



Date: 13 September 2010

BSS Manager's Report [Doc A1, BSSAC #73]

This report is provided by way of an update of BSS activity since the last BSSAC meeting in June and in lieu of the cancellation of BSSAC meeting (#73) scheduled for 14 September.

The report should be read in conjunction with the other reports provided.

1) Overview

Because of the impact of the summer's workload combined with BSS Office staff planned and sickness absence, activity in support of change management has slowed. The impact of case investigations, other challenges, rolling out online examination reporting, the implementation of the enhanced examiner insurance cover levels and work in support of the forthcoming spending review has been marked.

2) Spending Restrictions and Review

The BSS is administered by BW and we are currently subject to BW savings initiatives and will feel the effect of the outcome of the Govt's Spending Review (due in October). It is already the case that the BSS is subject to DEFRA's advertising and marketing freeze from July and that will have to claim exemption on any expenditure in this area. What is also certain is that BSS will be affected as any other BW department. BSSMC Chair recently commented as follows:

'Every part of BW will have to demonstrate that it is working as efficiently as possible and even that may not prevent us having to decide to simply stop doing some things. So the message for BSS is no different to all other parts of BW – don't spend wastefully, make sure everything you do is absolutely essential, be clear on what the risks are of not doing something and charging more for service can't be ruled out. The fact a zero-based review of BSS was done in past will not really help.'

I'm sure the BSSAC Chair will ensure any potential impacts are identified in advance to members and that the committee's view will be taken account of before decisions are taken.

In the meantime BSS Office staff are analysing budgets for cost savings and looking for more efficiencies. We anticipate that budgets will be subject to audit and that for the time being spend will need sign-off by a director.

We have developed a complete list of current activity in support of technical/risk issues and a separate list comprehensive list of policy/strategy change management activity to aid any review of what we do.

This coverage is not intended to spread alarm, merely to report the impact of the restrictions already in place and for members to anticipate further potential impacts. I'm guessing that the shape of the Govt's spending review in as much as it affects BSS may be more clear by the time of our November BSSAC meeting.

3) Matters Arising

By way of an update I can report the following technical/risk activity/status:

BSSAC Effectiveness [72.4] – to be reported on at the November BSSAC meeting

LPG gas locker check 7.2.1 [72.2.2] – this is to remain with BSSTC for the moment because of the need to look at the proposed change to a check for holes in the locker in the wider context of how the BSS approaches gas

lockers generally. This because of two appeals with BSSTC and the Chairs concern to ensure alignment with the RCD approach.

HHO generators [72.5] - the recommendations, with BSSAC support, are currently with BSSMC.

SLA agreement [72.6] - - the recommendations, with BSSAC support, are currently with BSSMC.

Electrical hazards [72.9.3] – remain with BSSTC and will be developed via a sub-group. Aspects including key awareness messages are likely to be with BSSAC by November.

CoC review [72.7] - no movement forward at present, planned)

PI/PL examiner insurance cover level increase [72.14.1] - implemented from 1 September, generally successfully. Report of take-up and examiner suspensions will be with BSSMC shortly.

Purpose of the Scheme documents [71.2.3] – Navigation Authority Agreement etc, no movement forward at present. BSS strategic direction to be discussed at the AINA meeting on 15 October.

4) Items of Interest

The current rep leaves MCA – having welcomed him to the last BSSAC meeting , he has now left MCA and the new contact has already been in touch.

Dundas Room Hatton no longer to be available for BSS meetings – In November, as part of the ongoing drive to reduce costs in BW, 29 staff from BW's Canwell office will move to the Hatton. Also, early in 2011 BW staff based in Hatton's White House will vacate and move to the main Hatton building. Existing staff based at Hatton will relocate to the first floor

Two additional meetings rooms will be formed from the SAP training room and the former office next to it. They will be a similar size to the current Dundas and Anderton rooms. More information will follow as the project plans are finalised.

Table of case review determinations – attached as Doc A2, BSSAC #73, is a table of examiner case review determinations over the past six years or so. This document was supplied to BSSMC Exec members recently in support of a need to conduct a swift desk-top review. The BSSAC Chair considered the information would be of interest to members.

