



Boat Owners Survey 2021

Summary Report

April 2021



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EXECUTIVE SUMMARY AND RECOMMENDATIONS

Summary of Key Findings

- Between mid-March and mid-April, the survey generated 1,020 replies from Boat Owners, with over three quarters of the responses from those with Narrowboats.
- Roughly one quarter of respondents (27%) live aboard their Vessel, 42% are regular users (weekly/fortnightly) and 29% use their boat on a less frequent basis.
- 89% of all respondents have at least one Smoke Alarm already installed, with 55% having at least one LPG Gas/Vapour Detector, but only 23% have a Heat Detector in place. Unsurprisingly, those in larger Vessels are more likely to have multiple smoke alarms installed.
- Hardly any of the smoke alarms that are currently in use are connected to a siren/horn or people's mobile devices.
- Only a quarter of respondents agree that they have a fixed firefighting system in the engine space. This is slightly more prevalent amongst those with Cabin/Sports Cruiser vessels.
- Just 6% of all Boaters have a fixed water-mist firefighting system in the main accommodation area.
- Amongst the 11% of survey respondents who do not currently have a smoke alarm in place, it appears that most consider that the alarms are too easily activated inadvertently (mostly through cooking).
- For all respondents (aggregating those that have and don't have a smoke alarm in place), the key factors influencing people's decision-making process are the basic features of the alarm and the ease of installation.
- Whilst some were intrigued by the idea of a smoke alarm having 'smart' features, the majority could not see the benefit of this type of feature given that they were normally absent from their vessel (geographically distant) and that any alarm sent to their device would be of no practical use to them.
- 84% of all survey respondents agreed that smoke alarms should form part of the Examiners Checking Procedure. People are strongly supportive of the common-sense case for fire safety and some were surprised that this check is not already part of the process (perhaps influenced by the CO2 checks).
- There was a strange geographical quirk in that 31% of Boaters in the East of England (total responses, 35 people) don't have a smoke alarm (average across the survey was just 11%) and that in this region, only 59% of people thought that smoke alarms should be part of the ECP (although still a majority, of course), well below the 84% average for all respondents).
- Only 55% of people have any kind of 'fire action plan' and the majority that do have something in place have only the very basic ideas about leaving the vessel (making up 44% out of that 55%).
- **In conclusion; the vast majority of boaters who responded to the survey already have a smoke alarm installed and would welcome the inclusion of a check on the equipment as part of the ECP. People's attitude to smoke alarms and fire safety are firmly grounded in common-sense, but there is little appetite for smart features related to connectivity. People are content to opt for very basic smoke alarm features and make very basic fire action plans. As long as the alarm works and they can safely exit their vessel, then they see no need to complicate matters further.**



BACKGROUND, MANAGEMENT INFORMATION AND DATA REPORTS

Research Design and Overall Response

The Boat Safety Scheme (“BSS”) asked Morale Solutions to help design a survey to understand more about the view of Boat Owners towards issues related to fire safety and smoke alarms. We produced a draft questionnaire and, following a series of iterations, a final survey was agreed. The topic coverage was as follows;

- ‘demographic’ style questions about;
 - Vessel type, Vessel size, Berths, Propulsion/Fuel, Age, Region, Frequency of boat usage
- Presence of Smoke Alarms, Heat Detectors and LPG gas/Vapour Detectors
- Connection of these units to outside horn/siren or home/mobile device
- Reasons for not having a Smoke Alarm
- Presence and type of fixed firefighting systems in the engine space
- Presence and type of fixed water-mist firefighting systems in the accommodation area
- Importance of a range of factors in choice of smoke alarm/system
- Openness to the inclusion of Smoke Alarms within the ECP
- Attitudes towards ‘fire action plans’

The survey comprised 31 questions, 29 closed questions and 2 open-ended questions. The survey was securely hosted online using a generic URL (non-personalised links). The survey design was optimised for adaptive use with PCs/tablet devices (53% of all completions), smartphones (31%) and tablets (16%).

