in its leaflet, Carbon Monoxide Safety On Boats – Don't let CO ruin your life.

**- ENDS -**

## NOTES FOR EDITORS

How the BSS works - The BSS is a public safety project owned jointly by the Canal & River Trust, registered as a charity with the charity number 1146792, and the Environment Agency. At least 14 other navigation and harbour authorities have also adopted it.

The navigation authorities' purposes for the Scheme are to help reduce the risks of fire, explosion and pollution on small craft.

This is done by promoting fire safety and pollution avoidance advice to help boat owners keep themselves and their crews' safe as well as regular examination of fuel systems, gas systems, electrical systems and appliances. The BSS is responsible for the administration and supervision of the BSS examination scheme.

The BSS' purpose is to help minimise the risk of harm to visitors to the inland waterways, the waterways' workforce and adjacent properties, as it is to these parties that the Navigation Authorities may have duties in law. Equally it contributes to the common goal to make the waterways a safe, attractive and pleasant environment for all.

The BSS helps control the hazards which are introduced by boats which have been inadequately constructed or maintained or hazards introduced by boat owners. The Navigation Authorities using the BSS, have two broad approaches in respect of privately owned and privately managed boats.

1. The BSS Examination - Firstly, the BSS supports the Navigation Authorities by helping monitor and develop their minimum safety (legal) requirements necessary for boat owners to obtain permission to use Authorities' waterways

Independent and authorised BSS Examiners are in place carry out BSS Examinations and verify whether any given boat meets those minimum safety standards. A boat must be examined every four years.

2. Awareness raising - Secondly, the BSS employs education, persuasion and promotion of safety to address accepted risks linked to the use of appliances, engines and associated boat systems and fuels. BSS safety information assists owners identify and control the risks for which they have a responsibility - this means risks associated with carbon monoxide poisoning and electrocution. Some of these risks are identified by the 'Advice Checks' within the BSS Examination for boats in private use and management. Similar checks on non-private vessels, including those such as hire craft and small passenger boats, are required passes.

Since 2005 the BSS has been closely monitoring incident data and it is clear from the known causes of incidents that owner behaviour, maybe due to a lack of awareness, is the main contributory cause of incidents.

It follows that promoting safety awareness is the measure is a key ingredient to achieving safer waterways.

**Marine Accident Investigation Branch (MAIB)** examines and investigates all types of marine accidents to or on board UK ships worldwide, and other ships in UK territorial waters.

The role of the MAIB is to contribute to boating safety by determining the causes and circumstances of marine accidents and working with others to reduce the likelihood of such accidents recurring in the future. Accident investigations are conducted solely in the interest of future safety. The Branch does not apportion blame and it does not establish liability, enforce laws or carry out prosecutions.

The Investigation Report concerning the vessel concerned, Arniston, is published on the MAIB and gov.uk websites here - [http://www.maib.gov.uk/publications/investigation\\_reports.cfm](http://www.maib.gov.uk/publications/investigation_reports.cfm) and <https://www.gov.uk/government/organisations/marine-accident-investigation-branch> , please check for the incident-specific link by vessel name.