BSS comes to Droitwich town centre – the BSS Certificate issued to Droitwich Canal Trust's trip boat 'Pamela May' was the very first on the newly restored stretch, bearing in mind navigation that was officially abandoned in 1939. The Barge Canal will open in 2011 providing the final link and creating a 21 mile cruising ring that will also take in the Worcester and Birmingham Canal and River Severn. A little bit of history and some good news.

BSS Manager

13 September 2010



Date: 14 Sep 2010

Report of incidents and accidents recorded 1 Jan to 10 Sept 2010 [Doc B1, BSSAC #73]

This is a year-to-date report of incidents for 2010 as recorded by the BSS Office as of 10 September 2010.

1.0 Introduction

1.1 - The inferences drawn from reviewing incident reports are key to the effective planning of BSS activity to reduce risk. Incident reports are used to help identify patterns of risk and any new risks not previously envisaged. It relies on the receiving-of or gathering-in of details of boating incidents including fire, carbon monoxide (CO) poisoning, capsize and man overboard.

1.2 - 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.

1.3 - 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 services attend around 300-350 boat fires each year, although the definition of boats may not be consistent.

1.4 - 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.

2.0 The Incident and Accident Data

2.1 – This review is based on 118 reports of incidents obtained for this year thus far. The BSS has gathered details of 83 incidents on inland waterways and 34 on inshore coastal waters including marinas, harbours, creeks and inlets. A breakdown is provided in Annex A attached.

3.0 Summary

3.1 – As referred to above, the total number of incidents reported so far this year is 118 and this is more considerably more than the 99 reported by this November in 2009. This is also more than the 68 reports to August 2008.

3.2 – While by November last year we had recorded 44 fire, explosion and deliberate fire-setting events, and 30 by August 2008, this year 53 incidents are so far recorded on Association of Inland Navigation Authority (AINA) member waterways.

3.3 – The use of internet search engine reports has increased the flow of records and the better recovery and record of BW reports as well as the improved record of near incidents has probably influenced the overall numbers. Near incidents include explosive vapour escapes, singeing and charring, and the actuation of CO alarms where on investigation by owners, CO has been the most likely cause.

3.4 – However, in terms of severity of incidents, it is slightly better than last year and it is again, so far, a trend in the right direction over previous years. Unfortunately, there has been one death on a boat due to CO poisoning, but we are still awaiting the coroner's findings on the first CO boat death since 2007 on an inland waterway.

3.5 – Overall, there have been 3 CO related incidents recorded to date, none of which required hospitalisation. There was a fourth on the PLA Thames which was reported as a causing hospitalisation. The source of the CO was cited as a leaking exhaust, but what appliance or engine was not cited. The one recorded fatality in

January is probably linked to the use of a portable diesel powered generator inside the boat which was under repair. If so this would be the first we have on record concerning the use of a diesel engine. However this is subject to confirmation at inquest and this early theory should not be reported until the inquest is held and cause and circumstance of death are confirmed. The person that died is thought to have been undertaking repair works.

3.6 – So far there have been 2 electrical fires confirmed. There are two further incidents linked to engine electrical components, which appear as engine incidents.

3.7 – Once again, with solid fuel stoves installation, maintenance and incorrect use problems are indicated in all 9 incidents of fire and CO, e.g. lack of flue cleaning is implicated in at least two of the incidents. The solid fuel appliance manufacturers and suppliers trade body has been challenged to support the new British Standard Institution Code of Practice (BS 8511), which has the potential to help with all three areas.

3.8 – So far this year, there have been 5 petrol vapour incidents inland. There is no one pattern. Older petrol engined boats having carburettor fuel/air delivery are in the incident figures, but so too are outboard motors and boats having petrol injection. Having reviewed the information we have, we suggest that no one underlying cause is significant. In at least four of these incidents, some degree of maintenance had been carried out on these vessels before the explosions took place. Refuelling and petrol handling practice may be a factor in some incidents. The common core message to owners of petrol boats is 'not to drop their guard', check for vapour, and react to appropriately to discovering vapour.

3.9 – There have been 3 incidents where carelessness in everyday activities have led to fires. One was the use tea-lights, and two significant fires relate to the use of chip pans.

