



House of Commons  
Transport Committee

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# Offshore helicopter safety

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**Second Report of Session 2014–15**

*Report, together with appendix and formal  
minutes relating to the report*

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## Summary

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In August 2013, a helicopter crashed into the sea while on approach to Sumburgh Airport on Shetland. Four passengers were killed. That was the fifth helicopter accident since 2009 involving the transfer of oil and gas industry personnel to and from offshore installations in the North Sea.

The Air Accidents Investigation Branch (AAIB) investigation into the crash uncovered a number of deeply worrying events. Specifically, the AAIB found pre-flight briefing material did not fully represent the type of Emergency Breathing System (EBS) supplied to passengers. This caused problems for some survivors of the crash who told us they decided not to use the EBS based on the safety briefing. We call for the Civil Aviation Authority (CAA) to ensure that helicopter operators, in collaboration with the offshore work force, review all safety briefing material to guarantee that it is up to date and fit for purpose. We also call for the AAIB to keep crash survivors better informed on the progress of their investigations and, along with the CAA, to meet survivors to take on board their ideas for improving safety.

The recent accidents all involved Super Puma helicopters. We heard no conclusive evidence that Super Puma variants are less safe than other helicopters used in the UK offshore sector. We welcome the work by operators, manufacturers and industry safety groups to engage with the offshore work force to address its concerns about Super Pumas. However, we heard troubling evidence about a macho bullying culture in the oil and gas industry, including that offshore workers who were concerned about helicopter safety were told that they should leave the industry. We believe that more must be done to facilitate a culture of approachability and openness at all levels.

The Sumburgh crash prompted the CAA to launch a wide-ranging review into offshore helicopter safety. In February 2014, the CAA published its review of offshore helicopter safety, which made strong recommendations on safety governance, airworthiness and equipment. We welcome that review and congratulate the CAA on quickly establishing the Offshore Helicopter Safety Action Group to implement the CAA's findings. At the same time, we highlight areas which we believe require more work, particularly on the problems caused by the diverse customer requirements for helicopter pilots and on the impact of seating restrictions on workers and their livelihoods.

We examined whether the Norwegian safety regime offers any lessons for the UK. We found no evidence to suggest that recent accidents in the UK could not also have happened in Norway. However, the CAA review uncovered a worrying statistical trend that shows Norway reporting far more incidents which could endanger life than in the UK. We have called for the CAA to look into why this is the case and report within 12 months.

There are strong concerns from the offshore oil and gas industry that transferring more power over helicopter operations to a European level is averaging down standards. The Government must uphold and entrench the CAA's ability to act quickly and unilaterally.

We are concerned that regulatory inertia on the part of the European Aviation Safety Agency (EASA) is leading to unnecessary risk for offshore workers. The Department for Transport (DfT) must push EASA to speed up its implementation times in response to safety recommendations from national investigation boards. To that end, we ask the DfT to issue a formal response to the CAA review that addresses all points relating to EASA and to ascertain what practical steps EASA is taking to speed up the implementation of recommendations.

We believe that the CAA review did not look in sufficient detail at two key areas of offshore helicopter operations. The first was the impact of commercial pressure on helicopter safety. The evidence that we heard was polarised, and commercial sensitivities mean that it is difficult for most external reviews to examine the contractual obligations set by industry. The second was the role and effectiveness of the CAA itself, and we acknowledge it would not be appropriate for the CAA to lead on such work. Only a full, independent public inquiry will have the resources, remit and power adequately to tackle those issues; we recommend that the DfT convene such an inquiry. In addition, the DfT must commission ongoing independent research to examine improvements and threats to offshore helicopter safety.

# 1 Introduction

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1. On 23 August 2013, a Super Puma helicopter crashed into the sea while on approach to Sumburgh Airport on Shetland. Four passengers were killed. That was the fifth accident in four years involving a helicopter carrying oil and gas industry personnel to and from offshore installations in the North Sea.

2. Shortly after the Sumburgh crash, the Civil Aviation Authority (CAA) announced a joint review of North Sea helicopter operations with the Norwegian CAA and the European Aviation Safety Agency (EASA). That review was advised by a panel of independent experts. The review studied current operations, previous accidents and offshore helicopter flying in other countries, and it made recommendations to improve the safety of offshore flying.<sup>1</sup>

3. Because we, too, were concerned about offshore helicopter safety, we launched an inquiry on offshore helicopter safety, but we agreed not to publish our report before the CAA had published its findings. We asked for written submissions on the following questions:

- How safe are offshore helicopter flights?
- How does the UK's safety record compare with that of other countries?
- What steps could be taken by industry to improve the safety of offshore flights?
- How could legislation and regulations relating to helicopter safety be improved?
- How effective are existing regulators, including the European Aviation Safety Agency, in ensuring that recommendations to improve safety are implemented?

4. Along with written submissions, we heard oral evidence on 27 January and 17 March. We also met a number of survivors of the Sumburgh crash at an informal private meeting on 10 April, where the survivors told us about their experiences during and after the accident. A summary of this meeting is set out in Appendix A.

5. The evidence session on 27 January was held in Aberdeen, which is the geographical centre of the UK oil and gas industry. In Aberdeen, we visited the North Sea operations centre of Bond Aviation Group, a helicopter operator, where we met staff and were briefed on existing safety practices in the offshore sector. We also visited Airbus Helicopters North Sea Service Centre where we were given a demonstration aboard a pilot training simulator.<sup>2</sup> We thank all those who hosted us on our visit as well as those who provided

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1 The CAA published its findings in [Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas, CAP 1145](#)

2 Formally Eurocopter Group

evidence to the Committee. We also thank our Specialist Adviser, Jeremy Barnett, for his assistance.

6. In this inquiry, we did not seek to identify the causes of specific accidents, although we considered information published by the Air Accidents Investigation Branch (AAIB) on the 2013 Sumburgh crash. Instead, we scrutinised the safety culture in the North Sea. To that end, we took evidence on the regulatory and commercial pressures faced by the offshore industry and listened carefully to the offshore work force on how safe they feel and what they believe can be improved. We heard about two broadly separate issues in relation to helicopter accidents: first, the reasons why helicopters crash; and, secondly, factors relating to the survivability of crew and passengers following such incidents.

7. A number of other helicopter accidents took place over land during the course of this inquiry. Those included the police helicopter crash into the Clutha Vaults bar in Glasgow, which killed 10 people, and two accidents in Norfolk, one civilian and one military, each of which led to four fatalities. We did not take evidence on the factors surrounding those accidents, as the onshore operating environment and culture is significantly different from the offshore sector.

