



House of Commons  
Transport Committee

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# Flight time limitations: follow up

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**Sixth Report of Session 2013–14**

*Report, together with formal minutes and  
written evidence*

*Ordered by the House of Commons  
to be printed date 9 September 2013*

**HC 641**

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## The Transport Committee

The Transport Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Department for Transport and its Associate Public Bodies.

### Current membership

Mrs Louise Ellman (*Labour/Co-operative, Liverpool Riverside*) (Chair)  
Sarah Champion (*Labour, Rotherham*)  
Jim Dobbin (*Labour/Co-operative, Heywood and Middleton*)  
Karen Lumley (*Conservative, Redditch*)  
Jason McCartney (*Conservative, Colne Valley*)  
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Mr Adrian Sanders (*Liberal Democrat, Torbay*)  
Iain Stewart (*Conservative, Milton Keynes South*)  
Graham Stringer (*Labour, Blackley and Broughton*)  
Martin Vickers (*Conservative, Cleethorpes*)

The following were also members of the committee during the Parliament.

Steve Baker (*Conservative, Wycombe*), Angie Bray (*Conservative, Ealing Central and Acton*), Lilian Greenwood (*Labour, Nottingham South*), Mr Tom Harris (*Labour, Glasgow South*), Julie Hilling (*Labour, Bolton West*), Kelvin Hopkins (*Labour, Luton North*), Kwasi Kwarteng (*Conservative, Spelthorne*), Mr John Leech (*Liberal Democrat, Manchester Withington*) Paul Maynard, (*Conservative, Blackpool North and Cleveleys*), Gavin Shuker (*Labour/Co-operative, Luton South*), Angela Smith (*Labour, Penistone and Stocksbridge*), Julian Sturdy (*Conservative, York Outer*)

### Powers

The Committee is one of the departmental select committees, the powers of which are set out in House of Commons Standing Orders, principally in SO No 152. These are available on the internet via [www.parliament.uk](http://www.parliament.uk).

### Publication

The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the internet at <http://www.parliament.uk/transcom>. A list of Reports of the Committee in the present Parliament is at the back of this volume.

The Reports of the Committee, the formal minutes relating to that report, oral evidence taken and some or all written evidence are available in a printed volume. Additional written evidence may be published on the internet only.

### Committee staff

The current staff of the Committee are Mark Egan (Clerk), Farrah Bhatti (Second Clerk), Richard Jeremy (Committee Specialist), Adrian Hitchins (Senior Committee Assistant), Stewart McIlvenna (Committee Assistant) and Hannah Pearce (Media Officer)

### Contacts

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## Summary

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In July 2013, Member States of the European Union voted strongly in support of a draft proposal on flight time limitations by the European Commission. This triggered a three-month scrutiny of the new draft regulation. As part of the process for UK parliamentary scrutiny of the EU proposals, the European Scrutiny Committee referred the draft regulation to us for an Opinion.

We looked at flight time limitations last year, following the publication of a draft proposal for EU regulations by the European Aviation Safety Agency (EASA). Following the publication of the Government's response to our report we also led a debate in Westminster Hall on this important subject. While we recognise that the Commission's draft regulation represents an improvement on the EASA proposal, we retain concerns over several areas, in particular the use of scientific evidence in developing the regulations and the arrangements for oversight and active management of the new regime. It is also disappointing that a consensus with crew and pilot representatives has not been reached on the draft regulations.

We recommend that the European Scrutiny Committee request that the European Commission address the matters we have raised in this report, including ensuring effective monitoring of the new flight time regulation. We also recommend that the European Scrutiny Committee requests the European Commission provide an assessment of the regulation two years after its implementation.



# 1 Introduction

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1. Flight time limitations regulate the number of hours that pilots and crew work in order to prevent fatigue. They also govern the allocation of rest periods to mitigate the risk of an airline schedule causing fatigue. In May 2012 we published a report on the European Aviation Safety Agency's (EASA) draft proposal for EU regulations on flight time limitations. That report highlighted the scale of the fatigue problem:

- Human error is associated with up to 80% of aviation accidents;
- Pilot fatigue in particular contributes to approximately 15–20% of fatal aviation incidents caused by human error; and
- 43% of UK pilots have reported falling asleep involuntarily while on the flight deck.<sup>1</sup>

We expressed concerns about a number of areas in EASA's draft proposals, including operator responsibilities, the limit for flight duty periods at night, and the effective use of scientific evidence in rule-making. We urged the Government to press for changes during negotiations in Europe. Following the publication of the Government's response to our report we also led a debate in Westminster Hall on this important subject.

2. In October 2012, after a period of consultation on the draft proposal, EASA issued an Opinion outlining its updated proposal to the European Commission. The Commission subsequently brought forward its own draft proposal, which was largely based on the EASA Opinion. In July 2013 Member States, including the UK, voted strongly in support of the Commission's draft proposal. This triggered a three-month scrutiny of the new draft regulation by the European Parliament and the Council. As part of the process for UK parliamentary scrutiny of EU proposals, the European Scrutiny Committee referred the draft regulation to us for an Opinion.<sup>2</sup>

3. We issued a call for evidence asking for views on the Commission's draft proposal. We received ten submissions of written evidence, for which we are grateful. We have chosen not to take oral evidence due to our extensive work on this subject last year and because we were keen to publish this report for consideration by the European Scrutiny Committee and Members across the House well ahead of the formal adoption of the regulation by the Commission – which is expected in November 2013.

4. We are grateful to the Rt Hon Simon Burns MP, Minister of State at the Department for Transport (DfT), for providing us with a copy of the draft regulation for scrutiny ahead of its publication by the Commission. We also thank Louise Congdon, our specialist adviser on aviation matters, for her continued assistance.

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1 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, para 1

2 European Scrutiny Committee, Sixth Report of Session 2012–13, HC 83-vi, Chapter 4

## 2 The draft regulation

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5. The draft regulation for flight time limitations is complex. It covers issues such as operator responsibilities, crew responsibilities, fatigue risk management, arrangements at the home base, flight duty period, crew acclimatisation, rest periods, split duty, standby, nutrition and training. During our earlier inquiry into this subject we highlighted the main areas of contention. Some of these have been addressed in the Commission's subsequent draft proposal but others have not. In this report we provide a brief overview of what has changed over the last year and how those changes have affected our position.

### Managing fatigue

#### *Operator responsibilities*

6. The draft regulation sets out the responsibilities of operators in relation to managing fatigue within their organisation. In our scrutiny of EASA's earlier proposals, we recommended that:

The Government should seek further information on the operator responsibilities proposed by EASA. Additional oversight by the CAA [Civil Aviation Authority] of scheduling practices is welcome, but this new role requires clarification. We recommend that the CAA sets out its strategy for enforcement and how it will ensure that operators comply with the responsibility not to construct fatiguing rotas.<sup>3</sup>

7. The Government agreed in its response that a clear enforcement strategy was an essential element of any regulator's oversight responsibilities.<sup>4</sup> Since then the European Commission has adopted legislation which establishes implementing rules covering the enforcement capabilities and responsibilities of national aviation authorities.<sup>5</sup> This legislation would be amended by the adoption of the draft regulation on flight time limitations. The Government also indicated that the CAA would develop clear guidance that will "include details of what an operator will need to do to meet the requirements of the Operator Responsibilities, and what a crew member will need to do to meet the Crew Member Responsibilities".<sup>6</sup> The CAA announced on 22 July that it is "finalising the implementation process and developing guidance material for Operators" and that it plans to hold industry seminars to explain the changes.<sup>7</sup>

8. We previously noted that EASA's proposal enabled operators to create rotas where up to 33% of flights during a scheduled seasonal period exceed the maximum flight duty period (FDP). The CAA had concerns about this, arguing that the number of flights in a seasonal

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3 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, para 11

4 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee's First Report of Session 2012–13*, HC 558

5 Commission Regulation (EU) No 965/2012

6 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee's First Report of Session 2012–13*, HC 558

7 Civil Aviation Authority Information Notice Number: IN–2013/115, Flight Time Limitations under Commission Regulation (EU) No. 965/2012 – Air Operations, 22 July 2013

period exceeding the maximum flight duty period should be limited to 10% or 20%. We agreed with the CAA's concerns and recommended that the Government should seek to restrict this limit.<sup>8</sup> The Government acknowledged the "desirability of a stricter limit than that proposed" and agreed to raise this issue during EU discussions. Disappointingly the limit remains at 33% in the draft regulation. The Government told us that "regardless of any finally agreed limit, the CAA will require operators to demonstrate active management of the programmed FDP to ensure compliance with their responsibilities".<sup>9</sup> *The Government should continue to press for a limitation of the number of flights exceeding the maximum flight duty period that is below the proposed level of 33%. The Civil Aviation Authority should set out in detail how it will enforce active management by operators of the programmed flight duty period.*

### Reporting fatigue

9. In our 2012 report we highlighted our concerns that there may be significant under-reporting of pilot fatigue and recommended that the CAA conduct a thorough investigation. Despite the Government accepting our recommendation, the British Airline Pilots' Association (BALPA) told us that the CAA continues to demonstrate "a fundamental complacency and lack of understanding around the prevalence of this problem". For example, BALPA drew our attention to a recent news broadcast in which the CAA were quoted as saying that it had received just two reports of pilots falling asleep on the flight deck in the last 30 years: in contrast the BALPA estimate that such events occur at least once a day on UK-registered aircraft. **The potential under-reporting of pilot fatigue must be properly recognised if it is to be effectively tackled. We note the continuing concerns regarding the CAA's ineffectiveness in this regard. We recommend that the Government set out what steps it has taken to implement our 2012 recommendation on pilot fatigue since it accepted that recommendation as well as the steps to plans to take to ensure proper recognition of and action to combat pilot fatigue in the future.**

### Flight time limitations

#### Flight duty period at night

10. The proposed limitations on flight duty periods at night were particularly controversial.<sup>10</sup> We summarised our position in our previous report:

The CAA has previously expressed reservations about the proposed flight duty period at night. The scientific advice given to EASA has been clear in recommending that an 11 hour flight duty period at night is too long and should be limited to 10 hours. In our view this advice should be adhered to. We recommend that the

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8 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, para 12

9 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee's First Report of Session 2012–13*, HC 558

10 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, paras 17–21

Government press EASA for a lower limit for flight duty periods at night in accordance with the scientific evidence on this matter.<sup>11</sup>

11. The Government told us that it would not seek to change the 11 hour limit.<sup>12</sup> However, the CAA proposed an additional operator responsibility stating that duties of over 10 hours between 2200 and 0400 should be actively managed.<sup>13</sup> The limit for flight duty period at night remains at 11 hours in the draft regulation. This remains a serious concern to many of the groups that wrote to us.<sup>14</sup> We note, however, that a requirement has been introduced for “fatigue management of night duties over 10 hours that encroach or overlap the period 2200-0400”.<sup>15</sup>

**12. We are disappointed that the Government chose not to press for a lower limit for the flight duty period at night in accordance with the scientific evidence on this matter. However, we welcome the new requirement for fatigue management of night duties over 10 hours that encroach or overlap the period 2200-0400. We recommend that the Government presses for national and EU-wide monitoring to examine whether the 11 hour limit is at least as safe as the current regime.**

### **Commander’s discretion**

13. Commander’s discretion allows a commander to extend their crew’s flight duty period by a specified number of hours if unforeseen circumstances arise. Extension of the flight duty period by over two hours by commander’s discretion must currently be reported to the CAA within 14 days. As drafted, the Commission’s draft regulation requires extensions of over one hour to be reported within 28 days. We previously queried the then EASA-proposed longer timeframe and the Government told us that it agrees that 14 days is a reasonable timeframe but that “the length of the reporting period will not affect the likelihood of completion or the accuracy of the reports, as this is a mandatory requirement”.<sup>16</sup>

14. We also recommended that “the CAA collate the information provided on the use of commander’s discretion, make this publicly available and monitor that this power is used only in exceptional circumstances”.<sup>17</sup> The Government responded: “this information would be of limited use without interpretation and contextualisation by the CAA”.<sup>18</sup> The Government told us that the CAA would “review what information can be published without compromising the integrity of the reporting systems, and how best it can be

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11 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, para 21

12 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee’s First Report of Session 2012–13*, HC 558

13 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, para 19

14 For example: Ev 16, para 1.8 [European Cockpit Association]; Ev 18 [BALPA]; and Ev 28 [European Transport Safety Council]

15 Ev 6, para 3 [Civil Aviation Authority]

16 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee’s First Report of Session 2012–13*, HC 558

17 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, para 23

18 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee’s First Report of Session 2012–13*, HC 558

presented to ensure it is intelligible to the public and, will not, out of context, risk misleading them”.<sup>19</sup> ***We recommend that the Government provide a progress report on the CAA’s review of its position on the publication of information on the use of Commander’s discretion. A regular, periodic pattern of publication should be established, together with an assessment of the impact of the use of discretion.***

### **Consecutive early starts**

15. The CAA does not permit more than three early starts (commencing 0500-0659) in consecutive days. Under the draft regulation, there would be no limit on the number of early starts. We continue to hear mixed views on the potential for consecutive early starts to exacerbate fatigue among crew members.<sup>20</sup> Our earlier recommendation to the Government last year focussed on ensuring that frequent early starts are actively managed. The Government explained in its response that the “new requirements on operator responsibilities will require that FDPs which fall into the early duty definition are actively monitored and managed”.<sup>21</sup> This situation reinforces the importance, which we set out in para 8, of the CAA setting out how it will enforce active management by operators.

