



11 June 2014

Dear BSSAC member,

Combined Reports in lieu of meeting BSSAC #86

This PDF document contains combined reports in lieu of meeting #86 of BSSAC.

I should draw your attention to the fact that the Quality Management Activity Report [*Doc D1*] and the BSS report against planned BSS risk-activity [*Doc E1*] provide a status update against the relevant BSS activity plans, as agreed at BSSAC/BSSMC.

The BSS Manager's report [*Doc B1*] highlights/identifies for members any significant initiatives, issues or outcomes that have arisen since the last BSSAC meeting, including those drawn from the activity reports.

As you know this meeting is by way of reports only, there is no action upon you to respond to anything but my recommendation is that if you have comments to make, please provide them by the end of June and I'll share these with the Chair prior to dissemination to members.

Remember that a meeting can be called, by agreement of the Chair, if members consider one is necessary. Also remember that it is always open for members to identify issues relevant to the impact and operation of the BSS

The confirmed notes of BSSAC #85 are being sent by separate email. With reference to *Doc D1* below, the email providing the notes of the last meeting will also have attached the current published version of the Navigation Authority Agreement, with the revisions incorporated.

The following documents are included in the combined reports attached.

- A1 Reports in lieu of meeting BSSAC #86 (introduction)
- B1 BSS Manager's Report - initiatives, issues and outcomes
- C1 Report from BSSTC Chair for BSSAC
- D1 Quarterly BSS Quality Management Activity Report
- E1 Quarterly BSS report against planned BSS risk-activity
- F1 Quarterly report of incidents and accidents recorded year to date

Graham Watts, BSS Secretariat

11 June 2014



10 June 2014

Dear BSSAC member,

BSS Manager's Report - initiatives, issues and outcomes [Doc B1, BSSAC #86]

The BSS Manager's Report includes reference to any significant quality management and risk activity initiatives, issues and outcomes in the last quarter.

Members are invited to comment on any intended actions associated with this report.

a. Lake District and the BSS - The QM activity plan includes an action to formulate a plan to promote the BSS to the Lake District and Loch Lomond (& others) and implement it. The MAIB report into the Windermere CO tragedy is due out within the next few days/weeks and this will likely trigger implementation of the plan. [Ref 8.2 Doc E1, BSSAC #86 + Ref 2.2 Doc D1, BSSAC #86]

b. BSS/CFOA joint bid to Gas Safe Charity - Although not connected with a) above or c) below – The BSS and CFOA are approaching Gas Safety Charity to fund the recruitment of a dedicated, small project to team to deliver a closer working relationship between CFOA, local FRSs (and the local agencies/charities i.e. BSS), to ensure a more co-ordinated and consistent approach to CO safety on boats across our waterways.

Included will be the development of a marketing campaign involving CFOA, BSS, Gas Safe register and other relevant organisations and to pilot the campaign in partnership with a local FRS for whom boat safety is a strategic priority.

In the longer term it is envisaged that the project will lead to improvements in - a) public awareness of the dangers of CO poisoning on boats, b) knowledge of the early symptoms of CO poisoning and the action to be taken if CO poisoning is suspected, c) CO alarm ownership, by way of the promotion of the importance of CO alarms to protect craft occupants from the 'silent killer'. [Ref 7.3 Doc E1, BSSAC #86]

c. CO research at Cranfield University – The Cranfield University CO project is about to start and a researcher and PhD student are being taken on to support the project. BSS have committed £15K per year for two years to help finance the research. The premise of the project is that public awareness campaigning should be accompanied by an effort to improve the safety of the products that cause the danger and the environments they function in, based on proper fundamental and applied research.

The central aim of the research project is the reduction of the danger of carbon monoxide and other harmful toxins from burning fossil fuels in various environments by developing a series of safety products and procedures based on solid research. The environments in question are primarily A. Boats, B. Tents C. Caravans.

Ventilation will also be researched as part of the project as it known to be a challenge concerning boats; and more design ingenuity and understanding of airflow is needed. *[Ref 8.4 Doc E1, BSSAC #86 + Ref 7.4 Doc D1, BSSAC #86]*

d) BSS hire boat requirements and the Hire Boat Code – here is an update for BSSAC members.

Navigation authority proposals will be developed during 2014 as to precisely how the Hirer Safety Review is to influence navigation authority licensing conditions and BSS hire boat requirements.

The consultant's report on *Stage 1 Risk Review* was received by the navigation authorities at the meeting of the BSS Management Committee on 19 December 2013. The period to the end of March 2014 was used to collect any initial and considered comments on the report from all organisations represented on the BSS committees.

A meeting of member navigation authorities of the Association of Inland Navigation Authorities (AINA) took place on 7 March to help ascertain the response of the navigation authorities to the initial recommendations contained in the consultant's report. The reactions to the initial recommendations were favourable. The key action points from this meeting can be viewed here and actions include the intention to revise the Hire Boat Code and implement adherence to it as a licensing condition for hire boat operators.

The ownership of taking forward the recommendations of the Hirer Safety Review including the revision of the Hire Boat Code has been accepted by AINA and it will be steered by its Safety Issues Group (SIG).

In parallel to the activity through AINA SIG, the BSS committees are working on refining the draft new BSS hire boat checks recommended in the consultant's report. This activity is being timed to meet the public consultation intended to take place from September 2014.