## 2 Offshore helicopter operations

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8. The North Sea is a hostile environment for helicopter operations. Helicopter flights over the North Sea are relatively high risk compared with transport by fixed-wing aircraft. Despite that risk, both industry and regulators recognise that helicopters are the most practical mode of transport for transferring personnel between oil and gas installations and the mainland. Despite its relatively high cost, the offshore oil and gas industry favours helicopter transfer over fixed-wing aircraft or ships. Helicopter transfer is unaffected by the surge of the sea and provides higher speed and greater efficiency than fixed-wing aircraft or ships. Unite told us that 99.1% of offshore transportation is by helicopter. Unite also stated that

the average number of flights undertaken annually per worker is approximately 28.6. The majority fly less than 40 helicopter flights annually but a significant minority of workers fly more frequently [...] taking over 40 flights annually.<sup>3</sup>

9. The North Sea is served by a mixed fleet of around 95 helicopters<sup>4</sup> including models manufactured by Airbus, Sikorsky and AgustaWestland. The National Union of Rail, Maritime and Transport Workers (RMT) stated that Super Puma models AS332 L, L1, L2 and EC225 account for 60% of the North Sea helicopter fleet<sup>5</sup> with the Sikorsky S-92 and the Airbus Super Puma EC225 serving as the workhorses of the industry.<sup>6</sup>

10. The Department for Transport (DfT) stated that approximately 57,000 individuals work in the North Sea at some 600 facilities. The main operating bases are Aberdeen, Scatsta (Shetland), Norwich, North Denes (Norfolk), Humberside and Blackpool. The offshore oil and gas industry is served by some 100 flights a day.<sup>7</sup> Those flights are conducted by three main helicopter operators—Bristow Helicopters, Bond Offshore Helicopters and CHC Helicopter. Those operators employ almost 2,000 people in the UK. In 2012, they carried more than 500,000 passengers to installations across the North Sea.<sup>8</sup> The southern North Sea contains a particularly large number of normally unmanned installations which are particularly affected by the CAA's proposed regulation in relation to helicopter safety, and this part of the UK Continental Shelf (UKCS) is key to domestic gas supply. The UKCS as a whole is critical to the UK economy.

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3 Unite ([HCS0008](#)) para 3.2.1

4 CAA, Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas (February 2014), para 2.4

5 RMT ([HCS0015](#)) para 4.2

6 Unite ([HCS0008](#)) para 3.2.2

7 DfT ([HCS0005](#)) para 1.2

8 Bond, Bristow Helicopters Limited and CHC Helicopter ([HCS0001](#)) para 1.3

## Sumburgh crash

11. The crash off Sumburgh, Shetland, occurred on 23 August 2013. An AS332 L2 Super Puma carrying 18 people was on approach to Sumburgh Airport where it was due to refuel before returning to Aberdeen. At 17.17 the helicopter crashed into the sea 1.5 nautical miles (2,780 metres) west of Sumburgh airport. Four passengers died as a result. An interim report by the AAIB found no evidence of mechanical failure.

12. The AAIB published a further bulletin on 18 October 2013, which found that the rescue boat did not reach the crash location for nearly an hour, although a search and rescue helicopter arrived after 26 minutes. The rescue boat was unable to launch from its slipway due to unfavourable tidal conditions. A 2010 airport safety survey suggested that the slipway was useable in only 11% of tidal conditions. An attempt was made to use another launch site, but the rescue boat became bogged down in the soft sand. When the rescue boat was finally launched successfully, it had to make a six nautical mile open sea transit to the crash location. The AAIB recommended that Sumburgh Airport “provides a water rescue capability, suitable for all tidal conditions, for the area of sea to the west of Sumburgh” and that “the CAA review the risks associated with the current water rescue provision for the area of sea to the west of Sumburgh Airport and take appropriate action.”<sup>9</sup> The crash investigation is continuing.

## Emergency Breathing System

13. An Emergency Breathing System (EBS) is a form of underwater breathing apparatus. It reduces the risk to life when a helicopter capsizes by extending underwater survival time. On 23 January, the AAIB published a special bulletin on the EBS provided to the victims of the Sumburgh crash. The bulletin revealed the pre-flight safety briefing video did not fully represent the EBS supplied to passengers. The safety video did not highlight that the EBS provided was a hybrid rebreather containing an air supply which was discharged automatically into the rebreather bag, or that the system could be used even if the wearer had not taken a breath before becoming submerged. The AAIB bulletin stated that that discrepancy “may [...] influence a passenger’s decision on whether or not to use the EBS in an emergency situation.”<sup>10</sup>

14. The helicopter involved in the Sumburgh crash was operated by CHC Helicopter. Duncan Trapp, Vice President of Safety and Quality for CHC Helicopter, set out his view on the safety briefing:

I would like to perhaps change the wording of the AAIB bulletin, which certainly highlighted an area for improvement, but I do not think to describe the safety briefing as flawed accurately captures what we put in place. As the Committee saw this morning, there is a comprehensive safety brief for all passengers going offshore. The bulletin rightly identified an area where

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9 AAIB, [S7/2013](#) (October 2013), page 8

10 AAIB, [S1/2014](#) (January 2014), page 3

improvement and clarification could be provided on that particular piece of safety equipment.<sup>11</sup>

However, John Taylor, Regional and Industrial Organiser at Unite, told us that the EBS issue was evidence of complacency and that the industry has a culture of evading responsibility for mistakes.<sup>12</sup> Furthermore, survivors of the Sumburgh crash strongly disagreed that the EBS briefing only needed “improvement and clarification”. Survivors told us that they did not use the EBS, because they had insufficient time to breathe into it before they were submerged. If they had known how the EBS worked, the survivors were confident that they would have used it.<sup>13</sup> Some survivors described their intense psychological stress after reading the AAIB’s findings on the EBS.<sup>14</sup>

15. The CAA review into offshore helicopter safety called for further improvements in safety equipment, including the EBS. We welcome that recommendation. The industry currently uses an EBS known as ‘Category B’. The CAA review stated that that EBS is inadequate when it is deployed at short notice or underwater.<sup>15</sup> The CAA review highlighted improved EBS technology, known as ‘Category A’, which can be rapidly deployed underwater. The CAA has stated that Category A EBS will be mandatory from 1 January 2015.<sup>16</sup> The provision of the improved EBS will require a corresponding update to training and pre-flight briefing material. It is imperative that that is completed as new safety equipment is introduced and not after the fact.

**16. Pre-flight briefing material must accurately describe how to use safety equipment. It is deeply disturbing that it took a fatal accident before the flawed EBS briefing was identified. The CAA must ensure that helicopter operators regularly review all safety briefing material to ensure that it is up to date. In addition, the CAA must consult the offshore work force to ensure that safety briefing material is easily understood and fit for purpose.**

## Crash investigation

17. The AAIB contacted survivors and took personal statements to inform its crash investigation. The survivors whom we met described their frustration that since that initial contact they had found it difficult to engage with the ongoing investigation. Survivors were disappointed that they had not been kept abreast of developments and in some cases had learned of AAIB findings through the media rather than being contacted beforehand. After the accident, survivors believed that they were “left in the dark”, because it was not clear

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11 Q2

12 Q5

13 Appendix A

14 *ibid*

15 CAA, [Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas](#) (February 2014), para 9.9

16 CAA, [CAA announces changes to timescales for Offshore helicopter safety measures](#), accessed 2 July 2014

where they might obtain help and advice.<sup>17</sup> Many survivors were unable to work, because of long-term trauma resulting from the accident. While some psychological help was available, some survivors were unable to access financial support, which was a significant source of stress for them and their families.