### **Maximum flight duty period**

16. EASA’s earlier proposals could have led to a situation where pilots could be landing planes after 22 hours awake, including a standby period, the flight duty period, additional time due to Commander’s discretion, as well as the time between a crew member waking and reporting for work. Despite being told that such a situation would be extremely rare we were nonetheless concerned and recommended:

that any overall duty period which reaches the maximum limit possible under the regulations should be reported to the CAA. The CAA should keep records of such incidents and take action against any operators that schedule duties in this way. The Government should press EASA to amend its proposals to give national aviation authorities the power to monitor the length of flight duties and to ensure that any duties of this length are indeed exceptional, with a view to reducing the maximum flight duty period in line with scientific advice.<sup>22</sup>

17. The Government explained that flights that reach the maximum limit permitted would need to be reported to national aviation authorities, as they would involve the use of Commander’s discretion. Furthermore, under EU implementing rules, national aviation authorities will have “both the power and the responsibility to monitor all aspects of the application and performance of any flight time limitation”.<sup>23</sup> The Government shared our concerns about the length of the duty that is theoretically possible and we heard from the

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19 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee’s First Report of Session 2012–13*, HC 558

20 For example: Ev 1 [Andy O’Shea]; and Ev 2 [Air Safety Group]

21 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee’s First Report of Session 2012–13*, HC 558

22 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, para 29

23 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee’s First Report of Session 2012–13*, HC 558

CAA that EASA had now capped airport standby plus flight duty period at 16 hours.<sup>24</sup> However, as BALPA explained, this does not necessarily prevent situations where pilots could be landing planes after 22 hours awake:

there is an implementing rule that limits combinations of one type of standby, airport standby, and planned flight duty periods to a maximum of 16 hours. However, to this can be added 2 hours of Commander's discretion and so taking account the time for pilots to get to work [assumed to be 2 hours] with respect to this provision pilots could still be landing aircraft after 20 hours of wakefulness. EASA did not cap combinations of rolling delays, where standby may be at home, and subsequent FDP, and so with respect to these provisions pilots could be landing aircraft after more than 22 hours of wakefulness.<sup>25</sup>

The CAA told us that this scenario is “misleading” principally because it “relies on a theoretical awake time before a duty period begins, rather than the duty period itself”.<sup>26</sup> The CAA added that “using the approach applied by BALPA a very similar scenario could be theoretically possible under existing rules and the EASA legislation restricts such a pattern rather than increases it”.<sup>27</sup>

**18. While we remain concerned about the length of the duty that is theoretically possible, we note the Government's assurances that this will be monitored. We recommend that the Government ensures that the Civil Aviation Authority has the power to act if very long periods of duty become anything but an exception.**

## Use of evidence

19. There have been long-standing concerns that scientific advice has not had a more prominent role in the flight time limitation rule-making process. In this respect, we previously recommended that:

The Government should seek to ensure that scientists have a more central role in further work by EASA as it finalises its flight time limitations proposals and if it considers revisions to these proposals in future. The Government should encourage EASA to cultivate an ongoing relationship with experts in this field to keep up to date with developments in the science of fatigue and fatigue management.<sup>28</sup>

20. In its response, the Government told us that it “agrees that EASA rule-making should be informed by the best available evidence” and that the CAA has proposed to EASA that it maintains an advisory group that would be able to call upon relevant experts, including scientists, to discuss developments in fatigue and fatigue management.<sup>29</sup> We also note that the CAA itself has been working with a “leading fatigue research scientist” to review the

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24 Ev 6, para 3 [Civil Aviation Authority]

25 Ev 22, para 2.8 [BALPA]

26 Ev 29 [Civil Aviation Authority]

27 Ev 29 [Civil Aviation Authority]

28 Transport Committee, First Report of Session 2012–13, *Flight time limitations*, HC 164, para 35

29 Transport Committee, Fifth Special Report of Session 2012–13, *Flight time limitations: Government response to the Committee's First Report of Session 2012–13*, HC 558

proposals.<sup>30</sup> However, EASA's use (or lack thereof) of scientific evidence continues to worry some groups. For example, BALPA recently submitted a complaint to the European Ombudsman regarding maladministration at EASA on bases including inappropriate use of scientific advice in the rule-making process.<sup>31</sup>

**21. We reiterate our earlier conclusion that the Government should seek to ensure that scientists have a more central role in further work by EASA as it finalises its flight time limitations proposals and in its assessments for the future.**

## 3 Conclusion

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22. The issues raised in the Commission's draft regulation are significant. Flight time limitations help to reduce the risk of aircraft accidents by preventing fatigue. It is therefore important that the Government ensures that new EU-wide regulations lead to improvements in safety. We recognise that the Commission's draft regulation represents an improvement on EASA's earlier proposal. However, there are legitimate concerns that while the regulations may lead to safety improvements elsewhere, there may be a diminution of standards in the UK – where the current regulatory regime is favoured by crew and pilot representatives. On the other hand the airline industry and safety regulators are satisfied with the proposed changes.

23. Our main areas of concern relate to the use of scientific evidence in developing the regulations, and the arrangements for oversight and active management of the new regime. It is also disappointing that a consensus with crew and pilot representatives has not been reached on the draft regulations. Once the regulations are passed into law it is important that crew and pilot representatives are able to work constructively with operators and regulators to ensure that there is effective monitoring of the new regime. If a diminution of safety standards in the UK becomes evident the Government must be prepared to act quickly and decisively.

### Our Opinion to the European Scrutiny Committee

24. We have carefully scrutinised the proposed changes to the regulations for flight time limitations, both here and in our earlier report. We also led a debate on this subject in Westminster Hall shortly after EASA issued its Opinion to the Commission. **We continue to have concerns on the proposed changes to the regulations. We recommend that the European Scrutiny Committee request that the European Commission address the matters we have raised in this report, including ensuring effective monitoring of the new flight time regulation. We also recommend that the European Scrutiny Committee requests the European Commission provide an assessment of the regulation two years after its implementation.**

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30 Ev 7, para 10 [Civil Aviation Authority]

31 Ev 23 [BALPA]

# Conclusions and recommendations

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## Operator responsibilities

1. The Government should continue to press for a limitation of the number of flights exceeding the maximum flight duty period that is below the proposed level of 33%. The Civil Aviation Authority should set out in detail how it will enforce active management by operators of the programmed flight duty period. (Paragraph 8)

## Reporting fatigue

2. The potential under-reporting of pilot fatigue must be properly recognised if it is to be effectively tackled. We note the continuing concerns regarding the CAA's ineffectiveness in this regard. We recommend that the Government set out what steps it has taken to implement our 2012 recommendation on pilot fatigue since it accepted that recommendation as well as the steps to plans to take to ensure proper recognition of and action to combat pilot fatigue in the future. (Paragraph 9)

## Flight duty period at night

3. We are disappointed that the Government chose not to press for a lower limit for the flight duty period at night in accordance with the scientific evidence on this matter. However, we welcome the new requirement for fatigue management of night duties over 10 hours that encroach or overlap the period 2200-0400. We recommend that the Government presses for national and EU-wide monitoring to examine whether the 11 hour limit is at least as safe as the current regime. (Paragraph 12)

## Commander's discretion

4. We recommend that the Government provide a progress report on the CAA's review of its position on the publication of information on the use of Commander's discretion. A regular, periodic pattern of publication should be established, together with an assessment of the impact of the use of discretion. (Paragraph 14)

## Maximum flight duty period

5. While we remain concerned about the length of the duty that is theoretically possible, we note the Government's assurances that this will be monitored. We recommend that the Government ensures that the Civil Aviation Authority has the power to act if very long periods of duty become anything but an exception. (Paragraph 18)
6. We reiterate our earlier conclusion that the Government should seek to ensure that scientists have a more central role in further work by EASA as it finalises its flight time limitations proposals and in its assessments for the future. (Paragraph 21)

## **Our opinion to the European Scrutiny Committee**

7. We continue to have concerns on the proposed changes to the regulations. We recommend that the European Scrutiny Committee request that the European Commission address the matters we have raised in this report, including ensuring effective monitoring of the new flight time regulation. We also recommend that the European Scrutiny Committee requests the European Commission provide an assessment of the regulation two years after its implementation. (Paragraph 24)

# Formal Minutes

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**Monday 9 September 2013**

Members present:

Mrs Louise Ellman, in the Chair

Sarah Champion  
Karen Lumley  
Jason McCartney

Karl McCartney  
Martin Vickers

Draft Report (*Flight time limitations: follow up*), proposed by the Chair, brought up and read.

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

Paragraphs 1 to 24 read and agreed to.

Summary agreed to.

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

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

Written evidence was ordered to be reported to the House for printing with the Report.

[Adjourned till Tuesday 10 September at 9.45 am]

## List of printed written evidence

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1	Andy O'Shea	Ev 1
2	Air Safety Group	Ev 2
3	British Airways	Ev 3
4	UK Civil Aviation Authority	Ev 6, Ev 29
5	Thomson Airways	Ev 7
6	British Air Transport Association	Ev 8
7	Unite the Union	Ev 8
8	European Cockpit Association	Ev 16
9	British Airline Pilots' Association	Ev 18
10	European Transport Safety Council	Ev 28

## List of Reports from the Committee during the current Parliament

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

### Session 2013–14

Fourth Report	Cost of motor insurance: whiplash	HC 117
Third Report	The work of the Vehicle and Operator Services Agency (VOSA)	HC 583
Second Report	Future programme: 2013-14	HC 438
Fifth Special Report	The European Commission's 4 <sup>th</sup> Railway Package: Government Response to the Committee's Twelfth Report of Session 2012-13	HC 439
Third Special Report	Rail 2020: Rail Delivery Group and Passenger Focus responses to the Committee's Seventh Report of Session 2012-13	HC 81
Fourth Special Report	Land transport security – scope for further EU involvement?: Government Response to the Committee's Eleventh Report of Session 2012-13	HC 177
Second Special Report	Marine Pilotage: Government Response to the Committee's Ninth Report of Session 2012–13	HC 79
First Report	Aviation strategy	HC 78 (HC 596)
First Special Report	Cancellation of the InterCity West Coast franchise competition: Government Response to the Committee's Eighth Report of Session 2012–13	HC 80

### Session 2012–13

Twelfth Report	The European Commission's 4 <sup>th</sup> Railway Package	HC 1001(HC 439)
Eleventh Report	Land transport security - scope for further EU involvement?	HC 875
Ninth Special Report	Rail 2020: Government and Office of Rail Regulation Responses to the Committee's Seventh Report of 2012–13	HC 1059
Tenth Report	The Coastguard, Emergency Towing Vessels and the Maritime Incident Response Group: follow up: Government Response to the Committee's Sixth Report of 2012–13	HC 1018
Ninth Report	Marine Pilotage	HC 840
Eighth Report	Cancellation of the InterCity West Coast franchise competition	HC 537
Eighth Special Report	Plug-in vehicles, plugged in policy?: Government Response to the Committee's Fourth Report of Session 2012–13	HC 884
Seventh Report	Rail 2020	HC 329
Sixth Report	The Coastguard, Emergency Towing Vessels and the Maritime Incident Response Group: follow up	HC 647
Fifth Report	Future programme: autumn and winter 2012–13	HC 591

Fourth Report	Plug-in vehicles, plugged in policy?	HC 239
Third Report	Competition in the local bus market	HC 10 (HC 761) (Incorporating HC 1861–i–iii)
Fifth Special Report	Flight Time Limitations: Government Response To The Committee's First Report Of Session 2012–13	HC 558
Fourth Special Report	Air Travel Organisers' Licensing (Atol) Reform: Government Response To The Committee's Seventeenth Report Of Session 2010–12	HC 557
Second Report	Road safety	HC 506 (HC 648) Incorporating HC 1738
First Report	Flight time limitations	HC 164 Incorporating HC 1838
Third Special Report	Sulphur emissions by ships: Government Response to the Committee's Sixteenth Report of Session 2010–12	HC 87
Second Special Report	Counting the cost: financial scrutiny of the Department for Transport 2011–12: Government Response to the Committee's Fifteenth Report of Session 2010–12	HC 15
First Special Report	Draft Civil Aviation Bill: Pre-Legislative Scrutiny: Government Response to the Committee's Thirteenth Report of Session 2010–12	HC 11
<b>Session 2010–12</b>		
Seventeenth Report	Air Travel Organisers' Licensing (ATOL) reform	HC 1798
Sixteenth Report	Sulphur emissions by ships	HC 1561
Fifteenth Report	Counting the cost: financial scrutiny of the Department for Transport 2011–12	HC 1560
Fourteenth Report	Cable theft on the Railway	HC 1609 (HC 1933)
Thirteenth Report	Draft Civil Aviation Bill: Pre-Legislative Scrutiny	HC 1694
Twelfth Report	Cost of motor insurance: follow up	HC 1451 (HC 1934)
Eleventh Report	Thameslink rolling stock procurement	HC 1453 (HC 1935)
Tenth Report	High Speed Rail	HC 1185–I (HC 1754)
Ninth Report	Out of the jam: reducing congestion on our roads	HC 872 (HC 1661)
Eighth Report	Bus Services after the Spending Review	HC 750 (HC 1550)
Seventh Report	Taxis and private hire vehicles: the road to reform	HC 720 (HC 1507)
Sixth Report	The Coastguard, Emergency Towing Vessels and the Maritime Incident Response Group	HC 948, incorporating HC 752–i (HC 1482)
Fifth Report	Keeping the UK moving: The impact on transport of the winter weather in December 2010	HC 794 (HC 1467)
Fourth Report	The cost of motor insurance	HC 591 (HC 1466)
Third Report	Transport and the economy	HC 473 (HC 962)
Second Report	Financial Scrutiny of the Department for Transport	HC 683
First Report	Drink and drug driving law	HC 460 (Cm 8050)
Tenth Special Report	The proposal for a National Policy Statement on Ports: Government Response to the Committee Fifth	HC 1598

	Report of Session 2009–10	
Third Special Report	The performance of the Department for Transport: Government response to the Committee's Fourth Report of Session 2009–10	HC 549
Second Special Report	Update on the London Underground and the public-private (PPP) partnership agreements: Government response to the Committee's Seventh Report of Session 2009–10	HC 467
First Special Report	The major road network: Government response to the Committee's Eighth Report of Session 2009–10	HC 421

# Written evidence

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## Written evidence from Andy O'Shea (FTL 01)

I would like to give personal evidence to the above. This evidence is my own and not related to my Company evidence previously submitted.

I am employed by DHL Air, East Midlands Airport, Derbyshire DE74 2DQ as Establishment Planning Manager. DHL Air is one of two airlines in the United Kingdom that have approved Fatigue Risk Management Systems. My role is to manage the FRMS in particular regard to aircrew sleep studies. These are completed by Loughborough Sleep Research Centre.

I am also responsible for the Company Flight Time Limitations scheme at DHL Air and sit on the UK CAA Fixed Wing Advisory Group for FTL and give advice to the Group on behalf of Express Freight Airlines.

I am also Chairman of the UK Airlines Crewing Managers (as such the group has no Chairman, more "volunteered").

My entire aviation career is airline related and I have spent the last 30+ years in varying Crew Scheduling positions for nine different airlines starting many years ago with Laker Airways. Of these three had sister Airlines in Europe:

- Trans European Airways Birmingham—Owned by Trans European Airways Brussels.
- Excalibur Airways East Midlands—Part owned by Air Malta.
- My Travel Airways Manchester—Sister Airline with Premier Denmark.

Of the above two are no longer trading and one has merged into Thomas Cook Airlines. In all cases the European Airlines had more flexible FTL schemes and it was very difficult trying to explain to Board Members why the UK rules are so restrictive and why it required more crews to fly a programme of flights. At this time there were no FRMS rules, only common sense applied.

At DHL we have partner airlines of European Air Transport Brussels and most recently European Air Transport Leipzig GMBH. In both cases again they have more advantageous FTL schemes and in the case of EAT LEJ GMBH they currently fly into the UK every night flying the same aircraft as DHL Air fly, safely within EU limits.

DHL Air is the only UK Airline that has derogation to EU FTL for a long block pattern of work which sits outside the weekly rest requirement currently in force.