At the meeting of the BSS Management Committee on 19 March 2014 the shift of ownership of the project to AINA SIG was endorsed and a target date established of September 2014 for developing proposals for public consultation on any changed navigation authority licensing conditions and BSS hire boat requirements.

The first meeting of the AINA SIG on this subject was held on 15 May 2014 and included representatives from British Marine Federation (BMF) and Maritime and Coastguard Agency (MCA). At the meeting the principles of the revised Hire Boat Code were agreed an action plan to meet the September project conclusion established. A second meeting is envisaged before the end of July.

The task to draft amended BSS requirements and supporting Risk Review and Assessment Papers (RRAP) is with BSSTC Sub-group prior to arriving at BSSTC. It is envisaged that BSSAC will become involved once more from early August. It is envisaged that BSSAC will meet to consider comments on the draft amended BSS requirements and supporting RRAPs. *[Ref 13.1 Doc E1, BSSAC #86]*

e. BSSAC Sub-group looking at Salesforce V5 – one year in – The RBOA rep and an ABSE rep attended a meeting with the BSS Quality and Technical Manager and BSS Communications Manager on Friday 6 June. The task was to review a list of 30 collected comments and suggestions for refining the implementation of Salesforce V5, after one year in operation. The meeting was very successful with an agreed route on all issues. A report of the meeting issues/outcomes will be made available to all BSSAC members shortly and any comments on the suggested outcomes invited. *[it is intended to add relevant and agreed improvement activity to the Quality Management Activity Plan Doc E1].*

f. Developing the BSS IT programme for the next 12 months - the plan is being developed in conjunction with the BSS Salesforce consultant and will include internet invoicing solutions, incorporation of examiner training onto Salesforce, incorporation of risk data onto Salesforce and control of examiners training records and performance criteria including field assessments. Deliverable - IT plan to be complete by end 2014 *[it is intended to add this action to the Quality Management Activity Plan Doc E1]*.

g. BSS Risk Management Process training for BSSAC members - a proposed BSSAC forum meeting on the BSS Risk Management Process is scheduled to take place at Hatton on Tuesday 23 September 2014. The purpose of the forum is to support BSSAC members understand and fulfil their role within the process and attendance is voluntary. The forum will be run by BSS risk management consultant Mike Barrett. It is likely to last for 3 hours and a morning session is planned. Please let me know if you interested to attend. *[Ref 12.2 Doc E1, BSSAC #86 + Ref 3.5 Doc D1, BSSAC #86]*

h) Boat Fire Safety Week is perceived to have gone well over Whitsun Week with record numbers of BSS leaflets being provide by BSS to support local FRS's – Hants FRS were provided with 6000 leaflets alone. The event was once again supported by RNLI who reported that their social media campaign was the most successful of recent weeks. For example their Facebook page reached just shy of 50k people and the tweet got four times their normal reach. BSS are also grateful to CFOA who strongly supported the week on social media.

A full assessment of the practical impact of the week will have to await a report from DCLG.

[Note to members – the BSS has sponsorship funding for both the fire and CO leaflets that more than covers the cost of printing and distribution to non-inland waterway boaters]

Graham Watts, **BSS Manager**



11 June 2014

Dear BSSAC member,

Report from BSSTC Chair for BSSAC [Doc C1, BSSAC #86]

A meeting of BSSTC was held on Tuesday 22 April.

The following update is provided:

a) BSSTC Terms of Reference (ToR)

Final BSSTC member comments were reviewed and the draft agreed for passing to BSSMC for ratification or comment. A few comments were received from BSSMC members and slight amends are to be made prior to the final draft returning to BSSMC for ratification.

One outstanding issue to do with the membership schedule was identified, the position on BSSTC of the BSS Lead Quality Control Assessor and whether the role should carry full membership and voting rights and the suggestion that the current rep representing the Broads Authority should become an AINA rep.

b) Navigation Authority Hirer Safety Review

Members reviewed in outline the proposals for new/amended hire boat BSS examination checking procedures (ECPs) as listed in the Hirer Safety Review's 'Initial Recommendations' paper.

Comments were sought post-meeting on the proposals for change and a BSSTC Sub-group formed to formalise the BSSTC position concerning the draft amended BSS requirements and finalise the supporting Risk Review and Assessment. The outcome of this group's work will be complete from mid-July and then full BSSTC will have time to consider the reports before the documents come to BSSAC as recommendations for change from early August.

c) Updates

Members received progress reports on:

- the RCD Update;
- LPG training for examiners & the pre-work including comparative tightness test methods;
- the HSE petrol legislation consolidation consultation;
- the consultant's report of availability of solid fuel stove components to the BS 8511 code;
- the imminent publication of a new European LPG hose standard;
- the top five technical priorities list.

Drafted by Graham Watts, BSS Secretariat, subject to change by the BSSTC Chair

11 June 2014



10 June 2014

Dear BSSAC member,

Quarterly BSS Quality Management Activity Report [Doc D1, BSSAC #86]

As reported at the last meeting (85.9.3), the BSS Office is no longer producing a separate quarterly IT and Quality Management reports.

Instead, this document reports against agreed planned activity in furtherance of quality management improvements.

As well as striving for further efficiencies and general risk-management improvements, planned activity is also specifically in support of continual improvements to the BSS 'Core Processes'¹.