3.10 – The two bullseye incidents listed are records of loose objects being caught in path of the focussed sun's rays this year. However the news of the ECP changes to include bullseyes in June this year brought forward, from examiners, new examples of singeing and charring of installations. These do not appear in the incident database as it is not known in which year or years the damage happened.

3.11 – Two incidents relate to the use of portable gas appliances. One was a significant escape of gas within a cabin where investigations found a cooking device was stored, not in keeping with navigation authority requirements. The other incident, which caused two hospitalisations with significant burns, was when a cartridge was changed improperly and gas escaped whilst tea lights were in use. A media release was issued to remind owners of safe and compliant use of portable gas equipment.

4.0 Other BSS Activity

4.1 – The BSS office is now using the Waterscape blog to react quickly to incidents such as the latest chip pan fire using available known information to promote safety without having to wait for monthly magazine deadlines and schedules. This is in addition to planned media releases and articles. Find BSS blogs at <http://www.waterscape.com/blog>

4.2 - Outside the record of incidents, but linked to a risk that is being monitored. The BSS office is receiving reports of secondary exits (emergency escapes) being locked on the outside for security reasons, but whilst the crew is in occupation including asleep aboard. Boat fire deaths from toxic smoke in previous years have been linked to escape difficulties. The committees will receive findings of this work should it suggest that there is a significant and widespread risk. See the Waterscape blog 'Trapped' by BSS Communications Manager.

See Annex A attached for a more detailed breakdown of the data collected year to date.

Compiled and drafted by BSS Office

Annex A - Total to 10 September 2010 118 incidents

Table A1 <u>Basic statistics from the records</u>	<u>Inland BSS</u>	<u>Non-BSS</u>	<u>Coastal</u>
Number of incidents recorded	74	9	34
Fire/explosion (inc immediate risk of)	53	4	31
CO (including near incidents)	3	1	1
Man Overboard	7	-	Not recorded
Capsize, sinking, collision, grounding, stranding	11	4	Not recorded
Conflagration	-	-	3
Personal injury	-	-	2

Table A2 <u>When accidental fire happens</u>	<u>Inland BSS</u>	<u>Non-BSS</u>	<u>Coastal</u>
Moored	27	4	11
In lock	-	-	-
Underway/setting off	6	-	16
Hard-standing/boat yard	1	-	2
Not recorded	1	-	-

Table A3 <u>Systems & causes: all fire & CO inland waters</u>	<u>Inland BSS</u> 53 fire 3 CO	<u>Non-BSS</u> 4 fire 1 CO	
Deliberate Fire setting	17	1	
Not known (inconclusive / not known to BSS)	10	2	
Solid fuel stoves / Oil fired stove	9 (inc. 2 CO)	-	
Petrol related	5	1	
Engine room / exhaust	3	1 CO	
Electrical (all installations and systems)	2		
LPG vapour	2		
Portable items (lamps / heaters / stoves)	2	-	
Bullseyes	2		
Galley Accidents	2		
Smoking / candles	1	-	
Generator	1 CO		

Table A4 <u>Use of vessel all incidents</u>	<u>Inland BSS</u>	<u>Non-BSS</u>	
Pleasure and leisure	25	4	
Not recorded/not known	23	2	
Intensive (residential use and extended periods)	15	4	
Hire and small passenger boat	8	-	
Workboats / other small commercial	2	-	
Brokerage / renovation / under repair	1	-	

Table A5 <u>Serious incidents on all inland waterways</u> (Note: Major injury = treated at hospital)		
Totals	<u>5 Fatalities</u>	<u>13 Major injuries</u>
Explosion/fire, petrol, gas, fume ignition	-	6
MOB/Capsize	4	4
Exhaust fumes	1	1
To be confirmed	-	2

Table A6 <u>Incidents on BSS applied waterways – certification nature where known</u>	
Craft having current BSS certificates	38
BSS - not appropriate open boat/short term	5
Boat not certified/certificate status expired	2
Annex IV	1

Table A7 <u>Incidents by Navigation Authority</u>	<u>Fire</u>	<u>CO</u>	<u>other</u>
BW	38	3	11
BWML	1		
EA	7		2
MSC-Bridgewater	3		
Broads	3		3
Avon Trusts	2		1
Windermere			1
PLA	3	1	

