

Helicopter Safety Research Management Committee

Subject Minutes of 76th HSRMC
Date Wednesday 1st May 2019
Location Aviation House, Gatwick
Organised by Ayshea Skinner/David Howson, UK CAA

List of Participants

Attendees	<p>Captain Rick Newson, UK CAA (Chairman) Mr David Howson, UK CAA Miss Ayshea Skinner (Secretary), UK CAA Mr Kevin Payne, UK CAA Mr Tony Eagles, UK CAA Mrs Ola Majcherczyk, UK CAA Mr Stephen Long, UK CAA International Miss Judith Rees, UK CAA International Lt Col Hayden Price, MAA Captain Simon Harlow, Babcock International Group Mr Tim Fauchon, British Helicopter Association Mr Jim Lyons, Royal Aeronautical Society Mr Michael Cerneck, Sikorsky</p>
Apologies	<p>Mr David Malins, UK CAA Mr John McColl, UK CAA Mr Brian Pattinson, UK CAA Mr Sean Parker, UK CAA Captain Andy Spencer, UK CAA Mr Gilles Bruniaux, Airbus Helicopters Mr Simon Brailsford, BP Captain Steve O'Collard, British Helicopter Association Captain Austin Craig, British International Helicopters Captain Jon Hopkinson, CHC and Heli offshore Mr Daniel Chicoyne, C-NLOPB Mr Neil Taylor, Defence Science and Technology Laboratory Mr Dimitri Garbi, EASA Mr Lionel Taszig, EASA</p>

	Mr Alex Knight, Helideck Certification Agency Mrs Gretchen Haskins, HeliOffshore Miss Esaula Armstrong, HSE Mr Robbie Decoster, mobilit Mr Ornulf Lien, Norwegian CAA Mr Anders Rosok, Norwegian CAA Mrs Alicia Green, RenewablesUK Mr Grant Campbell, Shell
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AGENDA

- 1. Introduction**
- 2. Review of Minutes of 75th Meeting (9th May 2018)**
 - 2.1 Accuracy
 - 2.2 Actions/matters arising
- 3. Review of Current Research Projects**
 - 3.1 UK CAA managed operational projects
 - 3.2 UK CAA managed helideck projects
 - 3.3 EASA managed projects
 - 3.4 C-NLOPB initiatives
- 4. Research Programme Funding**
 - 4.1 Funding status of current programme
- 5. Other matters**
 - 5.1 Offshore Review update report [JM]
 - 5.2 Update on offshore Renewables operations
 - 5.3 Onshore Review
- 6. AOB**
 - 6.1 Meeting frequency
- 7. Date of next meeting**
 - 7.1 Tuesday 22nd October 2019
- 8. Close**

Minutes of meeting

1. Welcome & Introduction

Captain Newson welcomed all participants to the 76th meeting of the HSRMC and, in particular: Lt. Col. Hayden Price, MAA who was attending for the first time; Ayshea Skinner from CAA, Future Safety taking over secretarial duties from Kevin Payne; and Ola Majcherczyk, CAA Finance, who is observing for familiarisation. It was noted that Alan Wilson of Leonardo Helicopters has retired; we await nomination of a replacement.

Each participant introduced themselves and provided a brief overview of their background.

2. Minutes of 9 May 2018 Meeting

2.1 Accuracy:

The minutes (final version) from the 75th meeting of 9th May 2018 were approved without any further comments or corrections.

2.2 Actions/matters arising:

- **Action 356:** Mr Howson to convene a workshop with the support of HeliOffshore on side floating helicopters during 2Q 2018.

Mr Howson advised that this action was not recorded as an open action but probably should have been. The side-floating helicopter scheme was raised at the September 2018 OHSLG meeting by Mr Swan, Group Director SARG, and the overall conclusion was that, although there was insufficient appetite to progress the initiative at this time, we should at least keep it alive. Mr Swan also took an action to raise the issue of the research promised by EASA with Patrick Ky; Mr Howson advised that he had not received any feedback. There may be some news on the research front in the near future, but Mr Howson has been asked to keep this confidential for the time being.

Action 356 status – Closed

It was noted that the One Atmosphere emergency floatation system programme for the Australian Tiger attack helicopter fleet had been cancelled. This was due to the limited service life of the aircraft and not due to any issues with the floatation system, however, the civilian side floating scheme, proposed for the S-92 initially, would consequently also be cancelled.