The report against planned quality management activity allows BSSAC to monitor progress against the plan and comment on any variances to the plan.

If members require detailed or supporting information about any of the projects please contact the BSS Manager who can provide them.

The BSS Manager's Report includes reference to any significant quality management initiatives, issues and outcomes in the last quarter.

P Rickett, **Quality and Technical Manager** 10 June 2014

Quarterly Report

The base document for this report is *Appendix A - The Quality Management Improvement/Activity Plan for 2014 (& beyond)* of the *Quarterly BSS Quality Management Report [Doc J1, BSSAC #85]*.

The headings in bold are drawn from the Navigation Authority Agreement.

Planned activity	Quarterly update against plan
1 - What the BSS does	
1.1 - Amend point d 2) of the NAA to include the '...linked to the use of the vessel and its appliances, engines and associated boat systems...'	Task complete

¹ By way of a reminder the two core processes are as follows:

- a) **BSS Risk Management Process** - The BSS Risk Management Process is employed to help ensure that 'real' and accepted risks presented by boats are identified and that risk management recommendations to the Navigation Authorities are appropriate, balanced and timely.
- b) **BSS Delivering Consistent Examinations Process** - The BSS employs the Delivering Consistent Examinations Process to ensure that BSS requirements are consistently and effectively applied by BSS examiners to all qualifying craft on participating waterways.

Deliverable – NAA amendment by March 2014.	
1.2 - Add a new point 3) to the NAA at d) and amend the first sentence to refer to three broad approaches; '3) The BSS monitors all boat-related risks and reports on any trends, local hot-spots and any critical groups'. Deliverable – NAA amendment by March 2014	Task complete
1.3 - The BSS risk management process referred to at j1 of the NAA to strengthen the reference to NWSF principles and use of WAID data. Deliverable – amendment by March 2014	Task complete
2. - BSS values and vision	
2.1 - Add new 6th bullet at e) in the NAA – 'making the BSS open and accessible to all UK navigation and harbour authorities'. Deliverable – NAA amendment by March 2014.	Task complete
2.2 - Formulate a plan to promote the BSS to the Lake District and Loch Lomond (& others) and implement it. Includes the use of lobbyist consultant. Deliverables – implementation by end of 2014, all navigation authorities participating by end of 2018.	Plan developing. Anticipate immediate implementation following publication of the recommendations of MAIB concerning the Windermere tragedy.
3 - Ensuring effective and efficient decision making	
3.1 - Introduce the use of a web-based tool to support committee members consider, deliberate and explore work topics and develop recommendations, monitor BSS performance against agreed targets/benchmarks; with increased timeliness and effectiveness. Deliverable – facility trialled up to June 2014 and fully implemented by end of 2014	Behind schedule – awaiting tool development by our web-consultant
3.2 - Introduce new committee member Terms of Reference to support the new ways of working and to emphasise the enhanced risk-review role of BSSTC and the enhanced performance monitoring role of BSSAC. Deliverable – fully implemented by end of 2014	Task complete, subject to ratification from BSSMC
3.3 - Further develop data sets to support committee recommendations/performance monitoring. Deliverable – subject to continuous improvement	Ongoing
3.4 - The Scheme's key processes and procedures are published the committee member's website and subject to periodic review by BSSAC. Deliverable – fully implemented by end of 2014.	Planned for late year – subject to 3.1 above.
3.5 - Provide BSSTC and BSSAC members with enhanced risk review and assessment capabilities. Deliverable – fully implemented by end of 2014	Training for BSSAC members on the BSS Risk Management Process is planned for Tuesday 23 September at Hatton. See Manager's report
3.8 - Carry-out an EFQM quality management audit in order to benchmark the overall BSS quality management approach and to underpin a review of the BSS Quality Management Commitment. Including an assessment of how IT can be used to support BSS performance monitoring. Deliverable – fully implemented by end of	Task planned for 2015

2015.	
4 - Delivering effective and efficient business planning	
4.1 - At h) in the NAA, amend the first sentence of h) as follows. 'The BSS Business Plan is produced on a four year rolling basis in support of an agreed BSS strategy.' Deliverable – NAA amendment by March 2014.	Task complete,
4.2 - Amend the paragraph numbered 2 at h) as follows. 'The aim is for the BSS to cover its own costs, however any shortfall will be divided equally between Canal & River Trust and the Environment Agency and any net excesses will be used in support of boat-related safety initiatives.' Deliverable – NAA amendment by March 2014.	Task complete,
4.3 - Create and implement new delivery mechanism and programme for examination paperwork, April 2014.	Ongoing. Programme and documentation agreed and in place. First bulk delivery start June 25th and follow through in July and early August
4.4 - Reduce amount of stock stored at MK by 50% - by end of 2014.	Ongoing. Stock is reduced by bulk delivery programme, and serious pruning at MK.
5 - The BSS Office performance objectives	
5.1 - at i) in the NAA, develop the BSS Office resilience plan to counter the threat to the Scheme's continuity presented by the age profile of the team and any other threats. Deliverable – BSS Resilience Plan in place by March 2014.	Behind schedule – Now planned for early Autumn.
5.2 - plan the necessary up-skilling of team members to meet strategic direction. Deliverable – BSS Office up-skilling costs to be included in the draft BSS Business Plan (done January 2014).	Incorporated in four year plan agreed by BSSMC
5.3 - outline training plan for planned new BSS Office staff member, by end of Summer 2014.	Ongoing. outline timescales and process have started
6 - Focussing on continual improvement the BSS Core Processes - Delivering Consistent BSS Examinations	
6.1 - Engage a Quality Management consultant to help deliver the BSS Examiner Development Strategy by May 2014	Behind schedule – Consultant located but no contract raised. Now planned for late year.
6.2 - As a prerequisite to the above bullet, carry out a self-audit the BSS Office against ISO 17020 and 17024 by April 2014	Behind schedule – Now planned for early Autumn.
6.3 linked to the bullet immediately above, use Salesforce as a primary delivery tool – for BSS examiner performance monitoring and for delivering e-learning. Deliverable – continuous improvement supported by the BSS Business Plan. To include this financial year: <ul style="list-style-type: none"> • reduce reporting after 48 hours by 50% • reduce incorrect reporting by 80% • reduce zero fault reporting by 25% 	Ongoing monitoring

