STEP CHANGE IN SAFETY

Category A Emergency Breathing Systems:

Briefing Note & FAQs

Background

CAP 1145: EBS-related Actions and Key Dates

Action A8: States that **no passengers** may sit on the inside seats (not next to a window) of a helicopter without a **Category A Emergency Breathing System (EBS).** This was originally to come into force on 1st June 2014 but was delayed until **1st September 2014.**

Action A10: States that no passengers may fly in a helicopter without a **Category A EBS.** This was originally to come into force on 1st January 2016 but has been brought forward to **1st January 2015.** (The implementation date for crew remains as 1st January 2016)

EBS Workgroup: Terms of Reference

The EBS Workgroup was set up to:

- Define, select and gain approval of a Category A EBS
- Define and develop training requirements
- Bring to operational service a fit-for-purpose solution.

The workgroup output has been focused on achieving the best possible solution for industry and workforce rather than to meet any externally imposed deadlines.

The new lifejacket / EBS

In accordance with CAA standard CAP 1034 a **Category A Emergency Breathing System** is an emergency breathing system that can be deployed with one hand in the air and under water, within 12 seconds. It can be used in both helicopter ditchings and in water impact incidents when capsize or sinking occurs immediately on impact. **The current LAP / Air pocket doesn't meet this standard.**

Safety Equipment

The new lifejacket is a **personally issued** piece of safety and survival equipment. It is a live, ready-to-use system and as result, buddy checks and personal assurance that suitable pressure is present in the bottle is critical. As with all safety equipment **interference is a breach of basic safety rules** and has likely disciplinary consequences.

Approval of Equipment

The **Civil Aviation Authority** (CAA) will approve the use of PSTASS (passenger short term air supply system) to CAP 1034 for operational use in UKCS oil and gas industry. PSTASS is integrated into the Survitec Mk50 Passenger Lifejacket. This has been specifically developed in response to the CAP 1145 requirements.

The **European Aviation Safety Agency** (EASA) will certify the Survitec Mk50 Passenger Aviation Lifejacket. **Approval is expected in the very near future.**

The equipment has undergone a rigorous testing and approval process (as laid out below) which has been witnessed by CAA and third-party subject matter experts.

Key Testing & Approval steps

- Laboratory testing of the materials and components
- Lifejacket approval and compatibility testing (Fleetwood)
- EBS ergonomics and in-water performance testing (Fleetwood)
- Review of the manufacturers (APEKS) technical data file for the EBS unit
- Helicopter integration testing (all current UK in-service airframes)
- Work of breathing testing (QinetiQ)
- Compatibility testing – alternative suit types (Fleetwood)
- Cold water human subject testing with EBS (Portsmouth University).

CAP1034 CATEGORY A EBS REQUIREMENT	DESIGN SPECIFICATION – SURVITEC MK50 PASSENGER AVIATION LIFE JACKET with PSTASS
Has the capability to be used in air and under water	**MEETS**
Simple to use and capable of being operated with either hand	**MEETS**
No more than one action should be required to activate the system on submersion	**MEETS**
Users should be provided with a means to prevent water from entering the nose	**MEETS** – integrated nose clip on second stage / demand valve
The mouthpiece can be deployed within 10 seconds	**EXCEEDS** – testing indicates average deployment time for nose clip and mouthpiece is less than 10 seconds
It shall be fully possible to deploy Category A EBS in less than 12 seconds with one hand	**EXCEEDS** – as per above
Cold water performance; EBS used in testing to define the standard provided sufficient breathing air for up to 60 seconds in cold (12^{o}C) water	**EXCEEDS** – design specification states that the average user can expect 120 seconds of breathing air at a depth of up to five metres in cold (10^{o}C) water

Key Considerations for deployment

The operational deployment model was developed on the basis of three key criteria

1. Hostile environment & unintended safety consequences
2. Alignment to ensure maximised training capacity
3. Mitigation of risk in meeting 1st September deadline.

Deployment rationale and provisional dates

1. Helicopter flights departing from Scatsa and Sumburgh
   a. **Target date: 5th August**
2. Helicopter flights departing Norwich, Blackpool and Humberside
   a. **Target date: 18th August**
3. Helicopter flights departing from Aberdeen
   a. **Target date: 1st September**

Please note that these dates remain under review.

The current LAP jacket will be withdrawn by 1st January 2015, although it is hoped that all passengers travelling offshore will have the new Category A EBS before then.

Operational guidance

- No mixing of current LAP and new lifejacket on any individual flight.
- During the introduction phase some flights will have the LAP, and some will have the new life jacket.
- Where possible no passenger should depart in the three weeks before target implementation date without having had the training, as they could return on a flight carrying the new Category A EBS
- In exceptional circumstances, passengers having to return onshore having missed the training will be required to watch the training video offshore before embarking. This "one-time" dispensation can only be sanctioned by OIM and Helicopter Operator.
  TO BE AGREED!

Resilience

- Whilst every effort is being made to meet the 1st September target, companies must still make contingency plans for the possibility of internal seat restrictions and continued use of LAP the period up to 1st January 2015.