New Action 359: Mr Howson to provide details regarding One Atmosphere discontinuing their development activities for the Tiger's emergency floatation system.

Post meeting note: Secretary provided, on 7 May 2019, a link to the press release regarding the One Atmosphere emergency floatation system on the Australian Tiger

attack helicopter fleet from 2016, and an update (PDF) article from 2019. **Action 359 status - Closed**

- **Action 357:** Mr Howson to provide an analysis of the lightning strike rate.

Mr Howson advised that he had produced a chart, which was presented to the September 2018 OHSLG, and it is included they presentation at agenda item 3. **Action 357 status - Closed**

- **Action 358:** Captain Newson to organise a visit of CAA inspectors to view the [Thales helmet-mounted display] system at Thales site in Crawley.

Mr Howson has tried several times to arrange this but with no response from Thales (David Thorndycraft). Mr Harlow advised that this enquiry should be directed to Kieran Smith and agreed to provide the relevant contact details. **Action 358 status - Open**

New Action 360: Captain Harlow to provide Mr Howson with contact details of Kieran Smith, Thales.

3. Review of Current Research Projects

3.1 UK CAA Managed Projects (Mr Howson, UK CAA)

Mr Howson delivered a PowerPoint presentation dated 1 May 2019, during which the following points were noted/emphasised:

Survivability

- Wave tank testing - Mr Howson noted that the maximum allowed capsize rate represents a trade-off between capsize rate and consequences of capsize. The risk assessment shows a maximum allowable capsize rate of 3%, which links to an assumed CS.1309 consequence of hazardous which is considered appropriate where capsize is mitigated by EBS. Mr Lyons asked if this was being harmonised with the FAA; Mr Howson confirmed that the FAA are participating in the working group.
- Life rafts - Mr Howson advised the group of a paper by Chris Brookes regarding Life Rafts, which he agreed to circulate.

New Action 361: Mr Howson to circulate the paper on Lift Rafts by Chris Brookes.

Operational Issues

- Trigger lightning strike forecasting - Mr Howson advised that a meeting was held on 14 May with the Met Office and helicopter operators regarding addressing display volatility. Mr Lyons asked if the scattered showers cluster. Mr Howson advised that conditions of scattered showers are usually associated with polar flows which

generate large areas within which localised showers can occur. The Met Office currently provide operators with a 3-day warning of polar flows. Captain Harlow noted that polar flows represent unusual conditions; for the majority of the time rainfall is associated with weather fronts which are much more predictable and can be picked up on the aircraft's weather radar.

3.2 UK CAA managed helideck projects

Mr Payne delivered a PowerPoint presentation dated 1 May 2019, during which the following points were noted/emphasised:

- NUI Fire-Fighting Scheme – Mr Payne advised that the recording and monitoring of attended and unattended landing numbers had been taking place from the beginning of 2017. Captain Newson added that HCA are updating the spreadsheet daily. Mr Lyons questioned the difference in risk profile, between manned and unmanned, and how does having someone there lower the risk. Mr Howson advised that, in the absence of a fully automated fire-fighting system, there was effectively no fire cover unless the installation was manned..
- Onshore elevated heliports – Mr Payne advised that further trials of the revised lighting system were taking place on 13 June; three configurations are to be trialled: circle with a red 'H'; circle with a green cross; circle with a red 'H' and a green cross. It is hoped that the circle with a green cross will perform adequately, so the red 'H' will prove to be unnecessary as the raised lighting has been found to present issues to skid undercarriage helicopters often used for operations to hospital helipads.

3.3 EASA Managed Projects

Mr Howson advised that nobody from EASA was able to attend, however, Mr Tauszig had provided a presentation regarding EASA projects and Mr Gomez on main rotor gearboxes. Mr Howson provided a verbal brief and the presentations have been circulated to members.

3.3 C-NLOPB initiatives

Mr Chicoyne was unable to attend the meeting; Mr Howson had received the following input from Dan which was read out:

"We continue to put people through the HUET training as we have done for almost nine years now. To date, I have not heard of any issues using compressed air in the HUET. I have done HUET training with compressed air (EBS / HUBA) since 1989 and have never heard of an issue except for one event approx. 20 years ago which, apparently, was the result of a pre-existing medical condition.