18. The survivors' experiences have inspired a number of practical suggestions for improving safety. Those suggestions are outlined in Appendix A. They included fitting more sophisticated lighting around egress windows, making survival suits more visible and applying luminous markings to rescue ropes and other equipment.<sup>18</sup>

**19. AAIB findings have a significant impact on survivors and their families, who deserve to be briefed on upcoming announcements. *The AAIB must keep crash survivors informed on the progress of investigations.* The CAA could learn a great deal by meeting survivors and considering their experiences. For example, survivors' suggestions on enhancing the visibility of equipment are compelling and are drawn from personal experience. More widely, the oil and gas industry must examine the experiences of crash survivors. In particular, more must be done to address the financial and psychological anxiety of survivors who cannot work.**

## Helicopter accidents

20. Between 1976 and 2013, 73 helicopter accidents occurred in the UK's offshore sector.<sup>19</sup> Thirteen of those accidents resulted in fatalities. Table 1 shows the annual accident rates since 1976.<sup>20</sup>

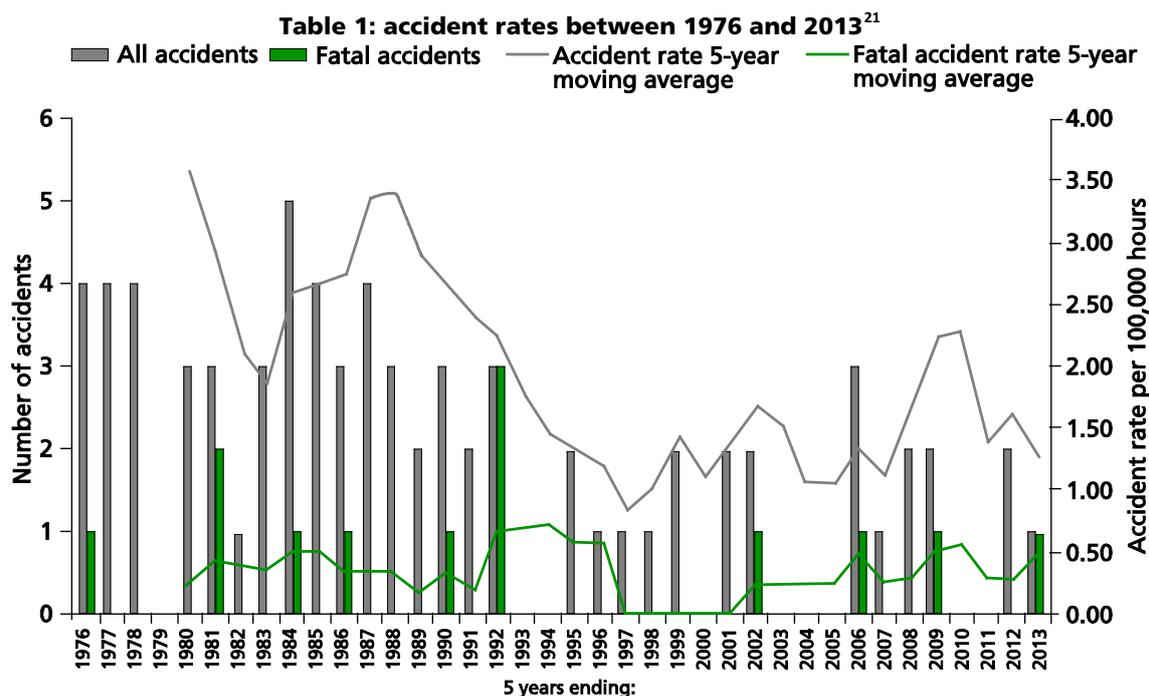
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17 Appendix A

18 Appendix A

19 The current system of recording helicopter accidents was introduced in 1976.

20 CAA, Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas (February 2014), para.1.7.



21. Since 2002, the UK offshore oil and gas industry has suffered 38 fatalities. The five most recent accidents (since 2009) have all involved Super Puma variants and three of those accidents were caused by problems with the gearbox:

- February 2009 - A Super Puma EC225 ditched in fog a short distance from a BP oil platform 125 miles east of Aberdeen. All 18 people on board survived. The AAIB attributed the accident to crew error and a faulty alert system.
- April 2009 - All 14 passengers and two crew on board a Super Puma AS332 L2 were killed after it crashed in the North Sea. The AAIB attributed the accident to a catastrophic gearbox failure.
- May 2012 - All 14 people on board a Super Puma EC225 were rescued when it crashed about 30 miles off the coast of Aberdeen. The AAIB attributed the accident to a gearbox failure.
- October 2012 - All 19 people on board a Super Puma EC225 were rescued safely after it ditched in the sea off Shetland. The AAIB found that the incident was caused by a cracked shaft in the main gearbox.<sup>22</sup>
- August 2013 - Four people died when a Super Puma AS332 L2 crashed into the sea as it approached Sumburgh, Shetland. The AAIB investigation is ongoing.

21 Ibid.

22 The AAIB has published a further report on the May and October 2012 ditches, [Aircraft Accident Report 2/2014](#) (June 2014)

In April this year, EASA certified a redesigned vertical gear shaft for the EC225. Gilles Bruniaux, Vice President of Fleet Safety at Airbus Helicopters, assured us that problems with the Super Puma gearboxes have now been “completely fixed”.<sup>23</sup>

22. The five most recent accidents all involved Super Pumas. We heard that the offshore work force has consequently lost confidence in Super Pumas.<sup>24</sup> In contrast, no accidents involving Sikorsky S-92s have occurred in the UK offshore sector, although there have been two accidents involving S-92s abroad—one in South Korea in 2008 and another off the Newfoundland coast in 2009.<sup>25</sup> Unite told us that after the Sumburgh crash, it was “inundated by the concerns expressed by our offshore membership regarding their confidence in the safety of the UK offshore oil and gas sector helicopter fleet, specifically regarding the various Super Puma types”.<sup>26</sup> After the Sumburgh crash, a Facebook campaign called for the discontinuation of Super Pumas in the offshore sector.<sup>27</sup>

23. We were disturbed to hear that just weeks before the Sumburgh crash workers who had raised concerns about the airworthiness of Super Pumas were told by officials at the oil company Total to put on “big-boy pants” or quit if they could not deal with the risk of helicopter crashes.<sup>28</sup> That insensitive approach further eroded confidence in Super Pumas among the offshore work force. Several survivors of the Sumburgh crash were present at that meeting and cited it as an example of a poor reporting culture where legitimate concerns were dismissed.<sup>29</sup> The RMT union described a culture of “macho bullying that exists with the tacit acceptance of the employers.”<sup>30</sup> Robert Paterson, Health, Safety and Employment Issues Director at Oil & Gas UK said the oil and gas industry collaborate well with the offshore work force. However, he accepted that that incident highlighted the need to rebuild work force confidence and to improve communication between workers and managers.<sup>31</sup>

**24. We find it unacceptable that offshore workers were told by an operations manager that they should leave the industry if they were concerned about helicopter safety. In an inherently hazardous industry, operations managers must prioritise safety, which means facilitating a culture of approachability and openness at all levels.**

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23 Q54

24 Unite ([HCS0008](#)) para 1.2

25 Sikorsky ([HCS0014](#)) page 2

26 Unite ([HCS0008](#)) para 1.2

27 [Destroy the Super Pumas](#), accessed 2 July 2014

28 Daily Mail, [If you can't live with the risk don't work offshore': Oil workers were told to put on their 'big-boy pants' at safety meeting just weeks before Shetland helicopter crash](#), accessed 2 July 2014

29 Appendix A

30 RMT ([HCS0015](#)) para 4.5

31 Q51

## Comparing safety

25. It is difficult to compare the safety records of different helicopter manufacturers. Mark Swan, Director Safety, Airspace and Regulation, CAA, told us that the various models of Super Puma are all “quite distinct aircraft”.<sup>32</sup> That makes it difficult to draw conclusions on the airworthiness of the collective Super Puma brand compared with other helicopters. In addition, the relatively small number of helicopter accidents makes it difficult to detect statistically meaningful trends. Keith Conradi, Chief of Inspectors at the AAIB, stated:

The problem is that, dealing with such limited numbers [of accidents], to try to get any statistical relevance from them could be misleading. If you look globally, I do not know of any information that suggests that the EC225, or any of the Super Pumas, is more likely to have an accident than any other type.<sup>33</sup>

26. The oil and gas industry has tried to improve the perception of Super Pumas. In that context, Oil & Gas UK and Step Change in Safety outlined measures aimed at workers and their families, which included helicopter awareness courses, town hall conferences and pilot briefings.<sup>34</sup> When Unite consulted the offshore work force, however, it found a worrying lack of confidence in helicopter travel in general and in Super Pumas in particular.<sup>35</sup> The findings of that consultation are set out in Table 2.