Morale Solutions used the BSS’s pre-existing relationships with a number of [Boat] Owner Representative Groups (ORGs) to encourage them to support and publicise the survey amongst their membership. This involved us providing the ORGs with a series of templated messages which were adapted for email distribution, Forum posts, Facebook posts or even a printed Newsletter. A number of pre-survey ‘marketing’ messages were sent out by the ORGs and these were followed up with further messages during the survey fieldwork to maximise response rates.

The survey was launched on Monday March 15th 2021 and the fieldwork ran for four weeks, closing on Monday April 12th.

The response rate was excellent. After our normal data cleaning process, we compiled a database of 1020 useable survey responses (944 fully complete surveys and a further 76 partially completed surveys where we judged them to be sufficiently completed to merit inclusion in the analysis). For comparison, the BSS ran a similar project amongst Boat Owners in 2018 to explore attitudes toward Carbon Monoxide alarm systems. That project generated 279 total replies.



Response Levels by Key Demographics

The vast majority of survey replies came from Narrowboat owners (78%) and hence the most frequent choice for Vessel length was 16-25m, with 4 or more berths. Diesel was more prevalent than Petrol, with an almost identical split between LPG and Solid Fuel.

Vessel Type	2021 replies	2021 share of returns (%)
Cabin / Sports Cruiser	153	15%
Narrowboat	791	78%
Wide beam / Barge	58	6%
Converted commercial boat (e.g. fishing ')	4	0%
Yacht/Sailing boat	6	1%
House boat (fixed mooring)	2	0%
Any Other Vessel type	4	0%
not answered	2	0%
Total	1020	100%

these groups were combined for analysis purposes

Vessel Length	2021 replies	2021 share of returns (%)
0-5m	10	1%
6-10m	173	17%
11-15m	250	25%
16-25m	582	57%
25m+	3	0%
not answered	2	0%
Total	1020	100%

these groups were combined for analysis purposes

these groups were combined for analysis purposes

Number of Berths	2021 replies	2021 share of returns (%)
0	16	2%
1	61	6%
2	342	34%
3	75	7%
4 or more	521	51%
not answered	5	0%
Total	1020	100%



Type(s) of Propulsion / Fuel (multiple selections allowed)	2021 replies	2021 share of returns (%)
Diesel	935	65%
Petrol	81	6%
LPG	196	14%
Solid Fuel	203	14%
Other	16	1%
not answered	5	0%
Total	1436	100%

41% of the survey respondents were 65-74 years old. Another 41% fell into all of the younger groups combined. 16% were older than 75.

Age	2021 replies	2021 share of returns (%)
Under 25	2	0%
25-34	14	1%
35-44	31	3%
45-54	102	10%
55-64	273	27%
65-74	419	41%
75 or older	159	16%
Prefer not to say	14	1%
not answered	6	1%
Total	1020	100%

these groups were combined
for analysis purposes

Boaters from the East Midlands and West Midlands made up almost half of all respondents (46%) – see below.

The split between the different amount of boat usage was interesting, with 43% using their boat either all the time or at least once per week. A further 38% were monthly users (-ish) and another 17% fell into the slightly more sporadic usage categories and used their boat every couple of months or less frequently than that.



Geography (In which part of the country do you do most work?)	2021 replies	2021 share of returns (%)
Scotland	2	0%
Wales	9	1%
Northern Ireland	1	0%
North East	108	11%
North West	156	15%
East Midlands	235	23%
West Midlands	237	23%
East (Anglian incl. Norfolk Broads)	35	3%
South East	162	16%
South West	53	5%
Europe (non-UK)	4	0%
Other	9	1%
not answered	9	1%
Total	1020	100%

these groups were combined for analysis purposes

numbers too small for separate analysis

Boat Usage	2021 replies	2021 share of returns (%)
All the time, I live on my boat	273	27%
At least once per week / per weekend	163	16%
A few times per month	264	26%
About once per month	124	12%
Once every couple of months	84	8%
Less frequently than that	95	9%
not answered	17	2%
Total	1020	100%



Demographic Crossover

- 92% of all boats over 16m in length are Narrowboats.
- 66% of all those less than 10m in length are Cabin/Sports Cruisers.
- 69% of Cabin/Sports Cruisers have 4 berths or more.
- 98% of Narrowboats are Diesel, but only 62% of Cabin/Sports Cruisers.
- The vast majority of boats in the North West and West Midlands are Narrowboats.
- Cabin/Sports Cruisers are more likely to be found in the North East and the East Midlands.
- 86% of the 75 and older group own a Narrowboat.
- Those that live aboard their boat are most likely to own longer Narrowboats with 1 or 2 berths
- The boats with 4 or more berths tend to get used weekly or fortnightly.