Table A9 all inland waters <u>Trends in systems & causes: all fire & CO</u>	<u>2010 To date</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Totals	61	66	67	76	51
Deliberate Fire setting	18	17	29	15	10
Conflagration	-	7	0	5	1
Totals of accidental and original incidents	43	42	38	56	40
Electrical [system / appliances]	2	10	7	3	4
Engine / engine room / exhaust	4	4	3	6	2
Galley incidents / accidents and smoking	3	0	0	3	1
Gas escape / installed gas appliance	2	0	2	7	5
Not known [inconclusive / tbc to BSS]	12	11	8	13	12
Oil fired stoves and heaters [installed]	0	1	2	2	0
Other [inc machinery, welding, DIY, etc]	0	2	0	4	2
Petrol related – leaks, refuelling, etc	6	7	4	1	2
Portable engines / outboards / generators	1	0	4	1	3
Portable items [lpg, oil, BBQ, electric, etc]	2	2	4	0	2
Solid fuel stoves [inc steam pressure expl]	9	5	4	16	7
Bullseyes	2				

Annex B

Information on major non-fire and CO inland waterway incidents where available					
Month	Nav Auth	Details:	Cause:	Boat status:	Use of craft:
May	BW	Two 10 year old girls got in to trouble whilst playing on a dinghy once rescued both admitted to hospital for mild hypothermia	capsize	underway	pleasure
May	BA	Hire vessel stuck under bridge	Operating error	Underway	Hire
Jun	BW	A hire vessel struck a moored vessel which then began to sink	Operating error	Underway	Hire
Feb	AT	While attempting to turn into the current, the skipper lost control. The Boat jammed between a bridge and the bank.	Operating error	Underway	Intensive
Aug	BW	A boat having engine problems and then a miscalculation by the skipper resulted in the boat grounding on a tidal passage	Machinery failure & operating error	underway	pleasure
Aug	BW	Skipper missed all navigation signs and entered a non-navigable section of river and grounded	Operating error	underway	pleasure
May	BW	Whilst waiting to enter a lock the experienced skipper disappeared from the boat, unseen by the other crew member lock wheeling, and was found dead in the water	Accidental reason TBC	locking	pleasure
Jul	BW	A person died after being swept into the canal by a falling tree branch in high winds.	Fall	underway	intensive
Jun	BW	A male hirer went outside the cabin for a smoke and was found dead in the canal a little later	tbc	moored	hire
Jun	EAT	Two males travelling in a dinghy and one died after entering the water	tbc	underway	pleasure
Jul	none	Vessel being moved by professional boat mover The vessel became jammed between some tree debris and steel cable and sank. The river was in a flood state at the time of the incident	Operating error	underway	pleasure
Jan	none	One of a small convoy of cruisers became trapped against a bridge in strong river flow conditions and sustained damage.	Operating error	Underway	Pleasure

Annex C

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 development of the MCA hire boat code.

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 our partnership with Warwickshire Fire and Rescue Service (WFRS) we may identify research needs and seek sponsorship for such research and through our representation at British Standards Institution (BSI) we may seek to influence relevant standards-making activity.

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 BW 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.



Date: 13 September 2010

Efficiency - Update on the progress of the BSS IT project [Doc C1, BSSAC #73]

Progress Summary

Concerning online examination reporting, the original test group members were given access to the 'sandbox' test site, an IT update and new copies of 'How-to-Guides' (HTG's) with update 18.

Following limited feedback from this test group we believed that we were at the point where the examiner test group could sign-off the latest version of the examination reporting and the BSS Office could start to roll out the examination reporting module to the next 40 examiners.

The HTG's and links to the sandbox were sent out in early August to the second test group of around 40 examiners. The BSS monitored this group's log-on and reports as well as proactively contacting many group members to talk through any issues and to learn from their experiences.

Following this activity it was decided to modify the guides then start approx 35 examiners from this test group on examination reporting from 1 September. The remaining group members will be switched on once they start to practice, return from holiday, sick leave or overseas trips.

The BSS Office has chosen the next 40 examiners to roll out the sandbox practice site access very shortly. These examiners will be monitored and it is anticipated that they will go "live" within three weeks. At that point another 40 examiners will be given access to the sandbox, then onto the real site. This sequence of events will continue until all examiners are using the real site for recording all examinations.