Training

Training

- Delivery will be to a recognised industry standard and delivered through a national network of approved providers and recorded in VANTAGE.
- EBS training should not be a free-for-all. By design the planned training capacity is directly linked to the operational deployment model. This means that industry must work together to train passengers before departure. Maximising the training capacity at an industry level is a critical success factor. Where possible, collaboration for training is crucial.
- Training will commence up to three weeks before operation deployment and delegates should be prioritised as per the operational deployment model.
- Companies can secure their requirements with training providers in advance of the final training being available.

Training delivery

OPITO have developed an industry standard **Compressed Air Emergency Breathing System (CA-EBS) Initial Deployment Training** which can be found **here.** This standard was developed by an Industry Workgroup (IWG) in full consultation with the OPITO Basic Emergency Response Training Provider Advisory Group (TPAG) and builds upon the manufacturer's minimum training requirement which was submitted as part of the CAA CAP 1034 approval.

A **certificate to fly** will be issued by the training provider to the delegate on completion of the training course; this mitigates fully any delay (typically 12 hours) in the recording of the training in **VANTAGE**. OPITO will record this centrally in **VANTAGE** and have waived their standard charge for this. Failure to present a certificate in the event of no record in **VANTAGE** may result in the passenger not being able to fly.

It is expected that the typical course duration will take no longer than **90 minutes**.

Normal dry trainer to delegate ratios is **1 to 16**. Due to the simplicity of the new equipment and in order to build capacity the IWG have deemed it appropriate to increase this to **1 to 20** providing a further 20% capacity, without any loss of quality. In order to maintain 100% utilisation it is recommended that training providers book to 75% and release any unfilled spaces to all late-comers 48 hours before delivery to cover short-term or last-minute requirements.

It will be acceptable for providers to deliver the CA-EBS Initial Deployment Training in conjunction with the existing BOSIET and FOET programmes. In order to allow this to take place, OPITO will temporarily relax the current maximum daily contact hours contained in the BOSIET, FOET and CA-EBS Standards until further notice. This only applies in instances where the CA-EBS Initial Deployment Training is being delivered in conjunction with BOSIET or FOET. Where this is not the case, normal maximum daily contact hours will apply.

In cases where the CA-EBS training is being delivered in conjunction with the BOSIET/FOET programme providers will be required to register delegates for both standards. However, there will be no registration fee charged for the CA-EBS Initial Deployment Training.

In addition, providers **will also be permitted** to deliver the CA-EBS Initial Deployment Training as a stand-alone programme **on premises other than those currently approved** provided the OPITO standard requirements for on-site delivery are satisfied.

Medical requirements

- **There is no meaningful medical risk for dry training** of compressed air EBS. In the unlikely event of an accident the potential medical risk is generally deemed to be outweighed by benefits of having the EBS. There will be no requirements to amend the current Oil & Gas UK offshore medical.
- Diving at Work regulations (DWR 1997) **do not apply** for operational deployment. It has been deemed inappropriate for safety survival equipment.

Health and hygiene

The manufacturers recommended process for disinfection of the PSTASS second stage mouthpiece is:

- Immersing and agitating the whole second stage into a container of Miltons fluid solution (standard mix)
- Immediate rinse in a container of fresh water
- Shake to remove excess droplets and air dry.

This is very simple, especially when compared to the current regime with the LAP jackets which, by comparison, is both time and labour intensive.

Who pays for the training?

It is up to the individual client and contractors to make the necessary provisions based on their current contractual arrangements.

Future training developments

As part of CAP 1145 recommendation R7, the CAA expects that OPITO will review the BOSEIT / FOET training standards with regard to the fidelity and frequency of training provided. OPITO will establish an IWG to facilitate this. The HSSG EBS workgroup will feed forward into this process.

What companies need to do now.

1. **Review your operational impact internally to meet industry wide geographic roll-out.**
2. **Share key facts with all relevant personnel with your own organisations in particular those responsible for logistics and training.**
3. **Engage your planning and logistics teams to match passengers with roll-out schedule.**
4. **Secure training capacity relevant to your anticipated requirements.**
5. **Engage your workforce.**
6. **Engage your supply chain. Think beyond tier one contractors.**

Frequently Asked Questions

1. Can you confirm what role heli-admin will play in any checks to the new EBS?

- It is believed that heli-admin will continue to play a very similar role to their current. The training for the new system focuses on personal responsibility and buddy checks to ensure that the new EBS is handed over in a fully serviceable condition.
- Survitec Group can offer familiarisation training to HLO / Heli-admin personnel to ensure that they have the necessary knowledge and understanding of how to handle the equipment.

2. Who is going to be responsible for bagging up the spare jackets and storing in the hold, and what familiarisation/training is required?