### EXECUTIVE SUMMARY

I fully support the CAA and Government Ministers view for the introduction of EASA Flight Time Limitations. The proposed limits of EASA FTL are in many areas less restrictive than those currently en-force and being used extensively in Europe now under EU FTL. The exception to this is the UK where CAP371 is still in use.

UK Airlines will therefore benefit from a "level playing field" in the EU single aviation market.

Whilst understanding the concerns of UK Pilot associations that in some cases the EASA rules are less than restrictive than CAP371 my opinion is that UK Airlines and the UK CAA will be the leaders in adopting the new FTL and managing it proactively through Fatigue Risk Management Systems and local agreements with the Pilot associations. This partnership will identify any areas that may need increased levels of management and make necessary recommendations if required. FRMS will play an important role in the EASA FTL, this includes enhanced Operators responsibilities. It also reminds crewmembers of their responsibilities and their part in the partnership.

### FACTUAL INFORMATION

1. CAP371 whilst a mature document is deficient in three major areas that affect the airline I work for namely consecutive day/late/night duties, limits on two Flight Crew Long Range Operations and acclimatisation.

2. Consecutive Early/Late/Night Duties—Current UK rules allow three consecutive night duties. Fatigue Studies at both Easyjet and DHL Air have indicated that additional early/nights are better than switching from early/nights into lates/early/Night duties to get round the current rules. EASA FTL has fewer limits on early/late/night duties and I believe better, safer rosters will be possible with the introduction of EASA FTL.

3. Limits on Two Flight Crew Long Range Operations—Currently in the UK a factorisation takes place where each single long range flight is over seven hours. This is extremely limiting and commercially restrictive. Crews can work longer on medium range flights with additional take off and landings compared to a long haul flight with only one take off and landing. The CAA argument is aircrew time on task but this is dated information and both EU and EASA FTL have no such limits, this rule is truly British and unique.

4. Acclimatisation—in the UK under CAP371 a crewmember immediately becomes acclimatised to local time when the local time differs by two hours or more. This means on a flight to New York the crew adapt to local time on arrival. EASA FTL has a staggered adjustment to acclimatisation and is much more realistic and has scientific support.

5. Operators/Crew Members Responsibilities—Airlines will be obliged to ensure crewmembers receive initial and on-going FRMS training. Our data collected by Loughborough Sleep Research Centre indicates that 50% of all fatigue related reports are down to self management of rest issues by aircrew. This data can be made available if required. The reasons are varied but include; Commuting, no training in the science of sleep, social reasons—ie waking up for a free breakfast. On the operators side the issues are again varied but include poor Rostering, poor Hotac, disruption and long first nights.

July 2013

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### Written evidence from Air Safety Group (FTL 02)

#### REFERENCES:

- A. Letter from Captain Seal to Mrs Louise Ellman MP dated 24 February 2012.
- B. Letter from ASG to Mr Matthew Baldwin dated 4 July 2013.
- C. Letter from ASG to EU Ombudsman dated 8 July 2013.
- D. Email from Captain Russ Williams to M. Jean-Marc Cluzeau dated 10 July 2013.

You may recall that in February last year, I wrote to you in an individual capacity regarding the proposed European Aviation Safety Agency (EASA) Flight Time Limitations (FTL) scheme—Reference A. This scheme is now circulating as an Opinion and to be voted on by the EU Parliament in the near future; it may yet become EU and UK Law. However, I still hold very grave concerns regarding the scheme which I would like to reiterate, this time in my capacity as the Chairman of the UK's Air Safety Group (ASG). These concerns are shared by all the Group's members.

The ASG is a UK-based voluntary (and wholly independent) safety organisation formed in 1964, whose stated aim is to improve the safety of the travelling public in commercial air transport operations. To this end, we work together with the UK Parliamentary Advisory Council for Transport Safety (PACTS) to advise and influence those personnel and organisations who are directly responsible for monitoring, overseeing and ensuring the safety of commercial air transport operations, both in the UK and abroad.

May I also refer you to the letters copied to you recently that outline the ASG's standpoint on the subject; one to Mr Baldwin EU Director of Air Transport Policy (Reference B) and one supporting the British Air-Line Pilots' Association (BALPA) appeal to the EU Ombudsman (Reference C)? As mentioned, our independence is robustly maintained, although in this case and for purely safety-related reasons, we share the strongly-held views of British and European pilots and their representatives rather than those of the operators and regulators. We are deeply concerned that due process, science and common-sense may have been given a rough ride by EASA. This could seriously compromise the safety of UK aircrews and their passengers. That safety could be put at risk in any way whatsoever by an EASA proposal is wholly unacceptable to the ASG.

Even after some negotiated changes, the recent proposed FTL scheme remains very far from being as comprehensive as the "tried and tested" CAP371—which is the present UK FTL scheme. Most certainly, we disagree with Mr Haines of the CAA and the Government who stated to you and the Transport Committee last year that the proposed EASA FTL scheme is "broadly equivalent" to CAP371; sadly it is nowhere near. There are far too many gaps and inconsistencies—which have been highlighted by BALPA and other aircrew representative bodies, as did we in the References above.

Some important ones that come to mind are:

1. **Inadequate Set of EASA Definitions.** The EASA scheme has poor foundations because the building blocks of precise and unambiguous definitions just do not exist. Many are incomplete, confusing and unclear—which will lead to the scheme being abused by any unscrupulous operators. Captain Williams clearly demonstrates this in his email to M. Cluzeau at EASA at Reference D—which has gone unanswered and apparently unheeded.

2. **Pilots may be landing aircraft having been awake for 22 hours.** This is a point raised by BALPA but the CAA's retort to the Transport Committee that such a duty is also possible with "split-duty" under CAP371 is simply not true. UK-defined "split duty" allows planned uninterrupted rest *in a hotel bed-room* but EASA's "airport standby" only requires a reclining seat which could be in *a crew-room*—where it is very much harder to get any meaningful rest.

3. **There will be no provision for "factorisation".** Long-haul sectors, currently operated by 3-pilot crews for the purposes of fatigue management, will be allowed with just 2 pilots; significantly increasing their tiredness levels. Should these EASA FTLs ever be used in their presently-proposed form then we believe that flight-crews of 2-pilot-only, long-haul sectors are much more likely to be fatigued and their overall performance

be significantly affected. The likelihood of fatigue-related accidents and incidents on such sectors will increase as a result.

**4. The restrictions on the number of consecutive early starts will go.** The CAA's own research has shown that more than 3 consecutive early starts can cause unsafe levels of cumulative fatigue. From personal experience, I can verify that 4 or 5 consecutive early-starts (allowed under a "controlled" variation of CAP371) can be absolutely debilitating and I was more fatigued operating for a UK low-cost airline, than ever I was in Afghanistan during operations for the Royal Air Force.

**5. Lack of FTL Oversight Experience and Knowledge in Europe.** The ASG is very concerned that the levels of knowledge and expertise to manage and oversee such a scheme might not be available—either in EASA itself or in many of the EU member-states. It is believed that the International Civilian Aviation Organisation (ICAO) shares these grave concerns.

**6. Scientific Research not easily Incorporated.** It is imperative that *any* FTL/FRMS scheme must be sufficiently flexible to be quickly altered in light of any future scientific findings. We are worried that neither CAP371 nor the EASA scheme is sufficiently pliable in this respect—this serious limitation needs to be addressed before proceeding any further.

Overall, despite a perceived improvement for some EU member-states, the ASG believes that to accept the currently-proposed EASA scheme would jeopardise the overarching safety of UK aircrews, their passengers and the countries over which they fly. We do not believe that *any* UK citizen should be expected to tolerate any changes that lead to a different and lower standard of safety (no matter how big or small a reduction that is) just to appease the EU rule-makers and the airlines. Furthermore, we believe that any such reduction in safety standards could lead to "foreseeable loss of life" and so, this may be construed as an infringement of the UK air-travellers' rights under Article 2 of the European Convention of Human Rights.

Currently, the global benchmark for FTL schemes is the CAP371 scheme, which has been seen as the world's most-safe scheme for over 40 years. Though not perfect, CAP371, supplemented by modern fatigue-management processes, is the most-highly effective means to mitigating air safety threats due to aircrew fatigue that is currently available. Consequently, until we have scientifically proven that what we do presently in the UK is over-cautious, then for the UK Government to go away from the current sunlit uplands of the UK's excellent flight-safety record and gravitate towards the shadowy valley of *ad-hoc* EU risk-management is a move that could be considered as rash, ill-advised and irresponsible. We hope that you might endorse such an assessment and take appropriate action.

In conclusion, the ASG recommends that the Transport Select Committee and Her Majesty's Government should seriously consider all avenues open to them in order to prevent the EASA Opinion in its present form becoming EU or UK law—including any "opt-out" or derogation measures. If it is not already too late, we also urge UK MEPs to vote against the adoption of this scheme in the EU Parliament—in the interests of the safety of all UK nationals flying in civilian air transport aircraft. The ASG believes that for any elected official to do otherwise would be to fail in their responsibilities to their constituents and to disregard their rights not to be put at an increased risk of loss of life. The ASG stands-by ready to help in any way it can and we look forward to hearing from you in due course.

July 2013

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### Written evidence from British Airways (FTL 03)

#### SUMMARY

In this submission British Airways provides its opinion on the European Commission's legislative proposal which sets out the Flight and Duty Time Limitation (FTL) requirements for the crews who operate commercial aircraft.

- British Airways believes that the FTL legislative proposals should be endorsed by the Select Committee and adopted into European law in their current form without any further delay.
- The FTL proposals need to be viewed in their entirety to effect a meaningful comparison with other schemes. British Airways believes that the proposals, in their entirety, will give an equivalent level of safety to those in CAP 371 and will raise safety standards across the European Union.
- British Airways believes that FTL proposals sit within the broader framework of a company's safety-management system. In order to be effective, they require operator accountability, just culture and crew responsibility. With those elements in place, the net effect on safety across Europe should be positive.
- British Airways supports the adoption of the legislative proposal into European law. The majority of EU Member States, leading Members of the European Parliament Transport Committee and the CAA also support these proposals.

## 1. INTRODUCTION

1.1 British Airways welcomes the opportunity to contribute to the Transport Select Committee's further inquiry into the Commission's proposals on FTL.

1.2 British Airways is one of the world's largest international airlines and the UK's largest international scheduled airline, carrying approximately 37 million passengers worldwide annually on around 750 daily flights. The airline employs around 38,000 people, the vast majority of these at its sites throughout the UK, and has an annual turnover of £9 billion.

1.3 The airline's two main operating bases are London's Heathrow and Gatwick airports, with a smaller base at London City airport serving New York and European business destinations. From these three, British Airways flies 282 aircraft to 173 destinations in more than 80 countries. In addition to passengers, the airline also transports cargo—more than 785,000 tonnes of cargo are carried around the world each year.

1.4 In 2010, the airline completed its merger with Iberia of Spain to create the International Airlines Group (IAG). Our combined business offers flights to 205 destinations throughout the world on a fleet of 418 aircraft. It also commenced a joint business agreement with American Airlines, which further extends benefits for its customers. The combined network of British Airways, Iberia and American Airlines serves 453 destinations in more than 105 countries with over 5,180 daily departures.

1.5 In April 2012 IAG completed its purchase of British Midland Limited (bmi) from Lufthansa. The bmi mainline business has now been integrated into the British Airways business. This acquisition provides British Airways with the opportunity to expand its network and provide major improvements for customers.

## 2. BACKGROUND

2.1 The European Commission's legislative proposal is based on an opinion which was published by the European Aviation Safety Agency (EASA) in October 2012. The purpose of the proposal is to provide an update of the current regulations on flight and duty time limitations and rest requirements for the crew of aircraft involved in commercial air transport operations.

2.2 The initial draft proposals were proposed by the EASA in 2008 and have been developed and improved over a long period. They have been established after two rounds of extensive public consultation, firstly in December 2010, then again in January 2012, with the support of a group of experts representing Member States, three independent scientific experts, air operators and flight and cabin crew associations. Over several years these parties have reviewed and validated more than 50 different scientific studies, and compiled safety data and best operational practices from the UK and throughout the European Union.

2.3 Since the consultation stage the EASA has made a number of improvements to the proposals based on scientific knowledge and has addressed many of the objections. We believe that the proposals, when taken as a whole package would produce an acceptable system for managing crew member fatigue. This view is based on the scientific evidence, our experience with our current regulations and our involvement with EASA during its rulemaking task.

## 3. THE EUROPEAN COMMISSION'S LEGISLATIVE PROPOSALS AND HOW THESE COMPARE TO THE UK'S CURRENT REGULATIONS

3.1 In assessing the difference between the Commission's proposals and the current UK regulation CAP 371, it is most important to take what may be referred to as a "zoom lens" approach. That is, it is important when focusing on individual elements of either rule set to then "zoom out" to view those elements in the context of the entirety of the proposals.

3.2 It is not possible to generalise about how the proposals compare with CAP 371: in some areas they are more permissive, in some areas more restrictive—including on the all-important topic of maximum flying duty period (FDP), where, depending upon the time of start and number of sectors, either set of rules will permit longer duty. In setting FDP limits, which are the same for both pilots and cabin crew, the proposals are more restrictive than CAP 371. The proposed duty-hour limits for one week and two weeks are more permissive; the four week limit is the same.

3.3 Generally, British Airways welcomes the work done by the EASA, which constitutes evolution, not revolution of FTL rules. Its task has been one of the most difficult undertaken by the Agency. Its work has resulted in legislative proposals, which build on the existing EU-OPS Subpart Q (as required by the European Commission), national rules from more than one state, scientific evidence and solid safety criteria. The end result is that the European Union will have among the strictest set of FTL rules in the world. British Airways believes that the proposals, in their entirety, will give an equivalent level of safety to CAP 371.

## 4. THE POTENTIAL EFFECTS OF THE LEGISLATIVE PROPOSALS

4.1 It is important to state at the outset that FTL rules are simply one part of the complex set of variables, which makes up an operator's safety-management system. As a constituent part of that system, they will not guarantee safety by themselves. Moreover, publication of European FTL rules will not change the safety

accountabilities and responsibilities of an operator. In the case of British Airways, responsibility for safety lies with the Chief Executive, and in turn the Director of Flight Operations is accountable to him. Ultimately, whatever is implemented by the Commission, operators must interpret the rules to ensure their operation is safe—that responsibility lies nowhere else.

4.2 Equally important, in ensuring that FTL rules work properly, is a just-reporting culture which allows crew members to report if they are insufficiently rested prior to a duty, or fatigued (the two are different things). Crew members, pilots or cabin crew, have an equal responsibility to ensure they use their rest periods efficiently so that they report for duty sufficiently rested.

4.3 If those elements of the safety-management system—operator accountability, just culture and crew responsibility work properly, the proposals should have no adverse effect on aviation safety. It will be the way in which the rules are managed which will be the key to success.