To date test group examiners have recorded over 3200 examinations (nearly 25% of all examinations) via the electronic reporting system with one test group member recording approx 430 examinations and another at approximately 354 examinations.

We are not planning any more major developments to the existing system until we have more examiners regularly reporting examination results on this system. We believe that when we have approximately 60% of all examiners reporting online that we will have reached a "critical mass" that will inevitably enable innovation and change quicker and easier than the present situation.

Work continues with 20/20 on improving BSS Office efficiency, BSS Administration reporting and integration with navigation authorities.

The ongoing development plan, or 'stage 2' (*as reported in Doc G2, BSSAC #72*) featuring changes to examination recording and the BSS Certificate is being planned for later in 2010/early 2011 and will be carried out in conjunction with BSSAC member input.

Online material ordering

This process of all examiners ordering their own material requirements is working well. The volume of queries and problems arising whilst using this section of the site remains negligible.

Online examination reporting

As discussed in the summary, all test group 1 examiners are now at V4 and have copies of the update number 18-20 which introduced access to the sandbox.

The sandbox area has been created and access to it is allowed via a new sign-on for any test group examiner who wishes to use it.

Test group 2 examiners will have been reporting examination results online since 1 September. Once this group are regularly reporting examination results we anticipate that just over 50% of all examination results will be being reported online.

Test group 3 start with sandbox access this week and, it is anticipated, will be using online reporting early in October.

Other test groups will then continue with access approx every three weeks until all 220 examiners are reporting online all examinations.

Examiners' support website

Development of the examiner's support website is continuing. In the early part of this reporting period all ECP changes historic and new were loaded up and further updates added. The new ECP change concerning the inclusion of domed-decklights (bullseyes) was also linked to a receipt and feedback form from which more information on incidents or near incidents linked to bullseyes came in.

The information concerning the rise in insurance cover levels, including the BSSMC Chair's letter and the cover offer from MHA, was also posted on that website together with its own receipt form.

A new single-sign on gateway is being constructed to give examiners access to the support site, Salesforce and the training sandbox. It will also allow the BSS to post messages to examiners about maintenance downtime, new ECP changes and other urgent important notes.

Development of this site has slowed to support the Salesforce examination reporting roll-out.

BSS Office staff development

The BSS Administrator is about undertake an Open University degree-level course on 'Web Applications Development' to support her web development activities for the BSS. [subject to spend sign-off].

Public risk messages

BSS Communications Manager has joined the ranks of the Waterscape bloggers. It is seen as a useful conduit to raise important matters of safety or boat safety compliance that for reasons of timing or appropriateness would not be relevant for the monthly boating press. It also provides us a means to react swiftly to incidents or events in measured way.

The first item was about the locking and blocking of emergency escape routes. It was presented as a reaction to an email from a concerned member of the public who was horrified that people on a hire boat had locked one set of doors on the outside before bedding down for the night. Also see the incident report for more details.

The reaction to the blog has been positive and has brought in several comments which compares well to some blogs on Waterscape.

BSS Quality and Technical Manager

13 September 2010



13 September 2010

BSS Quality Management Report [Doc D1, BSSAC #73]

As indicated within papers presented at previous BSSAC meetings, the BSS Office expects to move forward a number of quality improvements during this financial year.

However with BW's cost saving measures in place and the government's spending review about to take effect it is likely that financial restrictions may be applied to the BSS spend. As these changes are unknown at present the BSS Office will be moving forward slowly on implementation of any plans that involve current or mid-term expenditure and will ensure full sign-off of expenditure or delay spending until the impact of the spending review becomes clearer.

Field Assessments and other quality assurance measures

To remind members that other than to support case determinations, field assessment activity remains on hold until we have confirmation about both the level of insurance cover that our contractors have and the level of safety management that the BSS Office has with respect to assessor activities whilst contracted to the BSS Office.

Finance

Number of certificates sold since April 10 is approx 15% down on previous year's sales. This can be explained by a high number of certificate orders from examiners in March.

Number of guides sold is down by 20% on previous year's sales

Number of examiners **217**

Full time BSS staff **5**

Part time/temporary BSS staff **2** (one is long term sick and may not return/be replaced)

BSS is generating a surplus to date and it is not considered necessary to change the business plan at this stage. Close scrutiny of monthly certificate sales is being maintained to help identify any likelihood of an income shortfall for the year.