<ul style="list-style-type: none"> manage introduction of new single sign on process 	Process developed and will be instigated June/July
<ul style="list-style-type: none"> improve website architecture to allow embedded training videos 	Ongoing several options are being looked at.
<ul style="list-style-type: none"> complete automatic invoicing and payment process 	Contractor sourced, task ongoing. Completion due Sept 2014
<ul style="list-style-type: none"> de-dupe programme to be 80% completed 	Next planned 'de-dupe' to be run in July/August.
<ul style="list-style-type: none"> develop more targeted Salesforce reports to monitor examiner performance 	Ongoing.
<ul style="list-style-type: none"> develop a Salesforce e-Learning platform for trial by March 2015 	Ongoing. Partner not yet identified
<ul style="list-style-type: none"> deliver electrical training for those examiners yet to attend, by Autumn 2014 	Planned for late 2014
<ul style="list-style-type: none"> plan examiner LPG update training for delivery in Autumn 2015; 	Planned for late Autumn 2015
<ul style="list-style-type: none"> as part of the implementation of the BSS Examiner Development Strategy, training provision at South Worcestershire College will be audited. Deliverable – by end of 2015 	Ongoing.
<ul style="list-style-type: none"> deliver Scottish Examiner field assessments by March 2015 	Programme agreed, boats being located, set for mid-late Sept 2014.
<ul style="list-style-type: none"> BSS Office attend ABSE regional meetings on examination reporting and tech matters, and simultaneously select individual examiners to make home/local visits – from mid-2014; 	Ongoing. ABSE meetings at Bray, Wroxham and Runcorn completed. Stafford planned for June, Gloucester outlined for July
<ul style="list-style-type: none"> BSS hire boat requirements - develop BSS examiner training, publications, road shows and new documentation during early 2015. 	Ongoing. Outcome of Hirer Safety Review and public consultation will determine programme
7 - Focussing on continual improvement the BSS Core Processes - Minimising Risk Process	
7.1 - Salesforce will be developed to act as a primary delivery tool – for recording boat-related incidents Deliverable – continuous improvement supported by the BSS Business Plan – two-way upload/download of data between BSS and WAID databases by end of Summer 2014;	Ongoing. BSS IT contractor aware of forthcoming task to create bridge between WAID and Salesforce databases - July meeting to take forward
7.2 - additional data from examiners reporting the outcomes of BSS examinations on Salesforce, will inform the grading of risk and risk control initiatives such as planned press releases. Deliverable – continuous improvement,	Ongoing

<p>7.3 - deliver training to BSS Office BSS staff to run reports and move forward on Salesforce usage – by Summer 2014;</p>	<p>Planned - July/August delivery</p>
<p>7.4 - deliver boater-safety research sponsorship projects planned involving CO and fire spread. Subject to detailed project plans being accepted. Support for Cranfield University boat CO research project is in the pipeline for 2014-2016.</p>	<p>Cranfield CO research project about to begin. Separate BMF initiative looking at diesel appliances about to commence. See Manager's report.</p>
<p>7.5 - support Hazardous Boat process for Environment Agency regional areas, by designing attending and delivering training. Target end 2014</p>	<p>Ongoing waiting for dates from EA</p>



10 June 2014

Dear BSSAC member,

Quarterly BSS report against planned BSS risk-activity [Doc E1, BSSAC #86]

This is a report of BSS risk-activity for 2014 against the plan as agreed by BSSMC at their meeting last March [Doc F1, BSSMC #82 refers]. For BSSAC, Doc F1, BSSAC #85 presented and agreed at the February 2014 BSSAC meeting refers.

The report covers the period from mid-February 2013 to early June.

The report against planned BSS risk-activity allows BSSAC to monitor progress against the plan and comment on any variances to the plan.

If members require detailed or supporting information about any of the projects please contact the BSS Manager who can provide them.

The BSS Manager's Report includes reference to any significant risk activity initiatives, issues and outcomes in the last quarter.