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32 Q93

33 Q94

34 Step Change in Safety (HCS0021) page 1 & Q52 [Robert Paterson]

35 Unite ([HCS0008](#)) para 3.1

**Table 2: Confidence in different helicopter models amongst the offshore work force<sup>36</sup>**

<b>Table 1</b>	<b>Eurocopter EC225</b>	<b>Eurocopter S-92</b>	<b>Eurocopter AS 332L</b>	<b>Eurocopter AS 332L1</b>	<b>Eurocopter AS 332L2</b>	<b>Response Total</b>
<b>Very confident</b>	2.2%	3.1%	2.9%	3.9%	2.2%	2.9%
<b>Confident</b>	28.4%	39.3%	20.4%	23.7%	33.3%	35.8%
<b>No option</b>	14.4%	16.5%	11.7%	10.5%	15.6%	16.0%
<b>Not confident</b>	54.9%	41.1%	65.0%	61.8%	48.9%	45.3%

27. Super Puma variants make up some 60% of the offshore helicopter fleet, which means that it is unsurprising that they are involved in more accidents than other models. We heard no conclusive evidence that Super Puma variants are less safe than other helicopters used in the UK offshore sector. We welcome the work by operators, manufacturers and industry safety groups to engage with the offshore work force to address their concerns about Super Pumas.

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<sup>36</sup> Unite ([HCS0008](#)) para 3.3.3

## 3 CAA Review

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28. The CAA published its review of offshore helicopter safety on 20 February 2014. The CAA review sets out 32 safety interventions which fall within the remit of the CAA and 29 recommendations which fall within the remit of other parties. The review is wide ranging and its proposed changes will have a significant impact on how the offshore industry transports workers. Some of the most notable recommendations include:

- The establishment of a new Offshore Helicopter Safety Action Group to work for improved safety in helicopter operations on the UK Continental Shelf. The safety forum is chaired by the CAA and includes the key organisations from the offshore industry. The Safety Forum is inspired by a similar body in Norway, which it will work alongside;
- Helicopter flights will be prohibited in the most severe sea conditions, except in response to an emergency, so the chance of a ditched helicopter capsizing is reduced and a rescue can be safely undertaken;
- Pending further safety improvements to helicopters, passengers will be able to fly only if they are seated next to an emergency window exit to make it easier to evacuate (unless helicopters are fitted with extra flotation devices or passengers are provided with a better EBS);
- Operators will be prohibited from carrying passengers on offshore flights, except in response to an offshore emergency, whose body size, including required safety and survival equipment, is incompatible with push-out window emergency exit size;
- Passengers will be required to have an enhanced EBS to increase underwater survival time unless the helicopter is equipped with side floats; and
- There will be changes to the way pilots are trained and checked. For instance the CAA will review all helicopter training programmes to ensure that basic flight skills are maintained, so that crews can deal with manual flight if required. (This is in response to concerns about new helicopter pilots joining the industry who rely too much on automated systems.)

### Implementation

29. The CAA was criticised by Oil & Gas UK for its ambitious timescale for implementing some actions. In particular, Oil & Gas UK objected to the seating restrictions, which were scheduled for introduction on 1 June 2014. Oil & Gas UK stated that important safety maintenance work would require an increase in offshore personnel this summer and that seating restrictions would increase risk, because the measure would result in more flights

and more stress on pilots.<sup>37</sup> After negotiations in the new Offshore Helicopter Safety Action Group, the 1 June 2014 deadline was extended by three months to 1 September 2014 to allow for that maintenance work. At the same time, the deadline for implementing the compulsory use of the Category A EBS was brought forward a year to 1 January 2015.

30. Trade unions have criticised the CAA's plans to prevent helicopter operators carrying passengers whose body size means that they cannot escape through push-out window exits in an emergency.<sup>38</sup> The measure will prevent larger workers from going offshore, which will have serious consequences for their job security. That concern is legitimate and requires careful management. Oil & Gas UK is funding its own survey of passenger body size at Robert Gordon University.<sup>39</sup> The CAA told us:

We are working with the industry to establish the most appropriate body size metric and corresponding limit in relation to exit window size. Exit sizes vary from one helicopter type to another and even from one seat row to the next on some helicopters. So the impact of this measure could be minimised by restricting passengers to certain helicopter types and/or specific seat rows based on their size.<sup>40</sup>

The CAA told us that it does not foresee that change leading to job losses. Further guidance for offshore workers is required along with potential solutions for those affected. We support the CAA recommendation, because it is not acceptable for workers to fly offshore if they cannot fit through exits in an emergency, which risks not only their lives but those of their colleagues whose evacuation might be obstructed.

**31. We welcome the CAA review of offshore helicopter safety and congratulate it on quickly establishing the Offshore Helicopter Safety Action Group to implement its recommendations. At the same time, the CAA must be mindful of the effect of its actions and recommendations on the offshore work force and should consult with industry to ensure its demands are realistic and implemented in a way which continues to allow for “maximising economic recovery” as per the Wood Review.<sup>41</sup> We were extremely concerned to hear about how crash survivors wearing safety equipment struggled to evacuate through egress windows after helicopters capsized in the sea. The CAA must set out how it will address that key issue as a matter urgency.**

## Comparisons with Norway

32. The UK's offshore helicopter safety record is often compared unfavourably with that of Norway. The available statistics indicate that Norway's safety record over the past decade has improved, while that of the UK has declined. In 2012, 56 offshore helicopters were

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37 Oil & Gas UK ([HCS0022](#))

38 The change is planned for implementation on 1 April 2015

39 CAA, ([HCS0026](#)) page 3

40 *ibid*

<sup>41</sup> Sir Ian Wood, [UKCS Maximising Recovery Review: Final Report](#) (February 2014)

operated in Norway compared with 95 in the UK.<sup>42</sup> Table 3 shows that from 1992 to 2012 the Norwegians suffered one fatal accident compared with six in the UK sector. Although those accident rates may appear to indicate a difference in safety performance the CAA stated that it is “not statistically significant”.<sup>43</sup>

**Table 3 showing the offshore helicopter accident rates in the UK and Norway, 1992–2012<sup>44</sup>**

	Number of fatal accidents	Hours	Fatal accident rate per 100,000 hrs
UK	6	1,754,512	0.34
Norway	1	926,926	0.11

Trade Unions have highlighted the fact that during the 1990s Norway suffered more accidents than the UK and that that trend reversed only recently. However, it is significant that the CAA review was unable to “identify any material differences in operations, maintenance practices or regulation that could account for this.”<sup>45</sup>

33. The RMT and Unite attributed Norway’s improved safety record to its regulatory regime. The RMT and Unite believed that the UK has minimum standards compared with ‘gold’ standards in Norway after 2000.<sup>46</sup> The RMT stated:

If the ‘gold standard’ in inspection, operating procedures, training and maintenance in operation at Bristow and in the Norwegian sector had been in place in the UK sector, we believe that four out of the five incidents since February 2009 potentially could have been avoided, including the fatal incidents on 1st April 2009 and 23rd August 2013 which claimed a total of 20 lives.<sup>47</sup>

34. It remains unclear what exactly constitutes ‘gold standards’ in offshore helicopter safety. Andrew Watterson, Professor of Health Effectiveness at the University of Stirling, identified the introduction of the Work Environment Act 2000 in Norway as an important step towards Norway’s current approach to health and safety.<sup>48</sup> He also referred to different cultural factors in the UK and Norway, arguing that the UK examined helicopter accidents in isolation, whereas in Norway helicopter accidents were viewed as the result of wider commercial and environmental factors. He stated that

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42 CAA, [Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas](#) (February 2014), Annex C, Para 8.3.3

43 *ibid*

44 *ibid*

45 CAA, [Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas](#) (February 2014), page 8

46 Unite ([HCS0008](#)) para 2.7

47 RMT ([HCS00015](#)) para 2.4

48 Professor Andrew Watterson ([HCS00024](#)) para 12

with helicopter pilots the Norwegians would not view problems such as ‘pilot error’ being disconnected from the harsh physical and sometimes economic environment and pressures the pilots need to operate within. Hence Norwegian solutions to certain ‘pilot errors’ would focus on the environment rather than on ‘individual’ failures.<sup>49</sup>

35. The small number of accidents makes it difficult to draw definitive conclusions from Norway’s approach to health and safety and whether such an approach would have prevented the recent accidents in the UK sector. Oil & Gas UK cited a 2010 study by the Norwegian research organisation, SINTEF.<sup>50</sup> The study found no reasons why the UK helicopter crashes between 2000 and 2009 would not have occurred in the Norwegian sector.<sup>51</sup> Helicopter operations in the UK and Norway are similar. EASA applies the same regulations to both the UK and Norway and multinational parent groups own operators in both countries. Mark Swan of the CAA pointed out that the CAA review found that “pilot training, servicing and everything else” in Norway were not significantly different from UK practice.<sup>52</sup>

### Mandatory occurrence reporting

36. One important difference between the UK and Norway are their respective reporting cultures. A reportable occurrence is defined as “any incident which endangers or which, if not corrected, would endanger an aircraft, its occupants or any other person.”<sup>53</sup> Starting in 1976, the UK has pioneered mandatory occurrence reporting (MOR). MOR is now a requirement under EC Directive 2003/42/EC. That directive was only introduced in Norway in mid-2007. In the UK the MOR scheme ensures information on safety is reported to the CAA, which uses it to develop safety policy.

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49 Ibid, para 13

50 SINTEF describes itself as the largest independent research organisation in Scandinavia

51 SINTEF, Helicopter Safety Study 3 (March 2010), para 7.3.6

52 Q130

53 CAA, Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas (February 2014), para 4.4

**Table 4: UK and Norwegian Occurrence reporting data between 2003 and 2012<sup>54</sup>**

Year	No. of Events Reported		Hours Flown	
	Norwegian CAA	UK CAA	Norway	UK
2003	5	223	44,233	73,139
2004	8	149	41,786	69,674
2005	3	148	43,559	76,919
2006	3	208	44,815	71,755
2007	123	229	44,940	73,236
2008	293	224	43,087	70,924
2009	352	319	47,231	67,000
2010	556	293	52,651	69,662
2011	427	253	53,862	77,610
2012	356	216	57,160	86,133

37. Table 4 shows how the number of reported occurrences in Norway rapidly increased after 2008 reaching a level far higher than that in the UK. However, the reason for that increase is not well understood. Mark Swan of the CAA suggested that reporting in the Norwegian fleet is higher than in the UK because the system is newer:

We believe that is because their reporting culture is much younger than ours. It was introduced only a couple of years ago, and it still has a very good cultural ring to it. We are looking at whether we have missed something there.<sup>55</sup>

The CAA review found that there have been more occurrence reports in the Norwegian sector than in the UK sector since 2008, despite the Norwegian fleet being smaller than the UK fleet. That might reflect a greater occurrence rate, or it might be a function of a more active reporting culture. The CAA believed that the second explanation was more likely.<sup>56</sup>

**38. The CAA identified a worrying difference between Norway and the UK in occurrence reporting, but it acknowledged that more work is required to explain it. The CAA must undertake a joint review with its Norwegian counterparts to uncover why more occurrences are reported in Norway, despite its smaller fleet, and publish its findings within 12 months.**

54 CAA, [Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas](#) (February 2014), Annex C, para 8.3.1

55 Q130

56 CAA, [Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas](#) (February 2014), Para 8.3.3.1

## 4 Regulation

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39. Aviation regulation within the UK is evolving from a national model under the CAA to a pan-European model under EASA. In the areas for which EASA is responsible, such as aircraft certification, continued airworthiness and aircrew regulation, the CAA serves as EASA's local office to implement regulations. In areas for which EASA is not responsible, the CAA serves as the primary regulator. From 28 October 2014, Commission Regulation (EU) 965/2012 will apply to the UK. That regulation will supersede national regulations on safety requirements during offshore helicopter operations. The CAA stated that that change will implement a standardised regulatory framework for all Member States removing any differences in application of the rules.<sup>57</sup>

### EASA

40. Transferring responsibility for aviation to a European level has advantages as helicopter operators become more multinational. The British Airline Pilots Association (BALPA) told us that there is an incentive for operators to base themselves in countries where the regulatory authorities cannot effectively police them. BALPA proposed harmonising Europe-wide rules to reduce that risk.<sup>58</sup> However, BALPA and others pointed out that one possible disadvantage to that approach is that it might lead to the “averaging down” of standards in the UK.<sup>59</sup> Trevor Woods, Approvals and Standardisation Director at EASA, disputed that argument and referred to the stringency of the operations rules that will be implemented in October 2014.<sup>60</sup> The Aviation Minister, Robert Goodwill MP, told us that he had discussed that matter with the CAA and that he was satisfied that UK safety standards have not been diluted because of EASA.<sup>61</sup>

41. We share the concerns expressed by the trade unions and by Oil & Gas UK that transferring power to a European level has undermined the CAA's ability to be a strong regulator for the UK sector. BALPA and Oil & Gas UK observed that the CAA has the local expertise effectively to regulate the North Sea sector. As more responsibility is transferred to the European level, the CAA may become a mere “regional policeman”<sup>62</sup> while EASA designs broad rules for different sizes of helicopter fleets and without a fixed focus on the North Sea's particular hazards.<sup>63</sup>

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57 CAA, *Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas* (February 2014), para 2.15

58 Q37

59 Q80

60 Q111

61 Q143

62 Q37

63 *ibid*

42. **We note that the offshore industry has little appetite for transferring more responsibility for helicopter operations to a European level. As EASA accumulates more power over helicopter operations, the Government must uphold and entrench the CAA’s ability to act quickly and unilaterally.**

43. EASA has been criticised for being insufficiently responsive to safety recommendations from the AAIB. Step Change in Safety described EASA as “distant”.<sup>64</sup> Keith Conradi of the AAIB agreed that EASA had been slow to respond to recommendations but pointed out that Patrick Ky, EASA’s new Executive Director, had stated that there will be “more action, more swiftly”<sup>65</sup>. That assurance is, as yet, unproven. EASA told us that it would respond to the CAA’s actions and recommendations on offshore helicopter safety in “exactly the same way as any recommendation addressed to the Agency by an official accident investigation board” and that it would do so by early April.<sup>66</sup> It is disappointing that that official response has not yet been placed in the public domain.<sup>67</sup>