## 5. THE USE OF SCIENTIFIC AND MEDICAL EVIDENCE IN DEVELOPING THE PROPOSALS

5.1 As the Select Committee will be aware, the EASA made reference to more than 200 individual studies in developing the original Notice of Proposed Amendments, and subsequently took the views of three scientists in producing the revised text of the CRD. The most contentious of the scientific studies was the “Moebus Report”. The Moebus Report does not in British Airways’ view meet the scientific standards required to inform decision-making in this important area, and inferred conclusions, which were beyond the data that the report’s authors had at their disposal. We note that, although the EASA sponsored the production of the Moebus report, it too disregarded it from its deliberations in producing the FTL rules. British Airways is aware that some stakeholders have made claims regarding some components of the proposals, based on a limited range of scientific studies, without linking those claims to the entirety of the proposals. In some cases these stakeholders neglect to observe that the CAA/Qinetiq SAFE model, which has been widely endorsed, has also been used in developing many of the proposals.

5.2 Ultimately, British Airways is confident that the proposals have been validated either by robust scientific study, solid safety data, or by widespread custom and practice.

## 6. HOW THE PROPOSALS COMPARE TO THAT IN OTHER COUNTRIES

6.1 Our knowledge of other countries’ FTL schemes is, necessarily, limited. We are supportive of the EASA work, not least because it should bring the FTL regulation in Europe up to a high and uniform level. We understand that is definitely not the case in Europe at the moment. Whilst the existing scheme in the UK—CAP 371—is the most comprehensive FTL scheme in Europe, other states’ schemes are, we understand, less detailed or much less restrictive. Therefore, the scope of change required to comply with the new FTL rules in countries other than the UK will be considerably greater.

6.2 We are aware that the United States Federal Aviation Administration (FAA) has recently published its new draft rules on FTL. Several aspects of the FAA rules are actually aimed at aligning the FAA with the existing EU regime,—EU Ops Subpart Q—such as defining a maximum Flight Duty Period based on the time of the day pilots begin their first flight, number of scheduled sectors and circadian limits. The fact that the FAA is aligning itself with aspects of Subpart Q may be seen as an endorsement that the existing Subpart Q rules are effective in mitigating fatigue-related safety risks.

6.3 We also understand that certain organisations appear supportive of the FAA draft rules over and above the Commission’s proposals. Whilst that approach may be superficially attractive—presumably because of the lower flight-time limits in the FAA proposals—British Airways would question the value of a set of FTL rules which, *inter alia*:

- Do not contain any cumulative (weekly, 2-weekly or monthly) duty limits; and
- Only require 10 hours rest between duty periods (as opposed to the much more sophisticated EASA proposals for rest).

## CONCLUSIONS

The main priority for British Airways is the safety and security of their passengers and crew and as such we welcome the new EU rules that will standardise working hours for airline pilots across Europe.

British Airways believes that the EASA has performed a valuable role in developing the new FTL rules. With proper implementation and oversight, and within a just reporting culture, the rules will have the net effect of raising safety standards across the European Union. In our view the Commission’s legislative proposal should be adopted into European law without any further delays.

### Written evidence from the UK Civil Aviation Authority (FTL 04)

#### CONTEXT

1. This briefing is designed to provide the Transport Select Committee with further information on the progression and content of the European Commission's proposals on flight and duty time limitations. Since the Transport Select Committee's original inquiry into Flight Time Limitations (FTL) in February 2012, the proposals have been refined, strengthened and clarified by the European Aviation Safety Agency (EASA). This has involved a focused workshop with stakeholders and detailed discussions with the Member States in the EASA Committee<sup>1</sup>. The UK CAA has been very active in working with EASA to achieve the changes to clarify the intent of the proposals and strengthen them where necessary.

2. The Commission's draft regulation to revise the current EU FTL requirements received a positive vote in the EASA Committee meeting on Friday 12 July 2013. The draft regulation forms the foundation of all EU FTL regulations and will support the development of further regulations in this area for those operations currently not covered under EU-OPS. These operations include emergency medical services, air taxi and single pilot operations, helicopters and night freight.

3. The content of the draft regulation does contain some changes from the EASA Opinion, which itself contained changes from the Comment Response Document which was the reference document the Select Committee considered when it last examined these issues. These changes are largely to clarify the intent of the regulation. The supporting EASA draft Decision material has also been amended following an EASA workshop on standby and disruptive schedules, being strengthened in a number of areas. The key areas of change are:

- Clarification that the FTL safety regulations are without prejudice to the applicable EU and national social legislation (such as the Civil Aviation (Working Time) Regulations);
- Strengthening of the requirement on EASA for ongoing continuous assessment of the proposals alongside Member States and involving scientific expertise, which will be based on operational data gathering;
- As part of strengthening the EASA Decision material, a Certification Specification requirement has been introduced requiring fatigue management of night duties over 10 hours that encroach on or overlap the period 2200–0400;
- Capping airport standby plus Flight Duty Period (FDP) at 16 hours;
- Reducing the buffer period for standby other than at the airport to six hours;
- Delayed reporting callout procedures now clearly state how the allowable FDP is calculated to avoid rolling delays disturbing the crew;
- Introduction of a protected eight hour sleep opportunity during reserve where the crew member will not be contacted by the operator;
- Clarification of the requirements for in-flight rest for cabin crew.

4. The EU Transport Committee held a mini-hearing on the Opinion on Tuesday 18 June 2013.

#### THE CAA VIEW OF THE PROPOSALS

5. It is essential to recognise that the proposals represent a package of measures. When considering fatigue there are too many unique circumstances for any regulator to write prescriptive regulations to cover them all. Prescriptive limitations can set the boundaries on the safety framework, but these need to be supported by more demonstrable requirements being placed on operators and crew to develop a mature approach to managing fatigue in the operational context.

6. The draft regulation provides the CAA with more oversight tools in order to meet the objectives of fatigue management regulation. It places legal requirements on operators to demonstrate that they have developed rosters that enable the crew to be sufficiently free from fatigue so as to be able to operate to a satisfactory level safely in all circumstances. It also places under CAA oversight more processes and procedures related to the delivery of the regulation.

7. The EASA draft Decision material contains the majority of the detailed provisions of the regulations. The CAA is aware that this Decision material will not be formally known until the regulations are published in the Official Journal. The EASA Committee has been able to consider the draft Decision material as part of its review. Any amendments or clarifications to the material will be in line with the discussions in the Committee.

8. The CAA puts the UK citizen at the heart of its regulatory work. We believe that the Commission's draft regulations improve the safety levels of the current EU-OPS requirements. Not only will this maintain the same level of safety as our current requirements, this will also improve safety for UK passengers flying on non-UK European airlines.

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<sup>1</sup> Committee for the application of common safety rules in the field of aviation safety, commonly known as the EASA Committee, is the forum for the European Commission and representatives of the Member States to assist in the making, adoption and implementation of EU legislation in accordance with the Council "Comitology Decision".

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 NEXT STEPS

9. The Commission proposals will now follow a scrutiny process in the EU Parliament and Council which is expected to start in August and be finalised by November 2013. If this timetable is followed we would expect the regulation to come into force in the UK around the end of 2015.

10. The CAA is aware that changes to regulations produce a number of challenges for regulators and has reviewed the proposals with support from Dr Barbara Stone, a leading fatigue research scientist. The purpose of the review was to ensure that regulatory oversight is focused on those areas of significant change to ensure safety standards are maintained. This review will be used during the development of CAA oversight processes.

11. The CAA is also developing a required implementation process that all operators will have to follow with detailed information on the changes and guidance material. Towards the end of the year the CAA will hold two seminars for UK operators to brief them on the changes. The CAA will also provide information for crew members on the changes as well as on their rights and responsibilities. The aim will be to explain their new legal responsibilities and to promote open reporting of fatigue related issues. The CAA will be engaging airlines and pilots on the practicalities of ensuring the proposals are implemented in a way that maximises the benefits of the changes and builds on the UK's existing strong safety record. Work on the guidance material is being supported by a multi-stakeholder consultative group.

12. During the period of change the CAA will be working with EASA on the development of Safety Performance Indicators as part of a global collaboration initiative between regulators to assess the impact of the regulations. The CAA will continue to work with EASA on FTL issues and support them as they develop the methods they will use for the operational data gathering requirements under the regulation. The CAA will also be robust with any information that it receives with regard to standardisation of the regulations. It will seek to pass onto EASA any issues of operators or Member States who it believes are not implementing the regulations as intended.

13. The CAA will also gather relevant data from operators during, and after, the transition period in order to continually review the safety performance of the regulation. To support qualitative data gathering the CAA is aiming to use its active research programme into developing a pilot fatigue measurement tool.

14. It is very important for pilots to engage with the proposals and understand that the regulation places new requirements on them as well as on airlines, and that they and the airlines must make the most of the new scheme to ensure safety. The CAA is committed to actively working with its UK stakeholders and EASA to implement the regulation. Understanding the application of the package of regulations in the operational context is an important step in the continuous improvement process required under the UK State Safety Plan.

August 2013

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**Written evidence from Thomson Airways (FTL 05)**

Thomson Airways welcomes the opportunity to respond to the Transport Select Committee call for evidence on the EU Commission's proposal in relation to its proposals for legislation setting flight and duty time limitations (FTL) requirements for crews of aeroplanes involved in commercial air transport, Thomson Airways number one priority is the safety and security of its passengers and crew, we therefore welcome these proposals from EASA that will provide consistency of airline pilot working hours throughout Europe. We believe the proposals will raise standards across Europe and will not compromise on safety.

Through its trade association in Europe, (The International Air Carrier Association) Thomson Airways has been an active participant in the development of these proposals that have been developed by the European Aviation Safety Agency (EASA), that also included other trade bodies including civil aviation safety experts, airline trade associations, pilot and cabin crew union representatives.

The proposals:

We believe that the proposals will deliver a significant number of safety enhancements, most notably

- A regime that strengthens the requirement for EASA to practice continuous assessment of the requirements based upon operational data that will be gathered and assessed by scientific experts and Member States.
- Placing a cap on the number of hours for airport standby followed by a flight duty period.
- Reducing buffer periods for standby duties.
- Improved fatigue management processes, particularly management of night duties longer than 10 hours during the period 22:00 to 04:00. Requiring this to be part of the airline certification process.
- Requiring airlines to introduce 8 hour protected sleep during reserve periods, where the crew member may not be contacted by the airline.
- Clarification of cabin crew in-flight rest requirements.

Thomson Airways believes that the EASA proposals should be looked at as a package of measures that will deliver a number of safety related improvements over and above the current EU OPS requirements, that set

realistic boundaries for airlines to plan and operate their flights, whilst not being too prescriptive that would inhibit the commercial flexibility that airlines such as Thomson Airways needs.

Thomson Airways already has an open reporting safety culture within its Safety Management Systems (SMS) and continues to develop its crew fatigue management systems that will be embedded within the SMS. We will continue to work with our crew representatives, Pilots, the CAA and EASA in further developing these as the EASA requirements are introduced.

We will actively work with the CAA to provide the necessary data to assist with any review of the effectiveness of the EASA proposals.

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#### **Written evidence from the British Air Transport Association (BATA) (FTL 06)**

The British Air Transport Association (BATA) welcomes the opportunity to submit evidence to the follow up inquiry conducted by the Transport Select Committee into the European Commission's proposal for legislation setting flight and duty time limitation (FTL) requirements for the crews of aeroplanes involved in commercial air transport.

BATA is the trade body for UK registered airlines. Our eleven members cover all sectors of the airline industry—including freight, charter, low fare, regional operations and full service. In 2012, BATA members employed 73,000 people, operated four-fifths of the UK commercial aircraft fleet and were responsible for some 96% of UK airline output, carrying 131 million passengers and 1.1 million tonnes of cargo. The eleven BATA member airlines are: British Airways, DHL, easyJet, Flybe, Jet2.com, Monarch, RVL Group, Thomas Cook, Thomson Airways, Titan Airways and Virgin Atlantic.

The priority for all BATA members is the safety and security of their passengers and crew and as such we welcome the new EU rules that will standardise working hours for airline pilots across Europe.

The new “flight time limitations” rules provide for a consistent approach on airline pilot working hours throughout Europe which will benefit UK passengers. The new rules do not compromise safety. On the contrary, they will instead raise standards across Europe.

These new rules for pilots and cabin crew have been developed by the European Aviation Safety Agency (EASA), the EU body now responsible for rule-making in areas of European aviation such as flight operations, airworthiness and licensing. It follows an extensive consultation period involving an array of aviation authority safety experts, scientists, airline associations and pilot and cabin crew union representatives.

Under the new system, the UK Civil Aviation Authority will have far greater access to airline information to help oversee fatigue management of airline crew members. Indeed, UK airlines already carefully monitor pilot health and well being.

High levels of reporting by airlines of their compliance with the new flight time limitations will be required. Enforcement action will be taken if necessary.

BATA agrees with the CAA that the new regime will provide a sound basis to maintain the UK's current high safety levels.

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#### **Written evidence from Unite the Union (FTL 07)**

##### **1. SUMMARY**

1.1 This response is submitted by Unite the Union, the UK's largest trade union with 1.42 million members across the private and public sectors. The union's members work in a range of industries including transport, manufacturing, financial services, print, media, construction, local government, education, health and not for profit sectors. The Civil Air Transport (CAT) membership of Unite is currently the largest representative group of workers employed within the aviation industry.

1.2 The union's current membership includes 67,000 members working within Civil Aviation. Of this number over 40,000 are members of cabin crew for various airlines who will be directly affected by these changes.

1.3 As highlighted on in the outline of the committees enquiry and on page 25 of the European Scrutiny Committee, 6th Report, Session 2013–14,<sup>2</sup> the introduction of Regulation (EC) No 216/2008, revokes Annex III to Council Regulation (EEC) No 3922/91. The effect of this is to remove the scope for member states to maintain separate requirements which are more stringent than the European Aviation Safety Agency (EASA) limits.

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<sup>2</sup> <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmeuleg/83-vi/83vi.pdf>

1.4 In Unites previous submissions<sup>3</sup> on this subject, we have stressed the importance of retaining current limits which we believe do not go far enough to protect crew from fatigue. We reported cases where crew had attempted to report fatigue only for management to put it down as tiredness and reprimand staff for turning up suffering from this condition. We also stressed that there is no definitive definition of fatigue and that it is very subjective.

1.5 This change appears to decide, for the UK crews affected, that the need to harmonise legislation is more important than having a safer working environment.

1.6 Unite is therefore extremely concerned over the move to relax these limits down to the EASA standards which, in Unites opinion, will either prevent fatigue or harmonise the levels suffered by crew.