Graham Watts, **BSS Manager** 10 June 2014

Planned activity	Quarterly update against plan
1 – Electrical risk issues	
1.1 - A continuing effort to establish the causes of DC electrical incidents will continue stakeholders requested to promote the reporting of near misses.	No trends particular trends have been identified since March 14.
1.2 - There were four possible inverter related incidents during 2013 bringing the total reported to at least 15 in the past nine years. The BSS is to approach BMEA with what it has gleaned from these fires and to seek BMEA comment.	BMEA engagement is to commence June 2014
1.3 - The relative high rate of failures associated with the new BSS AC checks introduced in January 2013 is being monitored and any need to take further action will come through BSSTC.	Monitoring continuing.
1.4 – Development of the BSS web pages will continue. New information on identification and mitigation of AC electrical risks will be posted as and when it becomes available.	Development of the BSS web pages is continuing. BMEA engagement is to commence June 2014
1.5 - The BSS will participate in Fire Kills/Electrical Safety Council National Electrical Fire Safety Week in September 2014.	Activity planned - September

1.6 - 230V AC electrical risk awareness information is planned to be further promoted in partnership with the Electrical Safety Council and possibly BMEA.	BMEA engagement is to commence June 2014
2 – Battery charging incidents	
2.1 – The BSS Office will continue to seek out causal information from battery related incidents and work suppliers and manufacturers and other partners.	BMEA engagement is to commence June 2014
3 – Petrol engine and vapour incidents	
3.1 – In April, a briefing for feature and technical writers' and story lines will be developed emphasising the nature of petrol.	Social media employed, general waterways media articles and in briefing for BFSW.
3.2. – A new version of BSS 'Avoiding Fire Afloat – Safe Use of Petrol' leaflet will be revised and re-issued should a partnership opportunity arise.	Sponsor almost confirmed.
3.3 – The level of risk associated with the lack of ignition protected electrical equipment on older petrol engines is to be reviewed as part of the Hirer Safety Review outstanding work.	Task complete
4 – Safety self-awareness (escape)	
4.1 – Further promotion of safety self-awareness and the benefit of emergency action plans will continue.	Covered in briefing for BFSW.
4.2 - This will be a major theme of Boat Fire Safety Week (BFSW) in 2014.	Covered in briefing for BFSW.
5 - Portable Appliance Use	
5.1 – The promotion of safety self-awareness will continue to draw attention to the risks associated with the use of portable appliance equipment.	Covered in briefing for BFSW.
6 – The Risk to Residential Boaters	
6.1 – The BSS will continue to work with stakeholders (to determine the size of the risk, and with user groups and examiners to determine the nature of the risks.	Awaiting navigation authority lead concerning perceived level of responsibility BSS is advising CRT in the London area re informal renting of boats. At the heart of this is the protection of people using the boats and the responsibilities that the 'landlords' have for their tenants/guests.
6.2 - Liaison with Manchester FRS has commenced in the context of their Partnership Model and Referral Pathway for People at Increased Risk of Fire.	Awaiting navigation authority lead concerning perceived level of responsibility
7 – Incident Information	
7.1 – The BSS anticipates inputting risk information in an automated way into the National Water Safety Forum's (NWSF) WAID database this Spring	Data sharing is currently taking place within WAID sandpit – upload/download imminent

7.2 – The BSS will work closely with NSWF to improve our ability to analyse incident data and draw inferences from it.	BSS now contributes funds to NSWF is support of this facility.
7.3 – The BSS will seek partnership on matters of mutual interest	See Manager's Report [Doc B1, BSSAC #86] for update concerning new joint project with CFOA.
8 - Carbon Monoxide	
8.1 – Further development of the CO advice on the BSS website will continue this year which will be supported by specific and periodic news releases and messages on social media.	Social media employed, general waterways media articles and in briefing for BFSW.
8.2 - We anticipate the release of the full MAIB reports into the deaths on Lake Windermere and the fishing boat in Whitby in this coming year.	MAIB report on Lake Windermere tragedy is imminent. The report on the fishing boat, Eschol in Whitby is published.
8.3 – With BMF, the BSS is seeking a consultant to help with the task to assess any potential for CO emissions from diesel heater flues and from diesel engine exhausts.	Add approach
8.4 – Subject to the approval of the detailed boat-related part of the proposal, it is envisaged that BSS will help sponsor research at Cranfield University into the CO risk on boats.	Research is about to start – BSS contributing £15K this year – see Manager's Report [Doc B1, BSSAC #86] for update
9 - Solid Fuel Stoves	
9.1 - The BSS will publish further information concerning the choice, storage and use of fuels as well as the disposal of ash and embers.	Planned late summer
9.2 – The BSS will continue to carefully monitor the known causes of solid fuel stove incidents and the impact of the availability of solid fuel stove products that meet the code.	Ongoing – see below
9.3 - The BSS has commissioned a consultant to look at the availability of products that meet the code.	Consultant's report received, incident data being assimilated. Report to BSSTC imminent.
9.4 - The BSS will continue to work with our solid fuel appliance consultant and the solid fuel industry to promote good practice messages about safe installations and the correct use and correct maintenance of appliances and flues.	Consultant supporting tech queries from boaters.
10 - Deliberate Fire Setting	
10.1 - The Navigation Authority Agreement has been agreed recently by BSSMC to be amended to include BSS monitoring of all boat-related risks and reports on any trends, local hot-spots and any critical groups.	Ongoing monitoring.
11 - Smoke Alarms	
11.1 - The BSS will help further promote the use of smoke alarms on boats and continue with 'Don't Drown In Toxic Smoke' campaign theme as this has both relevance and resonance for people sleeping on boats.	Social media employed, general waterways media articles and in briefing for BFSW.
11.2 – The BSS is reviewing its recommendation for smoke alarms with fire industry professional organisations. The Fire Industries Association has provided comment and the Fire Protection Association	Task complete – BSS recommendations supported by competent bodies with only