44. **Regulatory inertia results in unnecessary risk for the offshore work force. At the moment, it is difficult to discern whether EASA is prioritising CAA recommendations. We note the Agency’s assurance that it will swiftly implement recommendations from national aviation authorities and investigation boards. In future, EASA must respond quickly and transparently to the CAA and the AAIB. *The DfT must push EASA to improve its response and implementation times. We recommend that the DfT issues a formal response to the CAA review that addresses all 14 points relating to EASA. In addition, the DfT must ascertain what practical steps EASA is taking to speed up the implementation of recommendations derived from national aviation authorities and investigation boards.***

## Additional industry requirements

45. As well as CAA and EASA regulations, operators are subject to additional rules defined by their customers. Operators told us that considered in isolation those extra customer requirements do not erode safety.<sup>68</sup> However, the cumulative effect is an increase in complexity and therefore in risk for pilots. We heard that an operator with 10 clients might operate flights to 10 different standards.<sup>69</sup> The CAA found that “Pilot experience levels, different passenger loads and different weather minima for airborne radar approaches are examples of where there are differences between customer requirements”.<sup>70</sup>

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64 Step Change in Safety (HCS0009) para 5.4

65 Q119

66 EASA (HCS0029) page 2

67 As at 30 June 2014

68 Bond, Bristow, CHC (HCS0001) para 3.4

69 Bond, Bristow, CHC (HCS0001) para 3.3

70 CAA, Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas (February 2014), para 13.3

46. We are disappointed that the CAA did not want to take the lead on standardising customer requirements. Instead, the CAA recommended that operators “identify a set of ‘best practice’ standard procedures and engage with their customers to agree how these may be incorporated into contractual requirements”.<sup>71</sup> The CAA told us that while standardisation would be examined by the Offshore Helicopter Safety Action Group, operators should “lead on this because, at the end of the day, they are responsible for letting the contracts.”<sup>72</sup> However Mike Imlach, Director, Bristow Helicopters, said that customer requirements are significantly more standardised in Norway, in part due to the grip displayed by the Norwegian CAA.<sup>73</sup>

47. It is unclear how much influence operators have in standardising the numerous rules demanded of them by their customers. BALPA believed that the financial clout of the oil and gas companies gave them the whip hand over operators in contract negotiations.<sup>74</sup> Oil and gas companies have begun work on standardisation but the limited progress to date suggests that operators are not best placed to achieve reform.<sup>75</sup> Operators told us that the CAA should be responsible for that task.<sup>76</sup>

***48. The CAA must use its chairmanship of the Offshore Helicopter Safety Action Group to lead the standardisation of customer requirements for helicopter operators. This is as an opportunity for the CAA to demonstrate its ability and willingness to stand up and lead industry in reducing risk during helicopter operations.***

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71 CAA, [Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas](#) (February 2014), R10

72 Q121

73 Q42

74 BALPA ([HCS0012](#)) para 5.2

75 Oil & Gas UK ([HCS0028](#)) page 1

76 Bond, Bristow, CHC ([HCS0001](#)) para 3.4

## 5 Commercial pressure

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49. The extent to which oil and gas companies influence safety standards is fiercely contested. BALPA stated that oil and gas companies enforce cost-cutting in the helicopter operator market by structuring contracts to include a 90-day notice period for termination of contract. However, the contracted operator is normally tied to the contract for a period of years. That allows oil and gas companies to threaten operators with market-testing exercises and to pull out of the contract at short notice, if their market testing finds another operator to undercut the price. Secondly, BALPA contended that oil and gas companies artificially distort competition in the operator market by providing financial backing to new entrants, which forces existing operators to cut costs to compete.<sup>77</sup>

50. Oil & Gas UK flatly rejected BALPA's observations.<sup>78</sup> Helicopter operators argued that commercial pressure from their customers does not affect safety standards. Mike Imlach, Director, Bristow Helicopters stated that "I can honestly say we have never been under commercial pressure where we have felt it is unsafe to continue a flight."<sup>79</sup> Luke Farajallah, Managing Director, Bond Offshore Helicopters, told us that his company was adept at keeping commercial pressure away from pilots and were able to "ensure that our contractual relationships do not lend themselves to any commercial pressure".<sup>80</sup> The CAA review directly contradicted the arguments advanced by Oil & Gas UK and by the helicopter operators:

All the helicopter operators reported that customer influence in operational matters was too extensive. The perception that contracts are offered at too short a timescale and awarded on lowest cost is also prevalent. The CAA considers that this may reduce a helicopter operator's capacity to recruit and train for a new commitment, and may challenge standards in the drive for a successful bid.<sup>81</sup>

### Public inquiry

51. Trade unions have campaigned for a full public inquiry into offshore helicopter safety, which they believe is the only measure that would restore the work force's confidence in helicopter safety.<sup>82</sup> The RMT suggested that a public inquiry should examine:

- Comparisons of the UK safety record and standards of helicopter companies with their counterparts in the Norwegian sector of the North Sea;

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77 BALPA ([HCS0012](#)) para 5.1

78 Qq72-76

79 Q21

80 Q12

81 CAA, [Safety review of offshore public transport helicopter operations in support of the exploitation of oil and gas](#) (February 2014), para 13.3

82 RMT ([HCS0015](#)) page 1

- Trade union access to berths on helicopters;
- The extent and effectiveness of training requirements for helicopter pilots; and
- All operational aspects of helicopter transport, from maintenance regimes through to survivability.<sup>83</sup>

With the exception of the second point, the CAA review examined those issues in detail. Mark Swan of the CAA was ambivalent about a public inquiry. He stated that the CAA review was comprehensive and had not missed anything significant, although a public inquiry was for the Government to decide.<sup>84</sup> While we agree that the CAA review was strong, we do not accept that all the significant questions have been answered. The Aviation Minister rejected a need for a public inquiry and stated that it would delay action and have little value.<sup>85</sup> Robert Paterson of Oil & Gas UK told us that following the publication of the CAA review and of the AAIB investigation into the Sumburgh crash, there would be an “opportunity to look carefully at what we may need to focus a public inquiry on.”<sup>86</sup> We reject that argument, because a public inquiry should consider the outstanding strategic issues and not replicate the AAIB investigation into the Sumburgh crash.

52. BALPA has called for a tightly focused public inquiry to consider the issues outwith the CAA review. Its proposed inquiry would examine

- the control of the offshore helicopter industry by the oil companies who charter services from the helicopter companies; and
- the effectiveness of the UK Civil Aviation Authority (CAA)’s regulation of the offshore helicopter industry against a background of six serious accidents in the UK offshore helicopter sector in the last seven years.<sup>87</sup>

53. Mark Swan acknowledged the criticism that the CAA failed to examine its own role:

There have been calls of, “Well, hang on, CAA. You haven’t looked at yourself and how good you are at your job.” Clearly, that is for others to remark on, not me.<sup>88</sup>

The CAA’s role is key to offshore safety. Any review which failed to examine it cannot be considered complete. It would obviously be inappropriate for the CAA to lead on such work. The DfT and regulators have failed to ask searching questions about the wider commercial culture in the North Sea operating environment, particularly concerning the

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83 RMT ([HCS0015](#)) para 1.1

84 Q134

85 Q156

86 Q87

87 BALPA ([HCS0012](#)) para 1.3

88 Q134

pressures on operators and their contractual obligations to customers. Only a full independent public inquiry will have the resources and powers adequately to examine those issues.