- There should be **no change** from the current arrangements as the existing LAP jackets have internal compressed air cylinders.
- CAA guidance regarding the wearing and carriage as cargo of new compressed air bottles:
    i. No special regulation required as the current hybrid re-breather contains compressed air cylinder.
    ii. The lifejacket stole is inflated by compressed gas CO^2 cylinders which are already covered under CAA Approval Number E13900.
    iii. The current approval/exemption documents issued by CAA to the main offshore helicopter operators identify the lifejackets and re-breathers currently in use by their specific CAA Approval numbers. This would need to be updated to the CAA/EASA approval number(s) of the new equipment (once granted).
    iv. Carriage of spare units is recommended to be by placing in the aircraft hold contained in a heavy duty rubberised nylon bag.

3. Are caps required to prevent accidental discharge of the air cylinders during transit and if so, where will they be stored? Will they be attached to the jackets?

- Yes, caps will be available in Q4.

4. **Will tampering with the air cylinder in use be a disciplinary offence/have you removed from the flight?**

- The new lifejacket is a personal issue piece of safety and survival equipment. As with all safety equipment interference is a breach of basic safety rules and has likely disciplinary consequences.

5. **Why is there no option to train-the-trainer and send them offshore?**

- The quality of training was deemed of critical importance due to the change from a hybrid re-breather to a compressed air system therefore the workgroup believes that the development of an industry standard with OPITO and delivery through an approved provider network best achieves this.

6. **Can the trainers from the approved training providers be sent offshore to locations to deliver training?**

- Yes, providers will be permitted to deliver the CA-EBS Initial Deployment Training as a stand-alone programme on premises other than those currently approved provided the OPITO standard requirements for on-site delivery are satisfied.

7. **Could we all join together and book a large hotel ballroom and set up a central training centre adjacent to the heliports? This could allow people to mobilise earlier for their check in and get trained immediately prior (as was done for Airpocket roll out).**

- Yes, subject to the training being delivered by an approved provider, the correct trainer-delegate ratio and approval of the external venue by OPITO.

8. **Do the training providers have adequate resources to cope with the volume of training required in a short period of time?**

- Training providers have differing capacity and some are more prepared than others at this time. We do not underestimate the amount of work required but believe that following the regional deployment model and working together with the national training provider network offers the best chance of meeting the dates.

9. **How are the Vantage updates going to be managed if the training is immediately prior to check in or within a few hours of travel? Will a temporary certificate be issued until Vantage is updated (as was done for Airpocket roll out) or will there be real time Vantage updates by the training providers?**

- A certificate to fly will be issued by the training provider to the delegate on completion of the training course; this mitigates fully any delay (typically 12 hours) in the recording of the training in VANTAGE. OPITO will record this centrally in VANTAGE and have waived their standard charge for this. Failure to present a certificate in the event of no record in VANTAGE may result in the passenger not being able to fly.

10. **Will companies be allowed to have their own dispensation process?**

- No. This is a regulatory requirement and therefore we cannot utilise internal seats (not adjacent to a window) after 1st September **unless passengers have a Category A EBS** and all passengers must have the new equipment by 1st January 2015.
- In exceptional circumstances, passengers having to return onshore having missed the training will be required to watch the training video offshore before embarking. This "one-time" dispensation can only be sanctioned by OIM and Helicopter Operator. TO BE AGREED!

11. **When do we anticipate the absolute date for withdrawal of LAP jacket?**

- The current LAP jacket will be withdrawn by 1st January 2015 although we hope that all passengers travelling offshore will have the new Category A EBS significantly before then.

12. **I have heard contradictory information regarding training dates, are all the training providers aligned? Is the booking system closed until 7th July or does it vary by training provider?**

- Each training provider must make their own arrangements and some are more prepared than others taking early bookings in parallel to the development of the course material.

13. **Will there be a priority system for booking the training by deployment region?**

- It is up to each company to prioritise according to the regional deployment model and work together. This affords the industry the best chance of a smooth operational deployment with minimal disruption or restrictions.

14. **If there is a delay in the production of the new EBS will it be permissible to have the two types of EBS on the same flight i.e. wearers of the old type sat next to emergency windows?**

- Whilst there are no regulatory restrictions on mixing equipment we believe that this adds unnecessary complexity and would not be the preferred option. To avoid mixing re-breather and Compressed Air EBS on inbound and outbound flights it is suggested that candidates are selected for training on the outbound leg of their journey up to three weeks before operational deployment for that region/asset.

15. **Will the training use "live" kit unlike the current re-breather training where the compressed air cylinder is removed, giving people an incorrect understanding of how the system works?**

- Yes, all delegates will get the opportunity to use the "live" system.

16. **On the training piece, does the HSSG believe that completion of this training will be led by the Operator or will it be the responsibility of all companies/contractors to book the training for their employees?**

- It is up to the individual client and contractors to make the necessary provisions based on their current contractual arrangements. Collaboration is the key to success for this project and we know that some clients intend to book spaces for their operations including contractors.

17. **There is also mention of an online training video – is this in addition to the training session that the employee has to attend or is this an alternative option available as it is not clear?**

- An online training video will be available through the Step Change in Safety website as a support tool. This is in addition to the training session and the CAA mandated pre-flight video.

18. Before going offshore, passengers are required to demonstrate various things – is this part of the standard training session or a separate requirement and if the latter where will this be conducted?

- This is part of the standard training session.