is now to be asked to revisit its 2007 recommendations to the BSS.	minor updated information added.
11.3 The BSS plans in 2014 to undertake a survey of boaters' attitudes to safety and safety self-awareness including the use of smoke and CO alarms. This is likely to be undertaken in partnership with RNLI.	Subject to RNLI priorities – anticipated late 2014 early 2015.
12 - Planned Incident data/risk analysis and process improvements	
12.1 The Risk Management Process Improvement Document [<i>Doc G2, BSSAC #81</i>] will continue to be used to help ensure that real and accepted boat-related risks are identified and that risk management recommendations coming through the committees are appropriate, balanced and timely.	Ongoing
12.2 – BSS Risk Management consultant will be furthering the process support tools this year, including training for committee members on the BSS Risk Management Process.	Scheduled for 20 September 2014 – members are invited to express their interest to attend.
13 – BSS hire boat requirements	
13.1 - the BSS is supporting the navigation authorities' review of hirer safety including the need to adjust the BSS 2002 requirements and, as part of an AINA initiative is supporting navigation authorities consideration of future licensing conditions for hire boat operators.	See Manager's Report [<i>Doc B1, BSSAC #86</i>] – task to draft amended BSS requirements and supporting Risk Review and Assessment papers with BSSTC Sub-group.



12 June 2014

Dear BSSAC member,

Report of incidents and accidents recorded for the year so far 2014 and inferences drawn and BSS risk-activity update [Doc F1, BSSAC #86]

This is a report of incidents and accidents for the calendar year 1 Jan – 4 June 2014 as recorded by the BSS as of 10 June 2014.

1.0 Introduction

1.1 - The inferences drawn from reviewing incident reports are the foundation to the effective planning of BSS activity to help address the risks presented by boats that have been inadequately constructed or maintained or inappropriately used.

Incident reports are used to help identify patterns of risk and any new risks not previously envisaged. The process employed relies on the receiving-of or gathering-in of details of boating incidents including fire, carbon monoxide (CO) poisoning, capsizes and man-overboard.

1.2 – The role of the BSSAC is key in determining the precise activity of the BSS Office by helping prioritise the activity and helping determine any appropriate risk-management measures based upon input at BSSAC meetings.

1.3 – The information within this report is not reproduced for comparative purposes. Its sole purpose is to provide picture of risk trends, potential hazards and the nature of incidents occurring on small craft, especially those on inland waterways.

2.0 The Incident and Accident Data

2.1 - The incident data used to populate this report is recorded by the BSS Office. The data includes incidents relating mostly to boats used on inland waterways. However, incidents of fire, explosion and CO on coastal boats are recorded where the craft may be of the type that could be used inland or where the systems aboard may be common to those on inland boats.

2.2 - The data cannot be considered as a complete record of incidents on any waters. Many minor incidents are not reported to any agency, let alone published. Where agencies, typically fire, ambulance or other health organisations have records of a boat related incidents, there are still likely to be only a minority of such records made public. Government records nationally suggest that fire & rescue service (FRS) attend around 300-350 boat fires each year, although the definition of boats may not be consistent.

2.3 – Where fire has spread from one boat to another each boat affected is counted as one record and cause is recorded as conflagration. This alludes to one of the purposes of the Scheme to help prevent such events from happening.

2.4 – Where two or more boats collide in one event, it is counted as one incident.

3.0 Summary

3.1 – This review is based on 99 reports obtained between January to June 2014.

The BSS has gathered details of 70 incidents on all inland waterways (canals, lakes, lochs, rivers and inland hard standing sites) and 29 on UK coastal waters including marinas, harbours, creeks and inlets. A more detailed breakdown of all incidents collected is provided in Annex A attached.

3.2 – All but one of the inland incidents recorded are on Association of Inland Navigation Authority (AINA) member waterways. The one being a fire on Lake Windermere.

3.3 – The bulk of incidents are related to navigation and boat use i.e. sinkings, capsizes, man overboard and groundings.

The number of inland fire and CO events is relatively low at 22, of which at least 6 are reported as deliberate fires.

For this period 28 fire events have been recorded on the coast where the incidents have caused local media coverage due to their spectacular nature or active media work by the fire services and RNLI. This may have influenced the participation of fire services and local RNLI stations in Boat Fire Safety Week 2014.

3.4 – The year started with a number of fatalities. A lady living on a moored barge on the R Crouch estuary at Brightlingsea died in a fire aboard. We are still awaiting the inquest results, but the fire is not thought to be related to boats fuel or power systems.

3.5 – A man living on his narrowboat in Banbury died from carbon monoxide poisoning recorded as coming from the generator he was running to power the boat and at the time, a computer. The generator was in use on a covered deck and the cabin door was open. There was no CO alarm.

Two men sleeping aboard a small fishing boat with haphazard living arrangements died from carbon monoxide poisoning. The source was a LPG cooker that the men were using as a space heater as it was the only working source of heat on the boat. There was no CO alarm and this has been picked up by the MAIB which has recommended that they be made compulsory in the accommodation on fishing vessels.