**54. The CAA review did not consider the evidence that commercial pressure impacts on helicopter safety in sufficient depth. *The Government must convene a full, independent public inquiry to investigate commercial pressures on helicopter safety in the North Sea operating environment. That inquiry must also examine the role and effectiveness of the CAA. In addition, the DfT must commission ongoing independent research similar to the SINTEF reports in Norway to examine improvements and threats to offshore helicopter safety. Once published, this research should be laid before Parliament for consideration.***

## 6 Conclusion

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55. Helicopter transfer across the North Sea has inherent risks but remains the most practical mode of transport for the offshore oil and gas industry. Five accidents since 2009 have led to a loss of confidence from the offshore work force in helicopter transport that will be difficult to remedy. Industry safety groups and operators have worked to rebuild confidence but more needs to be done. We were disheartened to learn of instances that reflect a “macho bullying culture”<sup>89</sup> in the industry and wish to be reassured that the flawed EBS safety briefing is not indicative of complacency toward safety.

56. We welcome the CAA review into offshore helicopter safety. This document set out detailed recommendations for improving the survivability of helicopter crashes. We highlighted areas of the review that we think require additional work, particularly concerning occurrence reporting, the standardisation of customer requirements and the implementation of seating restrictions. The CAA now needs the co-operation of the oil and gas industry, helicopter operators and EASA to ensure its recommendations are carried through to conclusion. We have called on the DfT to use its influence to ensure EASA has prioritised that important work.

57. The CAA review did not look in sufficient detail at two key areas of offshore helicopter operations. The first was the offshore industry’s highly competitive environment. Commercial sensitivities ensure that it is difficult for external reviews to examine the contractual obligations set by industry. The second was the role and effectiveness of the CAA itself. Those who work in the hazardous conditions of the North Sea deserve to know those issues have been properly evaluated. We believe only a full, independent public inquiry would have the resources, remit and power to do this.

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89 RMT ([HCS0015](#)) para 4.5

# Conclusions and recommendations

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## Sumburgh crash

1. Pre-flight briefing material must accurately describe how to use safety equipment. It is deeply disturbing that it took a fatal accident before the flawed EBS briefing was identified. The CAA must ensure that helicopter operators regularly review all safety briefing material to ensure that it is up to date. In addition, the CAA must consult the offshore work force to ensure that safety briefing material is easily understood and fit for purpose. (Paragraph 16)
2. AAIB findings have a significant impact on survivors and their families, who deserve to be briefed on upcoming announcements. The AAIB must keep crash survivors informed on the progress of investigations. The CAA could learn a great deal by meeting survivors and considering their experiences. For example, survivors' suggestions on enhancing the visibility of equipment are compelling and are drawn from personal experience. More widely, the oil and gas industry must examine the experiences of crash survivors. In particular, more must be done to address the financial and psychological anxiety of survivors who cannot work. (Paragraph 19)
3. We find it unacceptable that offshore workers were told by an operations manager that they should leave the industry if they were concerned about helicopter safety. In an inherently hazardous industry, operations managers must prioritise safety, which means facilitating a culture of approachability and openness at all levels. (Paragraph 24)

## Super Pumas

4. Super Puma variants make up some 60% of the offshore helicopter fleet, which means that it is unsurprising that they are involved in more accidents than other models. We heard no conclusive evidence that Super Puma variants are less safe than other helicopters used in the UK offshore sector. We welcome the work by operators, manufacturers and industry safety groups to engage with the offshore work force to address their concerns about Super Pumas. (Paragraph 27)

## CAA Review

5. We welcome the CAA review of offshore helicopter safety and congratulate it on quickly establishing the Offshore Helicopter Safety Action Group to implement its recommendations. At the same time, the CAA must be mindful of the effect of its actions and recommendations on the offshore work force and should consult with industry to ensure its demands are realistic and implemented in a way which continues to allow for "maximising economic recovery" as per the Wood Review. We were extremely concerned to hear about how crash survivors wearing safety equipment struggled to evacuate through egress windows after helicopters capsized in the sea. The CAA must set out how it will address that key issue as a matter of urgency. (Paragraph 31)

6. The CAA identified a worrying difference between Norway and the UK in occurrence reporting, but it acknowledged that more work is required to explain it. The CAA must undertake a joint review with its Norwegian counterparts to uncover why more occurrences are reported in Norway, despite its smaller fleet, and publish its findings within 12 months. (Paragraph 38)

### EASA

7. We note that the offshore industry has little appetite for transferring more responsibility for helicopter operations to a European level. As EASA accumulates more power over helicopter operations, the Government must uphold and entrench the CAA's ability to act quickly and unilaterally. (Paragraph 42)
8. Regulatory inertia results in unnecessary risk for the offshore work force. At the moment, it is difficult to discern whether EASA is prioritising CAA recommendations. We note the Agency's assurance that it will swiftly implement recommendations from national aviation authorities and investigation boards. In future, EASA must respond quickly and transparently to the CAA and the AAIB. The DfT must push EASA to improve its response and implementation times. We recommend that the DfT issues a formal response to the CAA review that addresses all 14 points relating to EASA. In addition, the DfT must ascertain what practical steps EASA is taking to speed up the implementation of recommendations derived from national aviation authorities and investigation boards. (Paragraph 44)

### Standardisation of customer requirements

9. The CAA must use its chairmanship of the Offshore Helicopter Safety Action Group to lead the standardisation of customer requirements for helicopter operators. This is as an opportunity for the CAA to demonstrate its ability and willingness to stand up and lead industry in reducing risk during helicopter operations.

### Public inquiry

10. The CAA review did not consider the evidence that commercial pressure impacts on helicopter safety in sufficient depth. The Government must convene a full, independent public inquiry to investigate commercial pressures on helicopter safety in the North Sea operating environment. That inquiry must also examine the role and effectiveness of the CAA. In addition, the DfT must commission ongoing independent research similar to the SINTEF reports in Norway to examine improvements and threats to offshore helicopter safety. Once published, this research should be laid before Parliament for consideration. (Paragraph 54)

# 1 Appendix A: Summary of meeting with Sumburgh crash survivors

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1. On 10 April, 6 survivors of the August 2013, Sumburgh helicopter crash met with Members of the Transport Committee to discuss their experiences. The survivors described the accident itself and their involvement with the subsequent AAIB investigation.

## Poor maintenance of safety equipment

2. Attendees began by describing the design flaws of the Super Puma helicopter and the poor condition of safety equipment on board. It was said that the Super Puma helicopter cannot carry both its full capacity of passengers and a full fuel load at the same time. This means Super Pumas are required to refuel more during operations. As helicopter crashes are more likely to occur during take-off and landing, additional refuelling inevitably leads to more risk.

3. There was strong agreement that the safety equipment on board was poorly maintained and not up to standard. This quickly became apparent when the helicopter impacted with the sea. Survival suits were poor quality and in some cases became a danger to life when they filled with water. Life jackets did not inflate correctly and straws designed for manual inflation were missing. The survivors stated that only two of the six flotation devices on the helicopter inflated.

4. One survivor, who at the time of the crash was seated next to a window, described his attempt to escape the aircraft. The tab designed to remove the window disintegrated in his hands. To remove the window he had to punch the window until it popped out. Only then were he and several others able to evacuate.