1.7 Understandably, operators consider any restrictions as a further strangling of options from undue interference. An operator would prefer to focus on the more flexible “in-house” elements of the scheme, Fatigue Risk Management System (FRMS). Unite feels that as fatigue is subjective that any in-house scheme is far from fool proof and leads to elastic boundaries beyond which crew will be incapable of carrying out their role. Restrictions to the overall industry, which cannot be deviated from by individual operators, extinguishes the inadvertent but high possibility of pushing this safety envelope.

## 2. HARMONISATION OVER SAFETY

2.1 Unite believes that the balance between mortality and fiscal accountancy needs to be kept at the forefront during the inevitable mire of debate over the need to harmonise legislation and the need to ensure a safe working environment. At the end of the day Governmental bodies need to be assured that they did everything to prevent a single serious injury or fatality due to fatigue.

2.2 This proposal will be seen as the blueprint for rostering crew. Any differing restrictions will be costed and seen as additional expense by the airlines. The issue of whether or not the legislation is safe or not will not be taken into consideration as the airlines will fall back on the age old excuse of we complied with the safety restrictions and blame the crew.

2.3 Unite believes the current proposal does not yet adequately reflect the scientific evidence or our considerable practical experience. Unite remain convinced that fatigue will not be prevented by this legislation and, if anything, will increase as UK rules are relaxed.

2.4 Whilst Unite approve the concept of a Pan-European Scheme, this position should not be seen as tacit support for the current proposal. We acknowledge and appreciate the changes we have seen to the proposal over the last two years. Especially efforts to introduce standards in other nations where non existed previously. Unite has serious and genuine concerns, that elements of the proposal are lacking in scientific backing, subject to undue Operator influence and an entrenched committee tasked with creating this scheme.

2.5 Unite is not convinced that at the highest level there is a complete understanding of the proposal or its practical application. Unite feels this should be a process led by scientific expertise, commercial understanding and reverence to experience. Stricter regulations need to be enforced in the areas of no negotiation. Limiting the deviations just a little more than is currently proposed.

## 3. “STAND-BY OTHER THAN AIRPORT STANDBY”—CS FTL.230.2

3.1 To demonstrate Unite’s, concern over this legislation, in this section the focus is on just one observation to illustrate that action needs to be taken.

3.2 In order that an airline can operate to schedule, the very nature of the industry requires flexibility to overcome often known but unpredictable events. These include issues beyond the control of the airline such as slot delays, diversions, technical issues, medical incidents on-board and weather but may also encompass crew sickness, lateness, imminent or post disciplinary action or a combination of the above.

3.3 The nature of the industry is constantly driving down costs and pushing for increased productivity. Operators are therefore using flight time limits (FTL’s) as a guide not a safety restriction. This has led to unrealistic rostering leaving little space for delay. As a result every day known occurrences have resulted in crew running out of permitted hours for their next flight.

3.4 In both these instances of predictable and unpredictable unavailability of crew members, there is a need to have replacement crew on standby. Working to FTL’s increases the use and frequency of standby it also means that crew are operating regularly on the very borders of what is deemed as unsafe.

3.5 In our previous submission Unite raised its concerns that increasing the flight duty periods (FDP’s) early in the morning and relaxing the current restrictions on cumulative duty hours for a 5 day block, would increase the hours by 17% per day and 33% per week, with little mitigation. These fears remain. Combining these concerns with more relaxed standby provisions, the frequency of rostering and the ambiguous support from

<sup>3</sup> Copies of these responses can be found at :- [http://centrallobby.politicshome.com/fileadmin/epolitix/stakeholders/Unite\\_further\\_evidence\\_to\\_the\\_Transport\\_Select\\_Committee\\_Enquiry\\_into\\_Flight\\_Time\\_Limitations\\_\\_final\\_\\_2\\_.pdf](http://centrallobby.politicshome.com/fileadmin/epolitix/stakeholders/Unite_further_evidence_to_the_Transport_Select_Committee_Enquiry_into_Flight_Time_Limitations__final__2_.pdf)  
[http://centrallobby.politicshome.com/fileadmin/epolitix/stakeholders/Unite\\_Response\\_to\\_the\\_Transport\\_Select\\_Committee\\_Enquiry\\_into\\_Flight\\_Time\\_Limitations\\_\\_final\\_.pdf](http://centrallobby.politicshome.com/fileadmin/epolitix/stakeholders/Unite_Response_to_the_Transport_Select_Committee_Enquiry_into_Flight_Time_Limitations__final_.pdf)

the data source of the proposal and, Unite believes, it becomes obvious that crew fatigue will become more common place.

3.6 In Appendix 1 Unite has set out a side by side comparison of the net effect of introducing the EASA proposals over CAP 371 to illustrate that these changes have the potential to increase the maximum allowable hours by over 25%.

3.7 At one airline crew can face a whole month where they will be scheduled to be on standby duty. During this time they need to be in a position to be at the airport in uniform within three hours of receiving a call.

3.8 In Appendix 2 Unite has set out an extract from both current and proposed legislation. Unite believes that the caveat used in part (h) of the CS proposal is the problem. We believe this is a dangerous fudge in an attempt to create a single period of standby, that permits coverage of flights departing at the earliest times of the day and also to cover the latest landings.

3.9 The vast majority of UK flights are public carriers (not cargo) and are Short haul in definition. Flights commence between 0500–0600 and typically the latest flights land 2200–2300. Predictive rest is therefore unachievable. Any countenance or suggestion that post duty rest could mitigate is based on the assumption that the fatigue created by the length of the combined standby and flying duty has not led to an incident so far. Therefore Unite believe that this is irrelevant and inadvisable.

3.10 A Stand-By duty by definition describes the unpredictable nature of the duty and therefore requires a degree of understanding and flexibility from the crew member in planning their pre-duty rest, in order to be sufficiently rested and undertake a flying duty period. GM1 ORO.FTL.205<sup>4</sup> demonstrates the knowledge that duties at varying times of the day require differing pre-flight rest provision. The current proposal, requires a crew member to be rested and ready to undertake a flying duty covering an entire day, which could be up to 22 hours, under EASA's guidance. Unite believes this is unsafe.

3.11 The human biorhythm goes through different cycles throughout the day. "Sleep pressure", or the need for sleep, expresses itself at different levels depending on the time of day. There are times when a person can hardly sleep at all and if they do, then the sleep provides a substandard quality of recovery. On the other hand, there are also times—in particularly between two and six in the morning—in which the urge to sleep is especially strong. And the restorative effects are also much better if one sleeps during this period. This time period at night is referred to as the Window of Circadian Low (WOCL). As a consequence the definition of a WOCL<sup>5</sup> is the home base time period between 02.00am and 05.59am within a band of three time zones. Beyond the three time zones the WOCL refers to home base time for the first 48 hours after departure from home base time zone, and to local time thereafter.

3.12 Unite believes that whilst the provision of FTL.1.230.2 on paper appears to satisfy the problem, in practice the provision is an unachievable fatigue prevention statement. Ultimately one can either plan to be adequately rested to commence a flying duty during the later hours of a "local night" (very early in the morning and encroaching the WOCL) or plan to be sufficiently rested for a duty that lands in the early hours of the next "local night" (very late in the evening/early hours of the following morning and well into the next WOCL).

3.13 Unite feels that the issue of what time a crew member is contacted is an irrelevance. If a crew member is expected to be well rested to wake up and go to work at 04:00 am they would not plan your sleeping pattern to be the same as if you were planning on being alert to finish at 02:00 am the following morning. It is the planning of the pre-duty rest that is scientifically fundamental. In absolute contrast with EASA's past assertion, Unite's data from actual crew members confirms that they routinely wake themselves prior to the start of a standby period to commence personal preparations for imminent contact. Unite therefore feels that irrespective of the current CAP 371 provision this provision this issue requires re-evaluation.

#### 4. ACTUAL HOME STANDBY PROVISIONS

4.1 Each UK carrier rosters Home Stand-by differently, due to the innate requirements of the operation. Although there are some similarities in airlines operating in similar markets there are differences. These differences range from a day of standby duty on mainly short haul and low cost, to blocks of up to a month by a mainly long haul carrier. The charter airlines nearly all apply a combination of 1–2 days and week blocks. Short Haul carriers typically have daily standby, with their early start times around 04:00 am although Bmi regional does employ a start of 02:00 am. Where carriers have multiple bases, standby crew can be utilised from any base.

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<sup>4</sup> As laid out in appendix 2 to this response

<sup>5</sup> Under EU.OPS.FTL—OPS 1.1095

<i>UK Airlines Home Standby details</i>	<i>Call Out</i>	<i>Number of Days Rostered</i>		<i>Frequency average per month</i>	<i>Additional restrictions</i>	<i>Number of Cabin Crew</i>
		<i>Min</i>	<i>Max</i>			
BA Gatwick	120 min	3	7	6–14	Maximum 2 blocks per month. For both S/H & L/H	1,200
BA Heathrow	120 min			24 hour availability every day	3 different fleets, Mixed fleet has no restrictions.	16,000
Bmi Regional	60 min	1	Any	4		75
Easy Jet	90 min	1	6	4		4,500
Flybe	90 min	1	6	4	Several different types of SBY, all with varying rules.	680
Monarch	120 min	1	Any	4		1,400 during the summer
Thomas Cook	90 min	1	Any	Any		1,100 to 1,400 during the summer
Thompson	90 min	2	5	1–4	5 blocks per 6 months, separated by 28 days.	2,200
Virgin	120 min	1 mth	1 mth	7	5 blocks per 3 years. (=150 days out of 1,095)	4,500 3,500 UK based crew

4.2 It's difficult to calculate a specific percentage for standby rostering so that we can see the exact impact over a longer period of time. Seasonal variations, individual base requirements, number of routes/aircraft based at an airport, size of operation, all impact on the regularity of rostering. Considerable variations within each airline across base networks are not uncommon. However, Charter carriers can see 100% of a roster given over to standby during off-peak times.

4.3 However, we can be sure that over a period of time, an average of 20–25% of a UK crew members work will begin as a standby. It is certainly a duty that impacts the majority of crew as a weekly occurrence. Unite believes that the repercussions of such a duty that will have a dramatic impact on the subsequent duties and this effect cannot be underestimated.

4.4 As highlighted above, at Bmi Regional, those on home standby are required to report to their base in as little as 60 minutes after receiving the call. When they arrive they are then told where they need to go to and are provided with a hire car. This airline currently operates out of eight bases around the country including all three main Scottish airports, Manchester, Birmingham International & Bristol. As a consequence the crew member may arrive at their Manchester base after being up all day at home, be told to drive to Aberdeen, which is a journey of 580 kms, before they start their pre-flight work and flight duty period. This crew member would then potentially face that journey back to Manchester to pick up their own vehicle before returning home.

4.5 As highlighted the current proposal requires a level of pre-duty rest preparation, which is impossible to achieve. Unite believes the frequency of standby demonstrates that it is a duty with considerable impact on Flight Safety.

## 5. THE SCIENCE

5.1 The premise that the frequency of standby has a considerable impact on safety is confirmed by several scientific studies, which do not support this element of the proposal. We believe that the reluctance of certain member states, are opposed to a safer standby regulation, similar to our CAP371. Unite believes that the current proposal is, is indicative of a deliberate misrepresentation of the provision of scientific expertise, to engineer the outcome to these states satisfaction.

5.2 None of these scientific studies were conducted on workers working in a similar work environment to cabin or flight deck crew but, Unite believes, are none the less relevant. An aircraft provides a pressurised environment for the crew to work in, which has around 20% less Oxygen to breathe, and a lower humidity, as it emulates being at an altitude of around 8,000 feet above sea level. This explains the scientific discovery of the increased effects of alcohol in an aircraft and greater than normal levels of tiredness experienced by both

passengers and crew. As a consequence Unite believes the effects of working in such an environment is more likely to produce more cases of fatigue than would be found in normal working conditions.

5.3 A survey on 198 train engineers showed that those working on-call had greater difficulty falling asleep while on-call versus when they are not on call. (Pitcher, 2000). Furthermore, engineers slept less when at home than “away”. The authors explained this difference by the presence of family and social obligation when at home.

5.4 A second study has shown with objective measures of sleep on 5 ship engineers, that sleep taken when on standby is shorter and of poorer quality than normal sleep (Torsvall & Akerstedt, 1998).

5.5 Other researches also found that standby duty negatively impact mental health with an increase in anxiety and depression (Chambers et al, 1996).

5.6 NPA provision of Scientific Expertise 3.7 response to Question 11, additional question 5. *One of the key issues in Standby duty is the schedules unpredictability and the associated difficulties for the aircrew to plan their sleep periods including naps. Of course, the shorter the notice, the higher potential impact on sleep.*

5.7 Assessment of the NPA on FTL, 3.7 Standby Question 11 and 12, Dr. Alexander Gundel. *Standby may interfere with regular sleeping times and I would like to discuss the influence of standby on regular sleep (eg From 2300–0700). This approach differs largely from that followed in the NPA. The discussed maximum FDP depends on the interference of standby with sleep. I am considering four different cases:*

1. If start of standby duty does not interfere with regular sleeping times (2300–0700) and if crew has suitable accommodation to get regular sleep during standby the table for maximum FDP can be applied. Crew is encouraged to prepare for a possible duty by additional short sleep in the afternoon (FRM).
2. If start of standby does not interfere with regular sleeping times (2300–0700) and if crew does not have suitable accommodation, FDP for a possible flight and for cumulative limits begins to count from two hours prior to regular bed time taking into account that crew cannot prepare for a late start by additional afternoon sleep.
3. If the start or end time of standby interferes with regular sleeping times and lead to later bed times or earlier wake-up times, flight duty limits have to be reduced by two times the lost hours of sleep applying the equivalent rationale used for in-flight rest extensions.
4. If standby immediately follows FDP, spilt duty regulations are effective. Standby should be counted regarding cumulative limits.

5.8 The main difference in approach is the “focus-on-sleep” as opposed to the consideration of interference with regular sleep. Unite believes that EASA have used the combination to create a rule that applies only when the crew member is called out. This is absolutely flawed because the statement does not mention any call out post undisturbed sleep. The statement instead refers to not being called from any part of the standby duty.

5.9 Unite believes the start time of a standby is the precursor to rest preparation. If you were preparing for an early standby and subsequently not called in, then the sleep would be undisturbed. If the duration of sleep would be earlier than biologically acceptable, to remain awake and not fatigued in the early hours of the following morning. A nap due to its unaccountable and unpredictable nature of standby would, by definition, be unmanageable. Operators would find themselves frustrated if a crew should call in during a “nap” period to inform the company that a nap was impossible. In such a situation there would be no alternative other than standing the crew member down. The effect on normal airline operations could be significant resulting in cancelled flights and aircraft out of position.