The report also recommended that the fishing industry needed to do more in raising awareness of the risks linked to CO, both with existing crews and for new entrants. It commended the information in the BSS 'CO Safety of Boats' booklet and reproduced in whole as an annex to the report.

The MAIB also listed recent statistics provided the BSS and detailed a number of incidents over the past few years including the double fatality on Lake Windermere, Easter 2013

This means there has been five CO fatalities in short order since then that ended the two-year run without a CO death.

The MAIB has not yet produced its report for the Windermere event, but it is expected very soon as we understand the provisional version has been circulated and the draft recommendations review period has closed.

On the day of writing this BSS report, the skipper of the boat and partner of the woman who died has been charged with manslaughter. The identified source of the CO was the fumes from an improvised exhaust on an 'installed' portable generator.

The BSS will be reacting to the expected MAIB report. We have renewed our stocks of the CO leaflet and other initiatives are being developed.

3.6 – Two boaters have been found dead in the vicinity of their boats so far this year.

One fatality was in January in Isleham marina. The man was found in the water next to his boat. The inquest verdict was accidental drowning linked to the excessive consumption of alcohol.

The second incident was in May and it concerns man who was on his 'liveaboard' narrowboat navigating through the Harecastle Tunnel. The exact circumstances are not yet clear but it is known that he went overboard during the journey through the tunnel.

3.7 – The 2014 report has seen what is probably an increase in use by staff of the CRT reporting system, the quality or completeness of the data continues to be very poor from a BSS perspective.

Moves to tackle the reluctance of some fire and rescue service to offer any information as to cause is being addressed on various fronts at the Chief Fire Officers Association, with the National Water Safety Forum and individual support in various key fire services

However until the probable positive results come through; half the of the fires on inland waterways this year remain causes un-recorded

3.8 – The single biggest identified cause so far this year is solid fuel stoves. In two, the stoves were unattended and in one case running with the door open. The third case was on a workboat and smouldering started in the bulkhead behind the appliance. All three incidents would have not have occurred if the advice published on the BSS website had been followed.

3.9 – There has been one petrol vapour incidents this year so far. The boat was being de-winterised and the incident happened shortly after the boat had been refuelled. The ignition of vapours was linked to the engine being started. It is understood that both husband and wife on boat at the time of fire. The husband went back on to fight the fire and suffered burns to hands and arms. Both were taken to hospital, the wife was released that day, but the husband stayed in longer.

3.10 – Other incidents include a washing machine catching fire and an "overheating engine". White goods catching fire is a problem of such significance on land that fire services and other safety bodies are promoting campaigns to urge people not to run dishwashers, tumble dryers and washing machines while asleep or leaving the house. The BSS has not joined these campaigns because it believes the relative few numbers of such equipment would not justify such an action, however the BSS will remain vigilant for evidence that it need to act in this respect.

3.11 – Three hire boats in two incidents (2013 & 2014) have been set on fire deliberately on the Lancaster Canal in the same village

3.12 – There have been a small number of hire/small passenger boat incidents this year so far although a third of the boats in the incident data have no indication as to use so more hirer incidents may be developed as more information arrives.

Your comments are welcome on the planned activities and contents of this review.

See Annex A attached for a more detailed breakdown of the data for 2013 as collected by Feb 2014.

See Annex B attached for information about the role of the BSS concerning incident report collection including the limitations.

Compiled and drafted by Rob McLean and Graham Watts from investigative work by Dave Washer – 12 June 2014

Annex A – Total - 1 January to 4 June 2013 99 incidents

Table A1 <u>Basic statistics from the records</u>	<u>BSS</u>	<u>Non-BSS</u>	<u>Coastal</u>
Number of incidents recorded	67	3	29
Fire/explosion (inc immediate risk of)	18	3	27
CO (including near incidents)	1	-	1
Pollution	-	-	
Man Overboard	6	-	1**
Personal Injury	5	-	
Capsize 0, collision 18, grounding 15, sinking 19 , lock hang-up 9, stranding 12, navigation error 2	37	-	

*vessels included in multi-vessel incidents

**MOB has relevance to inland boating (usually only fire & CO incidents are recorded)

Table A2 <u>When accidental fire happens</u>	<u>BSS (12)</u>	<u>Non-BSS (3)</u>	<u>Coastal (24)</u>
Moored / anchored / tethered	10	1	7
Approaching, traversing, departing Lock or Bridge	-	-	-
Underway/setting off	-	2	7
To Be Confirmed	1	-	1
Hard-standing / abandoned	1	-	8
Dry Dock/Construction	-	-	1

Table A3 <u>Use of vessels (70) in all inland incidents</u>	<u>BSS waters</u>	<u>BSS waters</u>	<u>Non-BSS</u>
Note: Navigation = all other inc Capsize, Sinking, Grounding etc	<u>Fire, CO & Pollution</u>	<u>'MOB & Navigation'</u>	<u>inland</u> <u>All incidents</u>
	(19)	(48)	(3)
Pleasure and leisure	4	19	-
Not recorded/not known	5	15	2

Intensive [residential and extended use)	5	4	-
Hire and passenger boat	2	3	1
Workboats / other commercial	2	7	-
Brokerage / renovation / under repair	1	-	-
Abandoned	-	-	-