5. There was scepticism that safety equipment was regularly checked for weaknesses. The attendees did not know who should be held accountable for maintaining safety equipment or who they could report concerns to, although there was agreement that speaking out could undermine future work prospects. One cause of this is the relatively small size of the sector which adds pressure on workers not to speak out. The widely reported account of a Total boss and CHC pilot dismissing workers concerns about Super Pumas by telling passengers to “put on their big-boy pants” or leave the industry<sup>90</sup> was highlighted as evidence of a poor reporting culture. Some of the attendees had been present during this incident.

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90 Daily Mail, [If you can't live with the risk don't work offshore': Oil workers were told to put on their 'big-boy pants' at safety meeting just weeks before Shetland helicopter crash](#), accessed 2 July 2014

## Emergency Breathing Systems

On 23 January the AAIB published a Special Bulletin on the Emergency Breathing System (EBS) supplied to the victims of the Sumburgh crash. The Bulletin revealed that the pre-flight safety briefing was not fully representative of the functionality of the EBS supplied. The briefing video suggested that individuals were required to breathe into the rebreather bag before the system could be used once submerged. However, the actual EBS supplied did not require this. Instead the EBS came with its own air supply which could be automatically discharged. The AAIB found that the mismatch between the safety video and EBS “may [...] influence a passenger’s decision on whether or not to use the EBS in an emergency situation.”<sup>91</sup>

6. The attendees expressed anger at this discovery, with several describing its aftermath as a period of heavy psychological stress. Many of the survivors said that they had ignored the EBSs as there was not time to breathe into them before being submerged. If they had known this was not necessary the survivors felt confident the EBSs would have been used.

7. The attendees were pleased the Committee had opened its evidence session in Aberdeen with a line of questioning on this subject but were disappointed by the answers given by helicopter operators.<sup>92</sup> It was felt that a fundamental safety flaw had been brushed aside without serious consideration. It was also felt that the operators’ temporary measure to correct the error was inadequate. After the AAIB’s Special Bulletin was published, operators supplemented the flawed briefing video with a short paper outlining how the supplied EBS actually worked.

## AAIB investigation and post-crash support

8. Following the crash, the AAIB had been in touch with each of the survivors and had taken statements. However, there was a perception that aside from this, survivors had been “left in the dark” as far as the rest of the investigation was concerned. They expressed distress at having to read latest AAIB findings in the media rather than being contacted directly and forewarned. Survivors said they had been told that they would be kept abreast of developments yet this had not happened and their telephone messages had not been returned.

9. There was also a concern that the AAIB’s inquiry is not addressing several important issues. Survivors believe the investigation is too focussed on technical or mechanical causes and is ignoring a wider complacency amongst operators towards safety standards. Attendees also stated that soon after the crash there had been personnel changes amongst CHC’s engineers. They suggested this may have lead the AAIB to take statements from engineers who were not responsible for the crash helicopter before the accident. To rectify

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91 AAIB, [S1/2014](#) (January 2014), page 3

92 Qq 2-9

omissions in current investigations, the attendees said a full public inquiry was the only way to restore confidence amongst the offshore work force.

10. Most of the attendees spoke of ongoing psychological trauma and episodes of depression, although they do have access to professional psychological help. Financial support is more patchy with some survivors still receiving a wage while not able to work and others not. This depends on employment status and contractual arrangements. Contractors have little or no financial support.

### **Measures to improve offshore helicopter safety**

11. The attendees had a number of practical suggestions for improving safety following a crash at sea in conditions with poor visibility. It was suggested that LED lights surrounding egress windows would make it easier to escape quickly. They recommended red LEDs could indicate a closed window which could then change to green once the window had been removed. They stated older variants of the Super Puma helicopter had a similar feature but this had been removed in subsequent models. They also said that their survival suits were too dark making it difficult to identify each other. The addition of luminous tape around rescue ropes and other equipment would have helped significantly.

12. When asked about the adequacy of their training for North Sea conditions, the survivors viewed it as insufficient, especially when compared to Norwegian standards. They explained that training in a heated swimming pool, in an aircraft model with large windows for escape, bears no relation to actual conditions. They stated this has not always been the case; in the past training was conducted in sea temperatures at -6 degrees. In Norway, training is significantly more demanding and is conducted at sea.

# Formal Minutes

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**Monday 30 June 2014**

Members present:

Mrs Louise Ellman, in the Chair

Sarah Champion  
Jim Dobbin  
Jim Fitzpatrick  
Karen Lumley  
Jason M<sup>c</sup>Cartney

Karl M<sup>c</sup>Cartney  
Mrs Adrian Sanders  
Chloe Smith  
Graham Stringer  
Martin Vickers

Draft Report (*Offshore helicopter safety*), proposed by the Chair, brought up and read.

*Ordered*, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 57 read and agreed to.

Summary agreed to.

A Paper was appended to the Report as Appendix A.

*Resolved*, That the Report be the Second Report of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

*Ordered*, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

Written evidence was ordered to be reported to the House for publishing with the Report (in addition to that ordered to be reported for publishing on [dates]).

[Adjourned till Monday 7 July January at 4.00 pm]

## Witnesses

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The following witnesses gave evidence. Transcripts can be viewed on the Committee's inquiry page at [www.parliament.uk/transcom](http://www.parliament.uk/transcom).

### Monday 27 January 2014

*Question number*

**Luke Farajallah**, Managing Director, Bond Offshore Helicopters, **Duncan Trapp**, Vice President, Safety and Quality, CHC Helicopter, **Mike Imlach**, Director, Bristow Helicopters, **Steve Todd**, National Secretary, RMT, **Captain Colin Milne**, Chairman, British Airline Pilots' Association Helicopter Affairs Committee, and **John Taylor**, Officer, Unite the Nation Q1-49

**Robert Paterson**, Health, Safety and Employment Issues Director, Oil and Gas UK, **David Eherts**, Vice President Environmental, Health and Safety and Chief Safety Officer, Sikorsky Aircraft Corporation, **Alex Sharp**, Sales Director, Europe, Sikorsky Aircraft Corporation, and **Gilles Bruniaux**, Vice President, Fleet Safety, Airbus Helicopters Q50-89

### Monday 17 March 2014

**Keith Conradi**, Chief of Inspectors, Air Accidents Investigation Branch, **Mark Swan**, Director Safety, Airspace and Regulation Group, Civil Aviation Authority, **Chester Armstrong**, Helicopter Specialist, Civil Aviation Authority, and **Trevor Woods**, Approvals and Standardisation Director, European Aviation Safety Agency Q90-138

**Robert Goodwill MP**, Parliamentary Under-Secretary of State, Department for Transport, and **Tricia Hayes**, Director of Aviation, Department for Transport Q139-162

## Published written evidence

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The following written evidence was received and can be viewed on the Committee's inquiry web page at [www.parliament.uk/transcom](http://www.parliament.uk/transcom). HCS numbers are generated by the evidence processing system and so may not be complete.

- 1 Avincis Group, Bristow Helicopters and CHC Helicopter ([HCS0001](#))
- 2 Colin Weaver ([HCS0002](#))
- 3 Colin M Weaver ([HCS0003](#))
- 4 Colin M Weaver ([HCS0004](#))
- 5 Department For Transport ([HCS0005](#))
- 6 Air Safety Group & PACTS ([HCS0006](#))
- 7 Oil & Gas UK ([HCS0007](#))
- 8 Unite The Union ([HCS0008](#))
- 9 Step Change In Safety ([HCS0009](#))
- 10 Eurocopter ([HCS0011](#))
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All publications from the Committee are available on the Committee's website at [www.parliament.uk/transcom](http://www.parliament.uk/transcom)

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

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