Intentionally blank



How to Use the Open-Ended Comments

Some of the sections of the survey also included open-ended questions. The full list of open comments for every question is provided to BSS under separate cover. The open comments are a valuable tool to help add colour to the hard data and provide positive creative input and ideas to some topics.

1. Use the comments to support the data, NOT to displace it. It is amazingly easy (and common) to find that a single open comment suddenly becomes fixed in your mind. It may be particularly well-written or thought out or may just be particularly vitriolic or negative. Either way, it is possible for isolated comments to become the focus of your attention in particular sections of the survey. However, your focus should in fact be on the bigger picture that the data analysis provides rather than the solitary comment.
2. In gathering the open-ended comments, we specifically included the following instruction to Examiners;
“when you write a response to any of the open-ended questions, please do NOT type anything that will allow you to be identified (unless of course you want to be). Your words will be passed exactly as written to the BSS Management Team.”

The purpose of this promise is to protect anonymity. In using the comments, BSS’s senior management must be careful never to share the full comments with other groups (the themes and examples can and should be shared of course). Likewise, people should never be identified from their comments. It may be human nature to wonder who made a given comment, but they should never be questioned about the comments they made as individuals.



SURVEY ANALYSIS IN DETAIL

Fire Safety On Your Vessel – Installation of Various Devices

- The survey asked respondents how many of each different type of fire safety device were installed in their vessel.
- 89% of all respondents have at least one Smoke Alarm already installed.
- 55% have at least one LPG Gas/Vapour Detector.
- Just 23% have at least one Heat Detector.

- Those without these devices are likely to be more negative in general about the need for them and particularly against the idea of Smoke Alarms being part of the ECP.
- Importantly, 95% of those who agree that Smoke Alarms should be part of the ECP, already have a Smoke Alarm installed.
- And (same data but the other way around), 89% of those who have at least 1 Smoke Alarm installed agree that Smoke Alarms should be part of the ECP. [these numbers are based on people that have answered both questions within the survey]

- Most people have 1 or 2 Smoke Alarms in place. Compared to an overall average of 44% who have 1 Smoke Alarm, those with vessels of up to 15m in length are more likely to have a single smoke alarm. The larger 16m+ vessels are more likely to have 2 smoke alarms in place (45% vs an overall average of 36%).
- Geographically, 31% of those Boaters in the East of England say they do not currently have a Smoke Alarm (overall sample average is just 11%).
- Most that do have LPG Gas/Vapour Detectors only have one in place. This is more likely amongst those with Cabin/Sports Cruisers and in the smaller size vessel ranges (up to 15m).
- Surprisingly, of those that claimed they have LPG on their Vessel, there is not a greater incidence of LPG Gas/Vapour Detectors. It's still around 38% that have one of these devices.
- Heat Detectors are less common overall, with a slightly higher incidence amongst Cabin/Sports Cruiser (20% have one of these devices vs an average 14% overall).

Fire Safety On Your Vessel – Connectivity of Devices

- There were very low levels of connectivity between the device people already have and other technology.
- Only 2% of people have their Smoke Alarm connected to an outside horn/siren or their home/mobile device.
- Numbers for Heat Detectors and LPG/Vapour Detectors are at 1%.