Table A4 <u>Systems & causes: all fire, pollution & CO inland waters</u>	<u>Inland BSS</u> (19)	<u>Non-BSS</u> (3)	
Deliberate Fire setting	6		
Conflagration	-		
Bullseyes	-		
Electrical [all installations and systems]	1		
Engine [installed] / engine room / exhaust	1	1	
Flammable vapour [type tbc]	-		
Galley Accidents / Smoking / candles/ un-specified appliance	-		
Gas escape / installed gas appliance	-		
No information [TBC, not reported, not investigated & inconclusive]	6	2	
Oil fired stoves and heaters [installed]	-		
Other [inc machinery, welding, DIY, etc]	1		
Petrol installed [leak, refuelling, detonation, etc]	1		
Portable engines / outboards / generators	-		
Portable items [lamps / heaters / stoves]	-		
Solid fuel stoves	3		

Table A5 <u>Serious incidents on all inland waterways</u>		
[Note: Major injury = treated at hospital]		
<u>Totals</u>	<u>Fatalities (3)</u>	<u>Major injuries (8)</u>
Explosion/fire, petrol, gas, fume ignition		3
Carbon Monoxide	1	-

MOB/Capsize	1	2
Other personal injuries	1	3

Table A6 all inland waters <u>Trends in systems & causes: All fire & CO</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Totals	21	91	80	90	105	66	67	76
Deliberate Fire setting	6	11	11	25	27	17	29	15
Conflagration	-	3	5	5	5	7	0	5
Totals of accidental and original incidents	15	75	64	60	72	42	38	56
Bullseyes	-			1	2			
Electrical [system / appliances]	1	15	15	17	8	10	7	3
Engine / engine room / exhaust	2	6	4	8	6	4	3	6
Flammable vapours (not yet identified)	-	3	2	3	2			
Other domestic, galley, smoking, candles, etc	-		3	1	3	0	0	3
Gas escape / installed gas appliance	-	4	3	3	3	0	2	7
Not known [inconclusive / tbc to BSS]	8	28	21	13	23	11	8	13
Oil fired stoves and heaters [installed]	-	1	2	1	1	1	2	2
Other [inc machinery, welding, DIY, etc]	1	1	2	0	0	2	0	4
Petrol related – leaks, refuelling, etc	1	2	2	1	3	7	4	1
Portable engines / outboards / generators	-	2		1	5	0	4	1
Portable items [lpg, oil, BBQ, electric, etc]	-	2		4	2	2	4	0
Solid fuel stoves	3	13	10	7	15	5	4	16

Additional information table A7 – Hire and passenger boat incidents 2014 to date

When	Where	Brief note on circumstances
March 2014	E Anglian tideway	A man fell off the gang plank when leaving the barge (entertainment venue) carrying equipment. *** He got stuck in the tidal mud
April 2012	N W canal	Two day hire boats were deliberately set alight. Petrol was used as the accelerant.
Mar 2014	Kennet & Avon	<p>There was the carnage apparently wrought by a stag party, that hired a narrowboat on the Kennet and Avon canal.</p> <p>The hire craft upturned in a lock and this blocked the canal for</p>
May 2014	London	<p>Firefighters dealt with a fire on board a Thames water taxi this morning. Seven passengers were evacuated to dry land at a pier.</p> <p>The fire was in the boat's machine compartment.</p>
June 2014	Kennet & Avon	Hire boaters have bent their rudder arms on the walkway when locking up. As usual they realised, when it was too late, that they should have been further forward in the lock to miss the metalwork of the walk way.

Annex B The Role of the BSS Concerning Accident and Incident Data Collection

The BSS Office collects reports of UK recreational boat-related accidents and incidents from any source.

We are interested to establish causes and circumstances to help establish trends and inform BSS Office activity aimed at helping prevent re-occurrences. Our job is to react to trends, or identify new risks or predict potential risks, in an appropriate way. This involves working with stakeholder groups through the BSS Advisory and Technical Committees. The data collected feeds into current and future BSS activities associated with the key risk areas. The data is also used to support navigation authority input concerning their other activities such as the Hirer Safety Review.

We are not responsible for, and do not conduct investigations into accidents/incidents, but we may view fire reports or coroner's verdicts in order to inform our assessment. We may help the investigation of incidents by facilitating the return for testing of suspected faulty equipment to the manufacturer/ supplier. We also assist Navigation Authorities in their responsibilities in investigating incidents.

We may also test the experience of the 200+ independent BSS examiners by way of targeted surveys. Through partnerships, we may seek to influence relevant British and European standards-making activities.

In the event any accident or incident casts doubts about the issue of a BSS certificate, the BSS Office will seek to view the vessel in order to investigate any potential for an inconsistent examination.

This report has been generated by the interrogation of Fire and Rescue Service web sites, news sites and boating newsgroups. Information from the Maritime and Coastguard Agency and the Marine Accident Investigation Branch and dealings with Coroners' Officers is also included. Discussions with CRT and EA navigation staff have generated further reports of accidents/incidents and a number of BSS examiners and others people from the marine trade have been helpful in reporting incidents or supplying greater detail. We also review key stakeholder statistics such as from the Royal National Lifeboat Institute and CO-Gas Safety.