

# HELICOPTER SAFETY RESEARCH MANAGEMENT COMMITTEE

Minutes of the 66<sup>th</sup> Meeting held on 21 May 2013  
Aviation House, Gatwick

Present	Capt. C. Armstrong	UK CAA, Mgr Flt Ops H (2) (Chair)
	Mr. D. Howson	UK CAA, Flt Ops Research Manager
	Mr. K. Payne	UK CAA, Flt Ops H (Secretary)
	Mr. T. Eagles	UK CAA, Head Flt Ops Policy GA
	Mr. J. Steel	IAA
	Mr. J. Lyons	EHA
	Mr. O. Lien	N CAA
	Mr O.Monsen	N CAA
	Capt. P. McKeage	C-NLOPB
	Mr. R. Decoster	Belgian CAA
	Mr R Walker	BP Aviation
	Ms L Hodgson	CHC
	Mr A Wilson	AgustaWestland
	Mr G Robb	Dong Energy
	Mr T Andersen	Danish Transport Authority
Mr J Wilkinson	Met Office (Guest Speaker)	
Apologies:	Mr. A. Knight	HCA
	Mr. D. McLean	BP
	Mr. B. Finlay	DSTL
	Mr A Ward	Shell Aircraft
	Mr G Hamre	N CAA
	Ms M Kirkesæther	N CAA
	Mr. E. Hamremoen	OLF / Statoil
	Mr. P. Halldorsson	Iceland CAA
	Mr. P. Naylor	HSE, OSD
	Mr. P. Heeney	HSE, OSD
	Capt. D Trapp	CHC /BHA
	Mr. W. Kleine-Beek	EASA

## 1 Introduction

Capt. Armstrong welcomed everyone to the 66<sup>th</sup> meeting, in particular Mr. Alan Wilson of AgustaWestland, Mr. Ron Walker of BP Aviation, Lorraine Hodgson representing CHC and BHA and Mr Tom Andersen from the Danish CAA who were all attending for the first time. Capt. Armstrong expressed disappointment that, once again, there was no representation from the UK HSE and EASA.

## 2 Review of Minutes of 65<sup>th</sup> Meeting (20 November 2012)

### 2.1 Accuracy

There were no comments or corrections and the minutes of the previous meeting were agreed.

### 2.2 Matters Arising

- **ACTION 334** – The CAA to consider inviting helicopter manufacturers and/or an appropriate industry body to join the HSRMC. Mr. Howson (CAA)  
**Open**  
Mr. Howson noted that Alan Wilson from AgustaWestland had now joined the group. However, Mr. Howson acknowledged he still had to make contact with the other manufacturers: Eurocopter, Bell and Sikorsky. Mr. Howson undertook to make further enquiries and report back to the 67<sup>th</sup> meeting.
- **ACTION 335** – Mr. Cramp and Mr. Stevens to exert OGP pressure on OEMs to participate in GPS trials. Mr. Ward (Shell Aircraft)  
**Open**  
Prior to the 66<sup>th</sup> meeting Mr. Cramp had stood down as Shell Aircraft's member and was replaced by Mr. Alan Ward. As Mr Ward was unable to attend the 66<sup>th</sup> meeting, the action remains open; and now attributed to Mr. Ward.
- **ACTION 336** – Mr. Hamre to provide feedback on the use of TCAS on naval ships. Mr. Hamre (N CAA)  
**Open**  
As Mr. Hamre was unable to attend the 66<sup>th</sup> meeting, the action remains open.
- **ACTION 337** – Mr. Howson to invite Dan Wells of AgustaWestland to give a presentation at next HSRMC. Mr. Howson (CAA)  
**Open**  
Mr. Howson said that AgustaWestland had advised that it would be better to defer the presentation on the Rotorcraft Technology Validation Programme (RTVP) to the next meeting in autumn 2013 as they are just about to undertake some trials work, i.e. there will hopefully be a lot more to say.
- **ACTION 338** – Mr. Robb to establish the form and format of any DONG Energy wind turbine wake data that could be made available. Mr. Robb (DONG)  
**Open**  
Mr. Robb advised that DONG Energy had undergone a radical organisational change and the team that was in charge of LIDAR measuring and data collection had been dispersed. He undertook to keep trying to find the 'new' team.
- **ACTION 339** – The CAA to circulate Helicopter Hoist Operations Risk Analysis with Mr Robb's presentation slides. Mr. Payne (CAA)  
**Closed**  
Completed.
- **ACTION 340** – Mr. Hamre to deliver a presentation at the next meeting on the results of Norwegian onshore operations safety study. Mr. Hamre (N-CAA)  
**Open**  
As Mr. Hamre was unable to attend the 66<sup>th</sup> meeting, the action remains open and is deferred to the autumn meeting.