One of the new topics of discussion I have initiated in Canada is Long-Range Offshore Transportation. We have formed a working group consisting of Regulators/HSPs/Operators/etc to discuss the challenges of moving farther offshore including the physical and performance limitations of the helicopter, the physiological limitations of the human (both pax and crew) and other challenges associated with this type of travel when there are no gas stations en route and no WC facilities onboard.

We continue to be interested in side-flotation and the various other areas of interest being pursued by HSRMC and I continue to be a member of the HeliOffshore Helideck Work Stream. Next meeting is next week in Athens.”

4. Research Programme Funding

Mr Howson provided a brief update on the funding status of the current CAA research programme. In general, there was sufficient funding to resource current projects.

Regarding in-service trials of GPS-guided offshore approaches, significant funding (circa £500k) would likely be required but Heli-Offshore do not believe that there is sufficient industry interest at the moment. EU Framework funding has been accessed for the project before but with other organisations leading the bids; there is significant overhead associated with running EU Framework projects.

5. Other matters

5.1 Offshore Review update report

In the absence of Mr McColl, Captain Newson provided a brief update and advised that the CAP 1145 update report is being worked on by Mrs Charlotte Reynolds, CAA and will be completed by August 2019. Captain Newson advised that the Scottish Government had been lobbied to conduct a Public Enquiry into offshore helicopter safety which had placed increased emphasis on the CAA's review.

It was noted the Mr John McColl will be retiring later this year.

5.2 Update on offshore Renewables operations

Mr Eagles advised that he had attended a workshop on UK Renewables, which was attended by helicopter operators, emergency response providers, and the wind farm industry. The impact of wind turbines on radars was discussed together with military/border control issues and enhanced management of airspace. Other topics were refuelling on unmanned installations, obstacle lighting standards, and night hoisting operations. Further workshops are planned. It was noted that Andy Wells is the CAA focal for wind turbines.

5.3 Onshore Review

Captain Newson advised that the onshore review will follow once the offshore review update report has been published. A project manager has been allocated to the onshore review, and a total of 377 accident reports have been reviewed. The scope of the review has been

limited to commercial and blue light operations which account for 81 of the accidents. Human factors is the most significant issue.

6. AOB

6.1 Meeting frequency

It was considered whether the Committee should meet less frequently, and suggested they take place annually instead of 6-monthly. Following a group discussion, it was agreed by all that the 6-monthly frequency should continue. It was suggested and noted that other subjects could feature in future presentations; items of interest were: urban air mobility, lithium batteries, electronic conspicuity for unmanned vehicles and renewables work. CAA agreed to review the Terms of Reference for the group and also considered the subjects suggested for future meetings.

Action 362: Miss Skinner, Captain Newson and Mr Howson to review the Terms of Reference before the 77th meeting and consider topics of interest for future meetings.

6.2 Future Subjects

The Members discussed future subjects of interest, these were:

- Urban air mobility
- Renewables
- Lithium batteries – USB charger/wifi enabled
- Electronic Conspicuity – unmanned vehicles

7. Date of Next meeting

Miss Skinner confirmed the 77th meeting of the HSRMC will take place on Tuesday 22nd October 2019 at CAA, Aviation House, Gatwick between 1230 and 1700 hrs. The following, 78th meeting of the HSRMC is set for the same time on **Wednesday XX Month 2019**.

8. Attachments circulated with an email dated 7 May 2019

1. CAA Operational Research Update [Dave Howson]
2. Helideck Update [Kevin Payne]
3. Integrity improvement of rotorcraft main gearboxes (MGBs)
4. EASA led projects [Mr Tauszig]
5. A link to the press release regarding the One Atmosphere side-floating helicopter system on the Australian Tiger attack helicopter fleet from 2016, and an update (PDF) article from 2019.

Table 1: List of actions:

Action 359: Mr Howson to provide details regarding One Atmosphere relinquishing their research activities for the Tiger's airframe floating device.

Post meeting note: Secretary provided, on 7 May 2019, a link to the press release regarding the One Atmosphere side-floating helicopter system on the Australian Tiger attack helicopter fleet from 2016, and an update (PDF) article from 2019.

Action 359 status – Closed

Action 360: Captain Harlow to provide Mr Howson with contact details of Mr Kieran Smith.

Action 361: Mr Howson to circulate the paper on Lift Rafts by Chris Brookes.

Action 362: Miss Skinner, Captain Newson and Mr Howson to review the Terms of Reference before the 77th meeting and consider items of interest for future meetings.