Fire Safety On Your Vessel – Fixed Firefighting Systems

- 74% of all survey respondents do not have a fixed firefighting system in the engine space. 26% do.
- Amongst those 26%, 19% come from Boat Owners who have a Manual system, 6% from those with an Automatic system and 1% who aren't sure which type of system they have.
- The presence of a fixed firefighting system is more marked amongst those with Cabin/Sports Cruisers (43% have some kind of system vs the 26% average overall) and those with Wide Beam/Barge vessels (35%).
- Cabin/Sports Cruisers are more likely to have an Automatic system whilst manual systems prevail in the Wide Beam/Barges.
- 31% of systems use Foam, 30% CO2 and 21% use Powder. Wide Beam/Barges are much more likely to have a CO2 type system (48% vs the average 30%).

- When it comes to having a fixed water-mist firefighting system in the main accommodation area, some 94% of all survey respondents do NOT have one of these in place.
- There are no specific demographic groups where this is not the case.



People Without a Smoke Alarm

- As explained above, 11% of all respondents (a total of 108 people) do not currently have at least 1 smoke alarm in their vessel.
- These people were asked to pick their Top 3 reasons for not having a smoke alarm (from the list of 6 provided).
- There were 3 clear 'winners' in terms of top picks
 - 38% of people felt that smoke alarms are too easily activated accidentally
 - 26% said that their boat wasn't big enough to merit a smoke alarm
 - 24% claimed that they "hadn't got around to it, but were planning to"
- Some 26% of people also wrote something in the 'Other Reason' box for this question, but the majority of these comments were simply explanations of their choices above – eg. "my boat is open, unenclosed and a smoke alarm would be irrelevant".
- The only useful additions in the comments were a handful of people who have CO2 alarms and felt they didn't need a smoke alarm – "I have 2 CO alarms that I consider adequate until expert opinion tells me otherwise."
- Compared to the average 38% who felt that smoke alarms were too easily activated, there were higher proportions of people who felt this way within the oldest age group (75+ years), amongst more frequent users or those that live aboard (50-60%) and the longer size Narrowboat community.
- Only 1% of people had not installed a smoke alarm because they considered it would be too expensive.
- A separate question explored people's perceptions of pricing for smoke alarms. 48% of people thought it would cost between £10-£20. A further 35% felt £5-£10 was more likely.



Considerations in Choosing a Smoke Alarm

- This question was asked to all respondents. For those that already have an alarm (89% of people), this was exploring their retrospective reasons for selecting what they picked. For those without an alarm (11%), this was a projected question.
- Respondents were asked to rate how important a number of different factors were in their choice. If we aggregate the percentages who picked either “of some importance” or “of most importance”, the ranked order was as follows **(data given is in turn ALL respondents, those WITH an alarm, those WITHOUT an alarm)**
 - Basic features - 69% (70%, 59%)
 - Ease of installation – 47% (47%, 45%)
 - Size of the smoke alarm – 31% (31%, 39%)
 - Cost - 27% (27%, 28%)
 - ‘Smart’ features – 8% (7%, 13%)
- The ranked order is the same irrespective of whether people currently have or do not have a smoke alarm
- The basic features of the alarm and the ease of installation are clearly the most important factors.
- Interestingly, those who currently do not have an alarm attach slightly more weight to the size of the alarm and the potential smart features it has.
- When we explore all of the key demographic groups here, the same ranked #1-#5 order is in place for all demographics apart from just one. Amongst the younger Boaters (those aged less than 55), there is more consideration of the cost of the alarm to purchase (which 38% see as important, compared to an average 27% across the whole survey).
- An open-ended question asked people to explain in some more detail their views on the importance of the various factors. The full set of comments is supplied separately to the BSS. There were 311 comments made (ie. 30% of all survey respondents wrote a comment). All of these comments have been read and thematically analysed. The frequency table for comments is shown overleaf.
- A quarter of all the comments received (24%) were about the Smart features of the smoke alarm. Breaking this down further, two thirds of these comments (18% of the total) were negative comments about the smart features, indicating people didn’t think that this added any degree of attractiveness to the equipment. Example comments are given overleaf. One third of the comments in this sub-section were however positive and people were encouraged to explore the idea of smart features some more.
- 54 comments (17% of the overall total) mentioned issues to do with the basic features of the alarm.
- Another 54 mentioned were simply comments indicating that they thought smoke alarms were a “no brainer” decision and the factors behind their choice were largely irrelevant because the alarm fell into the ‘have-to-have’ category.
- 35 comments (11%) spoke about the reliability of the equipment and mostly around the tendency for the alarm to be set off by accident (during cooking, for example).