## 6. FATIGUE RISK MANAGEMENT

6.1 Unite believes that serious thought needs to be given to the scientific evidence we do have. With the frequency of standby and its inclusion in regular roster lines, it should follow that standby and subsequent flying duties will have an influence on cumulative fatigue. EASA defers from drawing a line in the sand and adopts a less regulatory approach, and one could argue, less accountable approach. Preferring instead to promote the Use of Fatigue Risk Management Systems within individual airlines.

6.2 In researching the preferred computer model that evaluates fatigue “System for Aircrew Fatigue Evaluation” (S.A.F.E), Unite discovered that the systems own evaluation admits it is not accurate in certain areas and recommends further research.

*Fatigue Risk Management Systems (FRMS) using S.A.F.E, evaluation on the model.*

### 8.3 The way forward.

*There are several issues, however, that will need to be addressed, before any model can be considered fully developed. Some of the areas of uncertainty have been discussed in the previous section, and it should be therefore possible to make progress on these fairly rapidly. Others, like the issue of cumulative fatigue may prove to be more difficult, due to the problem of identifying current operations that could contribute useful data. Without these, the predictions of the model would be wide extrapolations, and it is likely that input*

*from laboratory studies and from the military operations will be required to provide rough estimates of the importance of this factor.<sup>6</sup>*

6.3 Unite believe regulators need to be sure that FRMS will be the safety net EASA hope, and the Operators conform to its recommendations. Unite is not suggesting that a company could or would deliberately “ignore” evidence within their operation but if the legislation is based on such a system which is by its own admission potentially flawed the ramifications could be profound.

6.4 Unite believes that the UK legislation is tried and tested in this area and is safety focused. Consequently loosening these regulations for a scheme designed to harmonise is not in its self dangerous but any replacement needs to be based on scientific fact not ideals and aspiration which may be affected by commercial interests. CAP371 does have areas that we believe need review, as a starting point though, not as a complete rewrite where some of the greatest safeguards are dismissed for a new untried and contested harmonious replacement.

6.5 In Mick Spencer’s 2011 study “Fatigue study on FTL” he makes the following observation: *There is very little scientific evidence to support specific limits for cumulative duty hours. The main issue is that sufficient time for recovery sleep or sleeps should be provided at regular intervals to overcome the effect of schedules that disrupt the normal pattern of sleep. The limits of 60 hours in seven days and 190 in 28 days are very high, when crews are subject to continual disruption of the sleep and circadian rhythms. However, it is realised that the long-haul limit over 28 days is effectively restricted by the 28 day limit on flying hours.*

## 7. CONCLUSION

7.1 Unite feels that before we abandon CAP371 and allow the passing of Regulation (EC) No 216/2008, which revokes Annex III to Council Regulation (EEC) No 3922/91 we should be sure that these provisions are safe. Unite is not convinced that they are and has serious concerns that the introduction of these provisions in certain areas will lead to a considerable increase in fatigue.

7.2 Unite does not dismiss the usefulness of S.A.F.E as a tool to assist in mitigating fatigue in an average individual under a normal work situation. We suggest that S.A.F.E is, however, a blunt instrument not designed to be a safety net for lax regulations which is designed to be fairly open so that they can cover the vast array of varying types of operation. There is also no average person as everyone reacts differently to fatigue. As a consequence Unite is not convinced this is the answer.

7.3 As highlighted previously, Unite is already aware of worrying levels of under reported fatigue which have been brought about by concerns over job security and fear of repercussions, reporting fatigue should be non-punitive. Unite feel that there needs to be strict oversight of the application of FTL and FRMS, ongoing studies to independently assess their impact, education/training for all concerned and the involvement of those on the front line, ie trade unions. This would include ongoing testing of crew to assess levels of fatigue.

7.4 There are some parts of FTL which will enhance safety in the UK but Unite needs to ensure the total package is safe and prevents fatigue in crew members.

### APPENDIX 1

#### CAP 371 V EASA SCENARIOS FROM STAND-BY AT HOME.

Below are two scenarios both with a standby duty starting at 04:00 hrs undisturbed before 07:00 hrs. 12:55 hrs & 13:05 hrs are used in this example as the actual report time because current CAP 371 guidelines change FDP at 13:00 hrs.

Both scenarios don’t show either the best or worst duties possible, they demonstrate the considerable difference in possible duty times within a short timeframe. Both examples cover Long Haul and Short Haul by covering both 1 and 4 sector duties.

Report	12:55				13:05			
	CAP371		EASA		CAP 371		EASA	
Sectors	1	4	1	4	1	4	1	4
FDP at time of reporting	11:00	9:00	13:00	12:00	11:00	9:00	13:00	12:00
Time on Standby (hrs)	8:55	8:55	8:55	8:55	9:05	9:05	9:05	9:05
CAP371 Buffer 6hr 8hr (hrs)	-2:55	-2:55	N/A	N/A	-3:05	-3:05	N/A	N/A
Discount undisturbed 6 hours			N/A	N/A			-5 min	-5 min
Actual FDP (hrs)	8:05	6:05	13:00	12:00	7:55	5:55	12:55-13:00	11:55-12:00

<sup>6</sup> (CAA paper 2005/04—Aircrew Fatigue: A review of research undertaken on behalf of the UK Civil Aviation Authority.)

Report	12:55				13:05			
	CAP371		EASA		CAP 371		EASA	
Time On-Chox <sup>7</sup>	21:00	19:00	01:55	00:55	21:00	19:00	0200-02:05	01:00-01:05
Standby+ Flight Duty Period (hrs)	17:00	15:00	21:55	20:55	17:00	15:00	22:00-22:05	21:00-21:05
Sector difference (hrs)	04:55	5:55	04:55	5:55	5 hrs	4:15	5:00-5:05	6:00-6:05
% increase			25%	26%			25%	26%

*Note: The FDP taken from CAP371 is for cabin crew only. Flight deck FDP is one hour less, therefore the percentage of duty time increase will be even greater for pilots.*

## APPENDIX 2 CURRENT AND PROPOSED REGULATIONS:

CAP 371, SECTION B, 12.1–12.5:

The time of start, end and nature of the standby duty must be defined and notified to crew members. The time a standby duty starts determines the allowable FDP, except that when the actual FDP starts in a more limiting time band then that FDP will apply. However, when standby is undertaken at home, or in suitable accommodation provided by the operator, during the period 2200 to 0800 hours local time and a crew member is given 2 hours or less notice of a report time. The allowable FDP starts at the report time for the designated reporting place.

12.2 When a crew member is on standby duty on immediate readiness at an airport, then the allowable FDP is calculated using the start time of the standby duty.

12.3 If a crew member is called out from standby, the stand by duty will cease when that individual reports at the designated reporting point.

12.4 The following limits apply:

Standby Duty (all cases): 12 hours maximum duration

Standby followed by an FDP: As in case A and B below

*Case A*

If a crew member is called out from standby to conduct an FDP before completing 6 hours standby duty the total duty period allowed is the sum of time spent on standby and the FDP allowable from paragraph 13, Tables A,B,C or paragraph 23, Table D.

*Case B*

If a crew member is called out from standby to conduct and FDP after completing 6 hours or more hours standby, then the total duty period allowed is the sum of all the time spent on standby and the allowable FDP, reduced by the amount of standby worked in excess of 6 hours.

12.5 When any period of standby finishes, during which a call-out has not occurred, at least 12 hours rest must follow prior to the next duty period. Similarly, following the end of a contactable period or periods, at least 10 hours must elapse prior to the next duty period.

CS FTL.1.230.2:

2—Standby other than airport standby:

- (a) the maximum duration of standby other than airport standby is 16 hours;
- (b) 25 % of time spent on standby other than airport standby counts as duty time for the purpose of ORO.FTL.210;
- (c) standby is followed by a rest period in accordance with ORO.FTL.235;
- (d) standby ceases when the crew member reports at the designated reporting point;
- (e) if standby ceases within the first 6 hours, the maximum FDP counts from reporting;
- (f) if standby ceases after the first 6 hours, the maximum FDP is reduced by the amount of short-call standby time exceeding 6 hours;

<sup>7</sup> On Chox means the aircraft has landed and wedges are placed around the wheels. This is not the end of a crew's duty as they still have to see the disembarkation of passengers and go through a duty debriefing period. This could take a further hour or more depending on incidents in-flight or delays in the disembarkation of a passenger who needs assistance, for example.

- (g) if the FDP is extended due to in-flight rest according to CS FTL.1.205 (3) or split duty according to CS FTL.1.220, the 6 hours of paragraph (e) and (f) are extended to 8 hours;
- (h) if standby starts between 23:00 and 07:00, the time between 23:00 and 07:00 does not count towards the reduction of the FDP under (e), (f) and (g) until the crew member is contacted by the operator; and
- (i) the response time between call and reporting time established by the operator allows the crew member to arrive from his/her place of rest to the designated reporting place within a reasonable time.

#### GM1 ORO.FTL.205 FLIGHT DUTY PERIOD.

3) Preparation of duty rosters sufficiently in advance with planning of recurrent extended recovery periods and notification of the crewmembers well in advance to plan adequate pre-duty rest.

### APPENDIX 3

#### OTHER RELEVANT COMMENT FROM CREDIBLE SOURCES

##### 5.5 Short haul studies (p29)

Other factors that interacted with early starts were the journey time to the airport, sleeping in a hotel instead of at home, and in advance of an hour local time, associated with an overnight stop on the continent. Although sleeping in a hotel reduced the journey time by an average of over 30 minutes, the quality of sleep was poorer and there was no improvement in alertness. The advance of local time was associated with a reduction in alertness on waking before an early report time. (CAA paper 2005/04—Aircrew Fatigue: A review of research undertaken on behalf of the UK Civil Aviation Authority.)

##### 5.6.3 Night operations (p32)

Previous data collected by DLR investigated return flights between Germany and the Seychelles had indicated that the model might be underestimating the impact of consecutive night duties. Whilst the DLR study had provided an indication of the possible weaknesses in the model, it had only involved two consecutive night duties. It was unclear whether problems associated with consecutive duties became more severe as the number of duties increases. To address the issue, Britannia Airways, who, were known to be undertaking a large number of night flights, were approached to participate in a study specifically targeting consecutive night duties. As in the previous study, factors that influenced levels of fatigue were to e of day, the length of the duty period and the number of sectors. In addition, the number of consecutive duties and the number of consecutive late finishes also affected levels of fatigue.

The main objective of this study was to investigate the effect on aircrew fatigue of several consecutive night duties. However as a result of the combination of two factors, this objective was not fully achieved. The first factor was the unfortunate timing of the study, which started in September 2001.

S.A.F.E. includes a factor associated with duties on consecutive days and since this factor is independent of the time of day, it applies equally to night duties. There was insufficient evidence from this study to support any modification to this factor. However the concern remained that the effect of consecutive night duties was not being adequately represented. It was suggested that it might be necessary to consider whether further information could be collected on other night operations that would supplement the information collected here. (CAA paper 2005/04—Aircrew Fatigue: A review of research undertaken on behalf of the UK Civil Aviation Authority.)

##### 7 Main Areas of Uncertainty (p39).

The various validation studies that have been carried out have enabled the model to be improved considerably, and it can now provide realistic assessment of fatigue levels associated with a large number of different types of operation. However there are still some issues that need to be addressed. There are also some types of operation that it has not been possible to validate at this stage, particularly those that involve an interaction between different factors. This applies for example, to short haul schedules with an adverse juxtaposition of early starts and late finishes and to long haul schedules with different combinations of start times and duration of layover, particularly after a long eastward transition, from those already studied. The importance of cumulative fatigue, especially as a result of a succession of long time zone changes is another area where further information is required. (CAA paper 2005/04—Aircrew Fatigue: A review of research undertaken on behalf of the UK Civil Aviation Authority.)

A final issue concerns the applicability of a model based mainly on subjective fatigue and simple performance tests that are unrepresentative of the task of piloting an aircraft (UNITE include cabin crew). The critical factor for safety is not fatigue, or even sleepiness, but the accident risk. (CAA paper 2005/04—Aircrew Fatigue: A review of research undertaken on behalf of the UK Civil Aviation Authority.)

### Written evidence from the European Cockpit Association (FTL 08)

I am writing in response to your notice inviting evidence for the above inquiry on behalf of the European Cockpit Association, the EU Social Partner representing European professional pilots.

Since the Transport Select Committee's (TSC) original report there have been no substantive changes to the regulatory environment to address the issues raised by the Committee, and a number of additional concerns have arisen now that the Regulation has been formally proposed by the Commission. These are detailed in the points below.

**The professional judgement of European pilots is that, in exceeding its own legal mandate, the Commission proposal contravenes scientific advice on what constitutes a minimum level of safety. It will put UK and European citizens at an avoidable and unacceptable level of risk. We urge the Committee to advise Parliament and the Minister that the UK should do all it can to prevent the adoption of these ill conceived, procedurally flawed proposals.**

#### 1. HIGHLY CRITICAL EUROPEAN TRANSPORT SAFETY COUNCIL (ETSC) REPORT (attached)

**1.1.** "(ETSC) believes that the proposals do not fully and properly reflect the scientific evidence that should underpin fatigue management. Nor do they fully incorporate the scientific evidence which EASA itself commissioned."

**1.2.** The ETSC brought together 6 of the most renowned experts on fatigue science from across Europe and asked them to examine the proposals from the European Aviation Safety Agency (EASA) on FTLs. These are referred to as EASA's Opinion 04/2012. It is this Opinion on which the Commission's proposed regulation is based.

**1.3.** The scientists were deeply concerned by the way in which many areas of scientific advice were not heeded, and the way in which scientific advice was sidelined in the rulemaking process. As they diplomatically put it: "it is also clear that the views of the scientists were incorporated at a fairly late stage in the drafting process and that several of their recommendations may not have been fully understood by the Agency".

**1.4.** The ETSC specifically singles out the following areas of the EASA Opinion and Commission proposal as being below the minimum safe level supported by science:

- 1.4.1. Maximum Flight Duty Periods (particularly overnight where the maximum safe limit is 10 hours and the proposals allow up to 12 and a half hours through the night, and duties containing more than one flight where there is insufficient allowance made for the fatiguing effect of multiple flights)
- 1.4.2. Flight Duty Periods (FDPs) extended by the use of relief crew and in-flight rest (where maximum FDPs are increased to arbitrary round numbers far in excess of the limits justified by scientific studies looking at exactly this issue)
- 1.4.3. Multiple early starts—known as "Disruptive Schedules", leading to sleep disruption and/or deprivation (where the scientists recommend protections for consecutive duties of this type that are absent from the EASA proposals)
- 1.4.4. Standby periods (where the scientists ask that a precautionary approach be taken on a number of areas where there is insufficient research, until it can be conducted, and in particular they flag concerns about interference with sleep patterns and the way in which the standby proposals can generate the requirement for crews to spend excessive times awake when assigned a duty)
- 1.4.5. Fatigue Risk Management Systems—FRMS (where the scientists express concern that the fundamental principle of FRMS is misinterpreted and that instead it is used to somehow justify accessing more permissive limits or as a tool for an operator to demonstrate compliance rather than actively seeking a safer operation)

**1.5.** ECA has been expressing its concerns about the way in which scientific advice has been continually set aside in the creation of the proposals for some time now, and has repeatedly written to both EASA and the Commission requesting a scientific assessment of the whole package. These requests have all been refused.