### 3 Review of Current Research Projects

#### 3.1 UK CAA Managed Projects (DH)

Mr. Howson reviewed the highlights of the latest **Research Update** (see Attachment 1) which he had circulated to members by e-mail prior to the meeting. The following additional points were noted (NB: paragraph numbers correspond to the numbering in Attachment 1):

(3) Operations to Moving Decks – Mr. Howson reported that in-service trials would commence late 2013 / early 2014 with a view to ‘road testing’ the new system. The scope of the trials system had been discussed and agreed with the HCA Helideck Steering Committee on 27 February 2013, and will include the following four elements:

- A new heave rate measure termed Significant Heave Rate (SHR).
- A system of repeater lights, a traffic light system located on the helideck, for the benefit of flight crew.
- Relative wind monitoring (to address a causal factor of the West Navion incident) and line squalls.
- A provisional MSI/WSI advisory only limit (amber light) is to be introduced.

Mr Howson confirmed that on satisfactory completion of the in-service trials CAP 437 will be updated (estimated early- to mid-2014).

(4) Helideck Lighting – Mr. Howson advised that the final specification for the stage 2 Heliport Identification “H” Marking and Touchdown/Positioning Marking Circle lighting had been published in the 7<sup>th</sup> Edition of CAP 437. As a consequence the CAA had written to the Accountable Managers at the four offshore helicopter operators to notify them of a five-year lead-in programme for the installation of new lighting systems throughout the UK sector. Mr Howson confirmed that there had been a few teething issues with the installation of systems and, as a result, Oil and Gas UK had formed a specialist working group looking particularly at the lighting installation issues. It had been reported that the CPC-1 production system was performing well, having withstood more than 2,000 landings to date. The first system, produced by Orga bv in The Netherlands, is now commercially available and has been attracting a lot of interest from new build projects around the world, as well as existing installations in the North Sea. A second system, manufactured by IMT (also a Dutch company), is expected to enter the market early in 2014. Both manufacturers have been participating in the industry’s specialist working group, but attending separate sections of the meetings. Mr Howson, as the CAA’s member of the working group, has emphasised to industry the primary importance of the five-year fitment programme for UK based assets, whether on fixed or floating installations or vessels.

- **NEW ACTION 341** – Mr. Payne to circulate photographs taken during the CPC-1 demonstration flight on 27 November 2012. Mr. Payne (CAA)

**Open**

Mr Lyons offered to forward a selection of the best photos to PPrune for inclusion in the July calendar. The offer was accepted and can be accessed via the attached link: <http://www.pprune.org/rotorheads/518127-rotorheads-calendar-july-2013-a.html>

- (5) HOMP (FDM) – Mr. Howson stated his opinion that the time had now arrived for a concerted effort to promote the more effective use of Flight Data Monitoring programmes among the large helicopter operators. Mike Pilgrim (of CHC Scotia) had been promoting FDM through the Global Helicopter FDM (GHFDM) forum which initially met in November 2012. Mr Howson confirmed that effective use of FDM was more difficult to achieve with the smaller operators noting, however, that the focus of HSRMC has always been on large (Part-29) helicopters.
- (7) Helideck Friction – Mr. Howson reported that, because the full scale testing completed by NLR for aluminium helidecks had produced minimum mu values well below the 0.65 threshold, NLR had been tasked to conduct follow-up testing for the effect on friction of Frictape helideck netting. Indications are that the presence of a Frictape net over a plain aluminium surface will raise peak mu values to about 0.65. Further net testing is planned to evaluate the effect of a smaller wheel (S76) and, by using lighter wheel loads, to measure the impact on friction of the lift generated by a helicopter’s main rotor at different wind speeds. Further testing to measure mu values for ‘standard’ non-slip surfaces at full scale for comparison with GripTester results is also planned.
- (12) EGPWS Warning Envelopes – Mr. Howson confirmed that a universal set of warning envelopes that provided really worthwhile benefits in terms of increased warning times and reduced ‘nuisance’ alert rates had been generated by the project. The next step is to work on the form and format of warnings and to test a complete system in simulator trials. Capt. Mark Prior of Bristow helicopters, a key member of the project team, had been sent the first draft of a specification for this next stage of the work.
- (13) Triggered Lightning Strike Forecasting – Mr. Howson drew attention to the statement agreed by all parties involved with the winter 2012/13 trials:

*“The Met Office helicopter triggered lightning product has been evaluated through in-service trials on the OHWeb weather information service during winter 2012/13 ‘lightning season’ by all three Aberdeen-based helicopter operators. Overall, the trials are considered to have been successful and it has been agreed that the system remain operational on OHWeb going forwards. Some improvements were made during the trial that, although showing good promise, have yet to be fully evaluated. In addition, following a review of the trials’ results some further enhancements have been identified for incorporation in the product. Although the product is considered to be relatively mature, it is therefore proposed that it remain under the review and direction of the project team for a further ‘season’ covering the winter 2013/14 period.”*

### 3.2 C-NLOPB Initiatives

Capt. McKeage delivered a presentation entitled ‘**C-NLOPB Progress Report: Offshore Helicopter Safety Inquiry (OHSI) Implementation Update**’ which was circulated post-meeting to members in pdf format (see Section 8).

### 3.3 EASA Managed Projects

Mr. Howson, on behalf of Mr. Kleine-Beek, introduced the update on the **EASA Helicopter Research Projects** presented in tabular form. The table was circulated to members post-meeting (see Section 8).