All Comment Theme Codes				
rank	main theme	number of comments	% of all comments	
1	Smart Features	75	24%	
	Smart is of no use to me (no smartphone, distance to boat, connectivity)	(55)		18%
	Smart is of interest (good idea, would consider)	(20)		6%
2	Basic Features	54	17%	
3	"No brainer", Have-to-Have	54	17%	
4	Reliability of Smoke Alarm	35	11%	
5	Have other devices present (extinguishers and CO2)	18	6%	
6	Not relevant for my boat (size) / don't want one	15	5%	
7	Personal/lifestyle choices	12	4%	
8	Ease of install	10	3%	
9	Comments about the BSS	8	3%	
10	Cost of Alarm	7	2%	
11	Size of Alarm/Aesthetics	6	2%	
12	Survey comments	5	2%	
13	Other, irrelevant, incl no comment	12	4%	
	All Comments	311	100%	

Example comments from the key major themes are given below (full list of comments provided separately).

As I live [some] travelling time from my mooring, a 'smart' device wouldn't help much. My experience with my camper suggests that false alarms are so frequent that a smoke alarm is more trouble than it is worth.

The CO alarm, however, seems a valuable device.

Linking "smart" alarms to domestic or mobile devices implies either wifi or 4G coverage at both locations. In rural locations these are seldom available or reliable. A device powered from the boat's electrical system will also drain the battery over time. Not all boats are moored in expensive marinas with shore power and wifi available!

Am now going to replace smoke detector and CO2 detectors with ones that can connect to mobile



I just needed a decent smoke alarm that conforms to the relevant standard and does the job

I want a smoke detector that will tell me if there is smoke in the boat and wake me if I am asleep nothing less and nothing more

A simple battery-operated smoke alarm is a no-brainer. No need for it to sound outside the boat - although a standard domestic type is well audible outside my boat. No need for any smart features.

A smoke alarm that alerts my phone would serve no purpose.

Most importantly, does it go off unnecessarily. False alarms have been the main reason for throwing them out or dissatisfaction

Require ability to silence alarm when activated during cooking (e.g. burnt toast)



Smoke Alarms as Part of the ECP

- We asked a specific question to Boat Owners about whether they thought that smoke alarms should be included in the BSS privately owned boat Examiners Checking Procedure.
- 84% of survey respondents agreed that they should be part of the ECP.
- 37% “agreed strongly” and 47% “agreed” with the statement.
- Importantly, in terms of boat usage, there were strong levels of agreement across the board. Boaters agreed that this should happen regardless of how often they use their boat currently.
- Similarly, scores for this question by boat type were also strong throughout (eg. 78% positive amongst those with Cabin/Sports Cruisers and up to 88% within the Wide Beam/Barge owners group).
- Likewise, there were no significant differences by age.
- The only demographic group where there was a marked lower degree of positivity was amongst those Boaters who are based on the East of England. Only 59% of them thought that smoke alarms should be part of the ECP (although still a majority, of course).
- An open-ended question asked people to explain in some more detail their views on the presence of smoke alarms in the ECP. The full set of comments is again supplied separately to the BSS. There were 364 people who responded to this question (ie. 36% of all survey respondents wrote a comment). Some people had multiple ideas to code, meaning 419 thoughts were considered. All of these comments have been read and thematically analysed. The frequency table for comments is shown overleaf.
- An important part of the analysis of these comments is that whilst some people explicitly made comments that they believed smoke alarms should be part of the ECP, other people only inferred this via their comments (some mentioning the fact that ‘safety is common sense’ and others believing that they were already part of the ECP).
- 21% of comments explicitly made the positive comment. 42% took the ‘safety is vital’ route and a further 5% of comments expressed surprise that this wasn’t already in place.
- Hence, overall, two thirds of comments (68%) were supportive of the idea of including smoke alarms within the ECP.
- Of the other comments, 9% were general in their approach (mostly again around reliability).
- 7% made (useful) suggestions for how this might work in practice for the ECP process.
- Only 8% of comments were negative here; 5% coming from people wanting to maintain a degree of personal choice about this and a further 3% concerned about how the BSS was expanding its role and control of their boating life.