**1.6.** It is alarming that the European fatigue science community should have to examine these proposals and express their concerns on their own initiative. It is damning that despite doing so, and despite the detailed advice on exactly where the rules are deficient, and how they can be fixed, that the Commission has not sought to amend their proposed Regulation accordingly.

**1.7.** ECA has sought throughout the creation of the proposed rules to avoid any element of industrial positioning or negotiation by simply accepting the position advised by fatigue science experts. We therefore endorse all the points raised by the ETSC as required changes in the Commission's proposal for a Regulation in order for it to become fit for purpose.

#### 2. EUROPEAN PARLIAMENT TRANSPORT AND TOURISM COMMITTEE HEARING ON FTLs

**2.1.** In advance of the Commission formally submitting its proposal for a Regulation to the European Parliament, the EP Transport and Tourism Committee held a hearing on the issue to learn for itself of the

issues at stake. Called before the Committee were representatives from DG Move in the Commission, EASA, the Association of European Airlines, the International Air Carriers Association, The European Transport workers Federation, ourselves at ECA, the UK CAA, and the scientists who advised EASA.

2.2. The hearing can be viewed in full here: <http://www.europarl.europa.eu/ep-live/en/committees/video?event=20130618-1500-COMMITTEE-TRAN>

2.3. Edited highlights were compiled by ECA for viewing here: <http://youtu.be/rTI-LDGxBvk>

2.4. Airlines stated that they felt the proposals were “fair” and “balanced”. Unfortunately this balance appears to be between the minimum safety level advised by scientists, and the even more permissive wishes of the industry.

2.5. Of particular relevance was the testimony of Dr. Alex Gundel, representing the scientists. In statements that again highlighted the contravention and sidelining of scientific advice he concluded by stating: *“Honourable Members, if you are in favour of the proposal that has been put forward, you’d be voting against the opinion of scientific experts.”*

2.6. EASA also stated that it did not wish to respect advice that incorporated studies its administrative staff (who did not have any scientific qualification) deemed not to be “good science”. It further went on to say that it did not take scientific recommendations “literally” (a comment we find bizarre). It must be asked what other way a safety agency should take them.

**2.7. The hearing served to underline and make explicit to MEPs the concerns expressed by scientists that the proposals are below the level of safety recommended by science. It also made clear that this was due to deliberate action on the part of EASA, and that the airline lobby was only too happy with the outcome. Particularly in light of the extensive complaint made by our UK member, BALPA, to the EU Parliamentary Ombudsman, it must be asked whether this amounts to wilful maladministration.**

### 3. EU COMMISSION PROPOSAL FOR A REGULATION AVOIDS REGULATING ON MOST SUBSTANTIVE PROVISIONS

3.1. Unlike EU Ops Subpart Q (the current EU regulation on FTLs), or any other sections of EU Ops, the Commission proposal for a Regulation contains little substantive material in its Implementing Rules.

3.2. The majority of provisions are pushed into “Certification Specifications”, a form of soft law that remains under the sole executive authority of EASA. These provisions have not been published with the proposal for a Regulation.

3.3. It is therefore not possible even to see, let alone guarantee, how EASA will regulate large areas of airline operations with respect to crew fatigue. These rules can be changed at any time by EASA.

3.4. Given that it is impossible to scrutinise or have surety over significant and critical areas of FTLs under the proposal for a regulation, it is difficult to see how Member States can endorse the proposal, or national regulators have confidence in it.

**3.5. Accordingly we would advise Member States to seek its rejection on this point alone.**

### 4. EU COMMISSION PROPOSAL IS NOT COMPATIBLE WITH THE AIM OR CONTENT OF THE LEGAL ACT

4.1. The legal mandate for the creation of the proposed EU FTL rules requires that they are based upon scientific and medical evidence.

4.2. As the previous points demonstrate, the proposed rules contravene scientific evidence.

4.3. There has been no referral to medical evidence at all in the creation of the proposed rules.

4.4. The Commission proposals are therefore not compatible with the aim or content of the legal act (Reg 1899/2006 amending 3922/91, and Reg 216/2008) mandating their creation.

**4.5. Accordingly, the Commission proposal should in any event be rejected by the European Parliament and Member States.**

### 5. EU COMMISSION PROPOSAL EXCEEDS THE EU’S POWERS OR REMIT AS IT INFRINGES THE PRINCIPLE OF SUBSIDIARITY

5.1. Having established that the Commission proposal for a regulation does not follow scientific and medical evidence in setting a high level of safety, it is necessary to look at what it is based on, and what level it is set at.

5.2. It is clear that in seeking to compromise or “balance” between a scientifically advised safety level and the commercial and operational wishes of airlines, the Regulation seeks not to regulate safety, but to regulate based on claimed operational and crewing costs within the industry.

5.3. These areas are not within the mandate of EASA to provide an Opinion on, or to regulate and oversee. Indeed if it is to be regulated at all, it is something that could and should be done by national Parliaments—it is not a requirement of harmonised safety rules or for the operation of a Single Market.

**5.4. The proposed regulation therefore infringes the principle of subsidiarity, and should be both rejected by the European Parliament, and subject to an “Orange Card” by the national Parliaments of Member States.**

RECOMMENDATIONS

We understand that the Transport Select Committee will provide an updated opinion on the EU Commissions proposal for a regulation to the UK’s European Scrutiny Committee to assist it in drafting its report, and considering whether to put the proposal to a Parliamentary debate.

Given that the Commission’s proposal on this critical area of aviation safety:

- Contravenes available scientific advice;
- Is based on an Opinion fatally undermined by maladministration within EASA;
- Avoids scrutiny or surety on most substantive provisions;
- Is not compatible with the aim or content of the legal act mandating it;
- And infringes the principle of subsidiarity.

We would recommend that the Committee’s report advises the Minister not to adopt the proposals; that the issue is put to Parliamentary debate in the UK with a view to directing the Minister not to adopt the proposals; that UK MEPs are asked to reject the proposal as it stands; and that the UK Parliament uses its Orange Card to prevent the infringement of subsidiarity.

August 2013

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**Written evidence from BALPA (FTL 09)**

1. EXECUTIVE SUMMARY

1.1 The Transport Select Committee’s recommendations from its previous inquiry have largely been ignored.

1.2 The Committee’s follow up inquiry is in the context of a very long rule-making process which is now ending. Pilots’ representatives, scientists and safety campaigners have tried to engage with the process but involvement has been resisted or not taken seriously. We feel that what is now before the European Parliament is not fit for purpose. In contravention of the legal mandate it is insufficiently based on science and medicine and therefore cannot be supported by pilots.

1.3 Your Committee has been concerned about these proposals, which represent a deterioration of safety standards compared to our current Flight Time Limitations (FTLs) in the UK, known as CAP 371. Behind these proposals lies a fundamental shift in the way that pilots’ hours, as well as many other aspects of aviation safety, are regulated; a shift away from the UK CAA and its inherent parliamentary oversight through the Department for Transport and towards EASA with very little democratic oversight and, in our view, serious questions about its ability to cope with this huge task. This last point is especially important because of the nature of European FTL regulation. Important parts of the provisions are not contained in the “Implementing Rules” (which *are* subject to European Parliamentary oversight) but rather in “soft law” such as “Certification Specifications” and “Acceptable Means of Compliance” which are not subject to any kind of parliamentary scrutiny and can be changed, subject to a weak rule making process, by an unelected EASA Executive Director. Whether one considers this shift in authority to Europe a good or bad thing, it is a fundamental one, and therefore doubtlessly of interest to both the Transport Select and European Scrutiny Committees.

1.4 Averaged over a long period, the proposed new European rules will not make a British pilot work longer than they already do, but with the greater potential to cause fatigue in the shorter term and in complexity and lack of good scientific and medical underpinning, they pose the most important of all current hazards to UK flight safety.

1.5 Airlines find economic benefit in having the facility to make pilots work longer whilst on duty, even though their total annual duty hours are unchanged. The problem of single or closely grouped long periods of duty is that the fatigue risks accumulate more or less exponentially towards the end of the duty. Most pilots have, to some degree, already had the experience of flying whilst fighting sleep and have found the experience to be distressing or even frightening. 43% of pilots report involuntarily falling asleep on the flight deck and of these 31% wake to find the other pilot asleep. Against that independently researched feedback we find the CAA’s recent claim of only two such reported examples in the last 30 years to be disconnected from the actual scale of the problem; see <http://www.bbc.co.uk/news/uk-england-london-22059560>

1.6 The proposed European rules are likely to substantially water down existing UK rules. The UK Government has said it cannot augment the rules to a higher safety standard, despite the UK having amongst the busiest skies in Europe. But even if it could augment the rules, it has said that it will not.

1.7 The terminology of the proposed rules is muddled. Key words such as “maximum” have a near opposite meaning to their plain English meaning and many seemingly definitive statements have a different interpretation

when cross referenced to a web of other statements. This confusion may now be multiplied as the rules are translated into European languages.

1.8 At a time when human fatigue risks have been found to be generally underestimated with the typical direction of flow of fatigue and sleep medical science towards a more cautious approach, rules have been developed in Europe that go against that direction despite EASA's legal mandate requiring them to take account of scientific and medical knowledge.

1.9 There has been a lack of transparency in the development of the rules. EASA constituted a rule making group of "experts" that it seems had little or no scientific and medical expertise. This has led BALPA to submit a complaint of maladministration to the European Ombudsman.

1.10 We also observe that the UK CAA provides scientific commentary on fatigue science matters which is outwith the mainstream of scientific opinion. When we ask for the qualifications of the CAA advisors, the CAA is evasive. We have serious concerns about FTL specific scientific governance at the CAA; in particular the way in which the CAA may fund and may seek to control FTL related scientific work.

1.11 The CAA's support for the proposals has left us concerned that we are witnessing regulatory capture and, for the first time in our history, has left Britain's pilots without confidence in the UK CAA's regulatory oversight of FTL. The CAA has as part of their Strategic Plan a Partnership in Safety strategy and this breakdown in trust in this area between pilots and the CAA is in itself a safety risk that both BALPA and the CAA have to address.

1.12 The Government has said that it will support the proposed rules because the independent UK CAA has so advised. We believe there are questions over the CAA's independence and expertise in this area. In accepting the CAA advice without any peer review, or reflecting on the concern of the UK's commercial pilots, we believe the Minister is wrong.

We recommend that:

1.13 On the basis of the evidence available to it that the Transport Select Committee reiterates its concerns stated in its previous report into Flight Time Limitations.

1.14 On the basis of its concerns, and on the basis that these proposals represent a fundamental shift of power away from the UK CAA and to EASA, that the Transport Select Committee recommends to the European Scrutiny Committee to withhold its approval and to suggest a debate on the matter in the House of Commons.

1.15 The Transport Select Committee asks the CAA to provide the evidence that any named UK fatigue scientist and any named UK medical specialist is prepared to defend the CAA's view that there is no scientific evidence to suggest that any of the limits established in the Opinion are unsafe.

1.16 The Transport Select Committee asks the CAA to give, in the case of 2 pilots being on the flight deck, an estimate of the incidence of one pilot involuntarily falling asleep and also an estimate of the incidence of both pilots involuntarily falling asleep at the same time. The CAA should also be asked to explain how these estimates may differ from the actual number of reported events.

1.17 The Transport Select Committee asks the CAA to give an explanation of the analysis undertaken to support the CAA's view that the provisions will deliver a significant improvement in safety across the EU as a whole. This analysis should describe on a State by State basis how the fatigue hazard and numbers of hours flown may change following adoption of the proposals.

1.18 The Transport Select Committee recommends that EASA should begin the process of constructing a new set of FTL again with a properly constituted expert group, based on scientific evidence. Failing that, the CAA and DfT must use the new opportunity afforded to it by the inclusion of a new "safety enhancement" clause to "fill-in" the glaring safety gaps.

1.19 The Transport Select Committee gives consideration to a broader inquiry to look at the way the CAA works, its independence from the industry that it regulates and the work of the European Aviation Safety Agency.

1.20 The Transport Select Committee recommends that a fatigue science advisory panel that is independent of the CAA is set up in the UK.

## 2. BALPA'S CRITIQUE OF THE GOVERNMENT RESPONSE TO THE COMMITTEE'S FIRST REPORT OF SESSION 2012-13: FLIGHT TIME LIMITATIONS

Our critique focuses on what the Transport Select Committee asked to be done, the Government's direct response to this and the situation today.

### 2.1 Recommendation 1.

You asked for three things to be done.

You asked that the Government should seek further information on the operator responsibilities proposed by EASA. The Government response made no direct promise to seek this information from EASA. Since your enquiry we are not aware of any substantive publication in this regard.

You asked that the new role of the CAA in the additional oversight of scheduling practices requires clarification. The Government said that the CAA will continue to work with EASA to ensure that comprehensive guidance material is established. Since your enquiry, we are not aware of the publication of any new guidance material.

You asked that the CAA sets out its strategy for enforcement and how it will ensure that operators comply with the responsibility not to construct fatiguing rotas. In the response the CAA made no promise to set out its enforcement strategy, however, it is implied that the CAA will adopt EU legislation in this regard. We consider that a full response to your question would have set out the enforcement strategy that is proposed to be adopted. Since your enquiry, we are not aware of the publication of an enforcement strategy.

### 2.2 Recommendation 2.

You asked for two things to be done.

You asked that the Government follows up the CAA's concerns about the frequency with which the maximum flight duty period can be exceeded during a scheduled seasonal period. The CAA said it will produce revised guidance to operators. Since your enquiry we do not believe that revised guidance to operators has been issued.

You asked that the Government should seek to restrict this limit during EU discussions on this matter. The CAA said that it will raise this issue during EU discussions on this matter and that it will require operators to demonstrate active management of the programmed Flight Duty Period. Since your enquiry, the CAA has not published the results of any such discussions that may have taken place. Moreover, we do not understand what the CAA means by the expression "active management" as management is inherently active.

### 2.3 Recommendation 3.

You asked for two things to be done.

You asked that the CAA publish the number of incidents involving fatigue in its annual report so that trends can be tracked. The Government did not promise to do this. Since your enquiry, the CAA annual report has been published; it does not describe the number of incidents involving fatigue.

You asked that the CAA investigate potential under-reporting of pilot fatigue so that the scale of the problem is properly recognised and is being effectively dealt with. The CAA said that it will vigorously pursue the encouragement of the open reporting of fatigue. Since your enquiry, we do not believe that the CAA is minded to properly recognise the problem of pilot fatigue.