## **4 Research Programme Funding Update**

### **4.1 Funding status of current programme**

Prior to the meeting Mr. Howson had circulated the [project funding table](#) (see Attachment 2) and reviewed the changes which are shown in red italics. Mr. Howson noted that the funding situation was generally satisfactory, but additional funding is required for two projects: Helideck Friction and EGPWS Warning Envelopes.

Also, any possible future work on wind turbines would need to be funded. Mr. Howson noted that DONG Energy had already indicated a willingness to contribute in this area.

### **4.2 Status of Funding Contributions**

Mr. Howson advised that all the funding received for the lightning strike forecasting work with the Met Office had been received. Otherwise there was nothing of significance to report. He noted that HSE had already advised that they are unable to contribute any more funding.

### **4.3 Status of UK CAA/EASA MoU**

Mr Kleine-Beek had advised by e-mail in advance that no progress had been made on the UK CAA/EASA MoC. This was still pending completion of the EU-US MoC on research co-operation which was at the FAA for review and comment.

## **5 Presentations**

### **5.1 Safety of offshore helicopter operations**

Mr. Howson gave an update of a presentation he had delivered at the 65<sup>th</sup> HSRMC meeting covering the safety record of offshore helicopters in the UK sector between 1976 and 2012. The statistics confirmed 72 accidents over the period of which 12 were fatal (and accounted for a total of 115 fatalities). The breakdown by high level causal factor was technical (46%), operational (39%) and external (15%). The frequency of accidents equates to approximately two per year with one fatal accident approximately every three years.

The [presentation slides](#) were forwarded to members as a pdf document (see Section 8).

### **5.2 Helicopter triggered lightning strike forecasting**

The presentation, leading to a Q & A session, was delivered by guest speaker, Jonathan Wilkinson from the UK Met Office. The [presentation slides](#) were forwarded to members in pdf version (see Section 8).

## **6 AOB**

- 6.1 Capt. Armstrong recorded his appreciation for the contribution of Mr. Max Ruelokke who had completed his term of office with C-NLOPB earlier in 2013.

## **7 Date of Next Meeting**

The 67<sup>th</sup> meeting of the HSRMC will be held on Thursday 21 November 2013 commencing at 12:30 hrs, in the Exam Room, Learning Centre, Aviation House, Gatwick.

- 8 Attachments to E-Mails (5 June 2013<sup>1</sup>, 8 July 2013<sup>2</sup> and with the minutes<sup>3</sup>)
1. [MET Office presentation: Helicopter triggered lightning strike forecasting](#)<sup>1</sup>
  2. [Safety of Offshore Helicopter Operations Presentation](#)<sup>1</sup>
  3. [EASA Research Update](#)<sup>1</sup>
  4. [Helideck lighting photos](#)<sup>1</sup>
  5. [C-NLOPB Progress Report: Offshore Helicopter Safety Inquiry \(OHSI\) Implementation Update](#)<sup>2</sup>
  6. [UK CAA Research Update](#)<sup>3</sup> (Attachment 1)
  7. [UK CAA Research Programme Funding Update](#)<sup>3</sup> (Attachment 2)

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Kevin Payne  
Secretary, HSRMC  
Flight Operations Inspectorate (Helicopters)  
Tel. +44 (0) 1293 573696  
E-mail: [kevin.payne@caa.co.uk](mailto:kevin.payne@caa.co.uk)

# HELICOPTER SAFETY RESEARCH MANAGEMENT COMMITTEE

## Agreed Actions from the 66<sup>th</sup> Meeting

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|---|---|
| <b>ACTION 334</b> – The CAA to consider inviting helicopter manufacturers and/or an appropriate industry body to join the HSRMC.        | Mr Howson<br>(CAA)<br><b>OPEN</b>           |
| <b>ACTION 335</b> – Mr Cramp and Mr Stevens to exert OGP pressure on OEMs to participate in the GPS trials.                             | Mr. Ward<br>(Shell Aircraft)<br><b>OPEN</b> |
| <b>ACTION 336</b> – Mr Hamre to provide feedback on the use of TCAS on naval ships.   | Mr. Hamre<br>(CAA-N)<br><b>OPEN</b>         |
| <b>ACTION 337</b> – Mr Howson to invite Dan Wells of AgustaWestland to give a presentation at the next HSRMC.                           | Mr. Howson<br>(CAA)<br><b>OPEN</b>          |
| <b>ACTION 338</b> – Mr. Robb to establish the form and format of any DONG Energy wind turbine wake data that could be made available.   | Mr. Robb<br>(DONG)<br><b>OPEN</b>           |
| <b>ACTION 340</b> – Mr Hamre to deliver a presentation at the next meeting on the results of Norwegian onshore operations safety study. | Mr. Hamre<br>(N-CAA)<br><b>OPEN</b>         |
| <b>NEW ACTION 341</b> – Mr. Payne to circulate photographs taken during the CPC-1 demonstration flight on 27 November 2012.             | Mr. Payne<br>(CAA)<br><b>OPEN</b>           |