Smoke Alarms As Part of the ECP			
rank	main theme	number of comments	% of all comments
1	Safety is vital, common sense (inferred YES to incl in ECP)	175	42%
2	Yes, include Smoke Alarms in ECP	86	21%
3	General comments / Alarm reliability and operation	39	9%
4	Practical considerations for ECP	29	7%
5	CO2 checks	24	6%
6	Personal choice / Let me decide for myself	23	5%
7	"Thought it was already part of ECP" (inferred YES to incl in ECP)	19	5%
8	BSS regulations, costs and role creep	13	3%
9	other comments, no comment, irrelevant to this question, survey	11	3%
	All Comments	419	100%

Example comments from the key themes are below (full set of comments provided separately).

Everyone everywhere should have at least a basic, working smoke alarm because they save lives and give a better chance of extinguishing fire early.

Low cost and simple to install. Why wouldn't you? Boat fires spread to other vessels quickly so there is an obligation to other boaters

Seems a sensible thing to check but I think that perhaps the response should be advisory rather than have a boat fail the BSS just because a battery happens to be flat at the time of the BSS

As I have said earlier on in this survey my boat is small so I cannot see a sensible position to fit one however I'm not adverse to more safety features being part of boat MOT. The problem if we go down this road all boats will be viewed in the same manner which clearly, they are not. For example, comparing my boat with a wide beam or 72' Narrow boat.

As I believe that the main deficiency with smoke alarms is that many people "forget" to make sure that the battery works periodic inspection would at least partially mitigate this. Alarms with sealed batteries and an expiry date may be preferable and lend themselves to easy inspection.



Due to the nature of a lot of narrowboats, smoke alarms can be a real pain with cooking/woodburners etc due to the nature of the confined space. But, as technology has progressed to help with these issues on the better devices, ultimately, smoke alarms are as important as a CO alarm and, in my opinion should be made part of the BSS, with some exceptions (e.g. for small, one room vessels).

The smoke alarm will go off on many occasions and I feel that the occupants will eventually take out the battery to neutralise the alarm and not replace. A battery will be installed "just" for the BSC then removed.

*I think they should be treated to check that they have a battery and are working... The simple pressing of the test button... No more. And certainly not to the point that BSS can dictate which smoke alarm you get.
I think it should be an advisory measure... Not a pass / fail measure*

The choice of whether to fit a smoke alarm should remain a personal choice and remain outside the requirements of the BSS scheme. Smoke alarms are not required by law in normal domestic houses. My assessment of the value of fitting an alarm is made on the basis of over 30 years experience as a fire and explosion risk assessor for a wide rank of manufacturing processes. The proposal also smacks of finding jobs for BSS assessors.



Fire Action Plans

- Boat Owners were questioned about their preparedness for a fire and their awareness and views on Fire Action Plans.
- 15% admitted that they did not know what a fire action plan was.
- 29% are aware of a fire action plan but have not made one for their vessel.
- Aggregating these two responses, some 44% of people are in a state of being completely unprepared for a fire.
- The remaining 55% of people do at least have some sense of a plan.
- 11% say they have already made a detailed plan which includes safely leaving the vessel, dealing with the fire, and contacting the fire authorities.
- The majority though (44%) have only made a very basic level fire action plan, predominantly about safely leaving the vessel.
- Those in Wide Beam/Barge vessels are relatively more prepared, 68% have some sort of plan compare to the 56% average.
- Interestingly (and perhaps understandably), there is almost a linear trend of preparedness linked with boat usage. So, for example, whilst only 36% of those boaters who use their vessel less frequently than once every few months have any kind of fire action plan, 66% of those who live aboard have a plan (17% detailed, 49% basic).

Survey Source

- We asked respondents to explain how they found out about the survey.
- There were 3 clear main routes to them taking part
 - 35% found out through their own Boat Club
 - 24% through the AWCC
 - 21% through NABO