Initial BSS Examiner Training Course and other courses

The next examiner training course takes place on 11 October for 10 working days.

BSS examiner training course waiting list has 75 applicants at present. Since June 2010 we have had 11 applications of which 1 has been turned down.

As mentioned at the previous BSSAC the following changes have been implemented.

The pass mark raised to 90%

Notes were added to the application website and the final conformation letter requiring all attendees to supply overalls, adverse weather protection, gloves, hand wipes etc and their personal examiner tools (mirror, torch, tape and callipers).

The College is still to negotiate with the two marinas we use for a larger selection of test vessels.

Changes to the course material introducing the Salesforce reporting site and increased petrol engine and electrical risk materials.

The pre-acceptance testing is still to be implemented.

After this next course all those on the waiting list will be contacted and asked to re-confirm that they still require a place on a training course, as a number contacted by post or email to attend the October course have not replied and may no longer wish to become BSS examiners.

Technical Updates (TU's)

The first technical updates of 2009/10 were issued in June a second release is scheduled for September.

The BSS Office is dealing with several appeals in relation to fuel filling points, electrical spaces and gas lockers.

A number of technical issues were concluded at the two recent BSSTC meetings, a number of issues discussed and agreed during those meetings will be communicated to examiners by various methods over the next few weeks.

BSS Quality and Technical Manager

13 September 2010



Date: 13 September 2010

Report from BSSTC Chair for BSSAC [Doc E1, BSSAC #73]

A BSSTC meeting was held on Tuesday 7 July. The following items were moved forward.

1) 230v Electrocution risks and whether or not individual risks should be covered by mandatory BSS requirements – members considered papers presented by ABSE highlighting initiatives that could address the risks as identified in the BSS consultants report. The need for awareness information for boatowners was highlighted in the report as was the need to introduce a BSS check of condition of shore and other interconnecting leads. It was also agreed that the existing BSS Examination Checking Procedures (ECPs) should be amended to include a condition check of 230v inlet points.

It was agreed that the BSS Office would check the availability and suitability of plug-in indicators to help protect examiners. It was agreed that the BSSTC should move this subject by way of a sub-committee.

2) LPG pipe end capping – information to examiners - members reviewed concerns regarding a Technical Newsletter TN 01.10 issued to all examiners at the end of May. The form of LPG pipe end capping as described at FAQ03 Fig1 as non-compliant was identified by some examiners as very common practice and requests were received to clarify what examiners should do if such capping arrangements are found. In so much as the use of plumbing fittings for end caps is concerned it was agreed that FAQ03 should be withdrawn and for the purposes of the BSS examination, reliance placed upon the successful passing of the LPG tightness test

3) ECP Queries– members viewed a number of papers having a minor impact on the ECPs:

- members supported the recommendation concerning the removal of the requirement conduits to be made of non-conducting material at check 3.3.2.
- members agreed the guidance clarifying the assessment of the effectiveness of sealant used in pipework exiting gas lockers (check 7.2.2) would become an FAQ for examiners.
- members agreed that for the purposes of the BSS joints secured with direct fixings meet the requirement at check 7.8.4.

4) LPG Locker Condition Check (7.2.1) members expressed general agreement for the draft revised check contained at Annex A (as previously distributed to BSSAC, Doc J1, BSSAC #71) but that the acceptability of hatches in lockers should be reviewed and resolved before the matter can be finalised.

5) Appeals –technical appeals in relation to bow thruster arrangements in the bottom of a narrowboat gas locker and in support of allowing a wooden gas locker were reviewed and placed in to the context of a wider review of gas locker arrangements.

6) Updates from the BSS Office were received on the following outstanding BSSTC technical items:

- *Wallas heaters/stoves* – further information had been forthcoming from Wallas allowing the paper for BSSTC on this matter to be finalised.
- *Hybrid systems* – BSS Office has commissioned a consultant to help support this task. BSSTC should anticipate a paper in September.
- *Petrol risks* – a consultant is to provide brief report on the following mitigation equipment availability: bilge blowers, flammable vapour alarms and engine space fire suppression systems.

Drafted by BSS Secretariat, as agreed with the BSSTC Chair 13 September 2010