An example of this is the response given by the CAA during a recent piece broadcast by BBC London News. The subject under discussion was how often pilots involuntarily fall asleep on the flight deck. The CAA stated that they had just two reports of this in the last 30 years. We believe this is demonstrative of a fundamental complacency and lack of understanding around the prevalence of this problem. (The piece is available here <http://www.bbc.co.uk/news/uk-england-london-22059560>)

We said that in reality this occurs at least every 24 hours on UK registered aircraft and probably a lot more than that. We suggest that the CAA does not want to measure the occurrence of involuntary sleep on the flight deck as in doing so they would open a Pandora's Box. It seems as though the CAA would prefer to maintain the taboo. The further point is that because the investigation of flight deck involuntary fatigue involves the carriage of equipment on the flight deck, pilot associations need the co-operation of the airlines and the CAA in order to investigate this problem.

Of greater concern is the situation where both pilots may have fallen asleep at the same time. In particular there is no study of the dependence of the risk of involuntary sleep on the sleep state of the other pilot. In plain terms if one pilot falls asleep, does this increase the risk of the other pilot falling asleep? In an individual letter sent to all CAA Board members we tried to engage Board members with this issue only to receive a dismissive reply (see appendices 8 & 9).

In the first quarter of this year the Confidential Human Factors Incident Reporting Programme (CHIRP) reported:<sup>8</sup>

*"..in some cases (Fatigue Risk Management Systems) FRMS is used to justify an operator's commercial schedule by management exerting pressure on individuals not to submit a fatigue report or by selectively assessing "operational fatigue" reports as "individual sickness" and thus discounting such reports from being reviewed under the FRMS".*

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<sup>8</sup> <http://www.chirp.co.uk/downloads/ATFB/ATFB105.pdf>

In the second CHIRP report this year<sup>9</sup> there is the report that states:

*“We have a fatigue reporting system, yet people are too scared to use it and I meet more and more people who are fatigued, but flying. Recently, I overheard a manager telling someone “to be very careful about calling fatigued on the last day of a sequence of duties, because it will look very bad when you’re going on to days off”. How can this be allowed? Is the CAA aware of this? If there was ever a day to call fatigued, it is the last day of a sequence of duties.*

*Picture this: You are working a series of “earlies”, most days waking up at around 3am. You then receive a last minute roster change to a late Standby (SBY) duty (but your body wakes you up early, so not enough rest). You are then called out from SBY for a delayed, long four sector flight duty period and rostered for a further multi sector late duty the next day. So you finish a week when you should have been on “earlies” (and originally planned to finish late morning) now finishing the week at close to midnight. You then express your concerns to a manager and the manager tells you that if you call fatigued, it will look very bad!*

*This is precisely a situation that occurred recently to an experienced flight crew member. I can only imagine how similar situations must be for junior First Officers in the company and now wonder how many of them are flying fatigued. This is a safety risk in my opinion, and something should be done to stop managers threatening the use of fatigue reporting”.*

Fundamentally, pilots are reluctant to report fatigue because of the jeopardy associated with this. They may in effect be writing the evidence for their own prosecution as it is an offence for a pilot to fly, or plan to fly, an aircraft whilst fatigued. Beyond this many pilots are employed on casual contracts and so rely on employer discretion for their continued employment as well as other benefits such as promotion.

A further fundamental issue is that pilots (people in general) are poor at assessing the performance decrement associated with their fatigue. In plain terms, a person might feel very fatigued but when they have their performance tested by, for example, a reaction time test, they can perform very well. The opposite is also true. Sleep deprived people can feel okay but when their reaction time is tested they have poor results. In certain circles of scientific research the parameter that reflects performance loss is referred to as “drowsiness” rather than fatigue. Hence, even if there were no disincentives to fatigue reporting, a reliance on subjective reporting is much less reliable than a programme of sampling measurements of drowsiness. This issue also relates to the questionable scientific basis for the use of Commander’s discretion. Fatigued pilots may have compromised decision making abilities making them a poor judge of how much more fatigue they can take. This is illustrated in the case of driver road deaths due to involuntary sleep. Drivers might feel that they can predict their impending sleep, but in fact many cannot.

Faced with the barriers to reporting fatigue and the problem of subjective fatigue rather than drowsiness, we suggest that it is not sufficient to rely on reporting to monitor fatigue, and the only way to get a grip on the hazard of tired pilots is to undertake a sampling programme of drowsiness measurements in pilots.

#### 2.4 Recommendation 4.

You asked that, as the scientific advice given to EASA has been clear in recommending that an 11 hour flight duty period at night is too long and should be limited to 10 hours. Your view was that this advice should be adhered to and that Government press EASA for a lower limit for flight duty periods at night in accordance with the scientific evidence on this matter. The Government responded that they would not seek the further changes that you requested because the provisions for 11 hour night FDPs “are broadly consistent with current UK provisions”. We believe this illustrates the CAA’s thinking on the ranking of “operational experience” (or “having gotten away with something so far”) over that of scientific advice.

The Government also state that the CAA is working with an operator who has been trialling 11 hour FDP limits and that although the research has yet to be completed the research has been presented at 2 international conferences. In this regard, if the research has been published then it should be fully cited so that we can review the original work.

The CAA have said that they have proposed additional requirements on the management of long overnight FDPs and that they understand that these amendments and additional requirements will be included in the final draft of the implementing rules. Since your enquiry, on 6 May 2013 the European Transport Safety Council (ETSC) published its position statement on the EASA Flight Time Limitation proposals<sup>10</sup>. The position statement is the report of a group of experts that includes the three EASA scientists as well as a further three scientists. The Council is independent of all pilot associations, of regulators and of industry and government. The report states:

*“The consensus of scientific evidence, however, is clear. Several scientific reports commissioned by EASA over the past 10 years concluded that “FDPs” for minimum crew should not exceed 10 hours overnight”*

<sup>9</sup> <http://www.chirp.co.uk/downloads/ATFB/ATFB106.pdf>

<sup>10</sup> [http://www.etsc.eu/documents/ETSC\\_position\\_FTL.pdf](http://www.etsc.eu/documents/ETSC_position_FTL.pdf)

### 2.5 Recommendation 5.

You asked that the reporting period for incidences of Commander's discretion should not be extended beyond that currently set by the CAA (14 days) in order to increase the likelihood and accuracy of such reports. The Government agreed with this recommendation. However, today the EASA proposals set the limit at 28 days.

### 2.6 Recommendation 6.

You asked that the CAA collate the information provided on the use of Commander's discretion, make this publicly available and monitor that this power is used only in exceptional circumstances. The Government response made no promise to do this. Since your enquiry, the CAA have not done this.

### 2.7 Recommendation 7.

You asked for two things to be done.

You asked that schedules featuring frequent consecutive early starts could prove particularly fatiguing. In order to gain greater understanding of how these should be managed the CAA should commission further research in this area. The CAA made no promise to do this. Today, since your enquiry, no further research commissioning has been announced.

You asked that the Government should press for EASA to include frequent early starts as a factor requiring a fatigue risk management strategy. The CAA made no direct promise to do this.

### 2.8 Recommendation 8.

You asked for two things to be done.

You asked that any overall duty period which reaches the maximum limit possible under the regulations should be reported to the CAA and that the CAA should keep records of such incidents and take action against any operators that schedule duties in this way. The Government responded that new provisions would address these concerns.

You asked that the Government should press EASA to amend its proposals to give national aviation authorities the power to monitor the length of flight duties and to ensure that any duties of maximum length are indeed exceptional, with a view to reducing the maximum flight duty period in line with scientific advice. The Government responded that EASA was expected to include another limitation in the final draft of the implementing rules which will limit the combination of standby and flight duty periods to a maximum of 16 hours. Today, there is an implementing rule that limits combinations of one type of standby, airport standby, and planned flight duty periods to a maximum of 16 hours. However, to this can be added 2 hours of Commander's discretion and so taking account the time for pilots to get to work with respect to this provision pilots could still be landing aircraft after 20 hours of wakefulness. EASA did not cap combinations of rolling delays, where standby may be at home, and subsequent FDP, and so with respect to these provisions pilots could be landing aircraft after more than 22 hours of wakefulness.

### 2.9 Recommendation 9.

You asked for two things to be done

You asked that the Government should seek to ensure that scientists have a more central role in further work by EASA as it finalises its flight time limitations proposals and if it considers revisions to these proposals in future. The Government responded that over 50 scientific papers were reviewed during the rule making task as well as the direct input from the three scientific reports. Since your enquiry, BALPA has further investigated these claims. When we asked EASA for the documentation to support the "thorough" review of these papers, no document was forthcoming; we were ultimately given access to the working groups' intranet site to trawl through to see if we could find the documentation to support the scientific review. The papers were selected by a working group whose scientific and medical qualification is uncertain. We believe that important scientific papers were not included in the "review" as the group may have been unaware of them. The ETSC Report states:

*"..the views of the scientists were incorporated at a fairly late stage in the drafting process and that several of the recommendations may not have been understood by the Agency"*

You asked that the Government should encourage EASA to cultivate an on-going relationship with experts in this field to keep up to date with developments in the science of fatigue and fatigue management. The Government responded that the CAA has proposed an Advisory Group that would be able to "call upon relevant experts". However, BALPA believes that advisory groups need to be experts themselves.

### 2.10 Recommendation 10.

You asked that the Government keep you informed of developments during negotiations and of how our concerns are being addressed during future discussions on EASA's proposals in Europe. The government responded that they would do this.

### 3. BALPA'S COMPLAINT TO THE EUROPEAN OMBUDSMAN

3.1 On 11 June 2013 BALPA submitted a complaint to the European Ombudsman regarding Maladministration at the European Aviation Safety Agency (EASA)<sup>11</sup>. Our complaint of maladministration focuses on our allegation that EASA has failed to act in accordance with laws and other rules that are binding upon EASA. We suggest that, of critical concern to your enquiry, are the circumstances surrounding the UK CAA's support for EASA processes and its FTL proposals. In particular, many of the deficiencies in EASA's approach are mirrored in the approach taken by the UK CAA.

We have complained that EASA has committed 3 breaches of good administration:

- Given the terms of reference for the work involved in revising flight time limitations, scientific advice should have had a more prominent role in the rulemaking process.
- The OPS.055 Group was constituted by EASA in a way such that the Group did not have the capability to fully undertake its assigned task (and EASA failed to provide evidence of qualifications on request).
- EASA took no steps to record, nor manage, conflicts of interest in the OPS.055 Group.

3.2 EASA was bound by its mandate in law to take full account of the state of the art of scientific and medical knowledge in order to produce rules that will ensure a high level of safety. In this regard EASA described the 21 or so members of its FTL working group as “experts”, yet when we made enquiries of EASA as to the qualifications of the group members we found no evidence of scientific or medical expertise.

3.3 Our concerns in relation to the management of conflicts of interest arise generally from the findings of the European Court of Auditor's report<sup>12</sup> that found EASA to be the worst performing of all of the Agencies that were studied. However, specifically we have concerns about how regulators may sponsor and seek to control the output of scientific projects.

3.4 A feature of the EASA proposals is that they deploy an increasing reliance on “fatigue risk management systems (FRMSs)”. Such systems allow airlines to exceed pilot duty hour limits that would otherwise be part of a prescriptive rule set provided that the airline can demonstrate to the regulator that such an exceedance is safe. Although there are benefits to this approach there are significant vulnerabilities that arise. An obvious vulnerability is that FRMSs that allow pilots to fly the most hours are the most attractive to airlines. For FRMSs to work it is important that they are based on objective science and that robust safeguards are in place to prevent bias. Our current experience in one FRMS-rich airline is that fatigue remains a serious problem. It is certainly not the panacea to any of the loopholes and problems in the proposals which the CAA seems to believe it to be. Indeed, misused FRMS may be associated with greater fatigue risks.

3.5 EASA's Regulatory Impact Assessment (RIA) of its FTL Notice of Proposed Amendment (NPA) is substantially based on a fatigue modelling computer program called SAFE. The version of SAFE used for the EASA NPA assessment was v5. BALPA tried to obtain a copy of SAFEv5 so that we could carry out our own analysis of the NPA. BALPA wrote to the CAA on a number of occasions in order to obtain a copy of SAFE, however, we were told that the commercial rights to SAFE had been sold to a private company. On contacting the company we were still not able to obtain SAFE and this remained the case throughout most of the critical phase of the EASA FTL consultation period. We understand that the lack of availability was due to the protracted nature of commercial negotiations between what we believe to be a subsidiary of the CAA, CAA International (CAAi), and the commercial company, and also that changes to the program that were being made prior to the program going on sale. We understand that CAAi receives profits from the sale of SAFE. In the event BALPA commissioned its own analysis using SAFEv5. This version of SAFE, the same version as used in the EASA RIA had an alcohol equivalence functionality that would describe, with respect to a specific parameter of human performance, an index of fatigue that was equivalent to blood alcohol<sup>13</sup>. Using this parameter of SAFE we were able to demonstrate that pilots could be landing their aircraft with such fatigue equivalent blood alcohol levels that were more than four times over the actual flying limit. When we made EASA aware of this they announced that the version of SAFE used by us was a “prototype” and that the production version of SAFE was to have this alcohol functionality removed. We noted that the alcohol functionality of SAFE had been a feature of the program for many years, perhaps a decade or so, and is described in the UK CAA publication of its research in this area and that the CAA had been giving frequent and routine operational advice to industry based on the earlier versions of SAFE that were throughout this time simply described as versions and not as a “prototype”. Those that owned SAFE had made no prior announcement of the removal of this alcohol function and on this basis there was the concern that the decision to remove this functionality was influenced by the commercial interest in the sale of the program. It is important to appreciate that with the emergence of new FTL rule sets that have an increasing reliance on FRMS, the sale of fatigue risk management services to airlines has become a growing bandwagon with many risk management consultancy companies entering the market. Airlines may not want to buy a product that shows that their pilots may, in this sense, be so tired that it is as though they are drunk. Moreover, legislators may be less inclined to support a proposed scheme of FTL if it allows pilots to fly with such unacceptable performance decrements.

<sup>11</sup> <http://www.balpa.org/My-Airline/Airlines/Balpa/Document-library/Flight-Safety/Ombudsman/BALPA-Ombudsman-Complaint-2013-06-11.aspx>

<sup>12</sup> <http://eca.europa.eu/portal/pls/portal/docs/1/17190743.PDF>

<sup>13</sup> [http://www.caa.co.uk/docs/33/CAAPaper2005\\_04.pdf](http://www.caa.co.uk/docs/33/CAAPaper2005_04.pdf)

3.6 A further concern that we have in relation to SAFE is that it may form part of a FRMS that is subject to an Approval by the CAA. In this regard we see a possible conflict of interest between the regulatory approval function and the commercial interest of CAAi that may profit from the sale of a product on which the Approval may be based.

3.7 Our Ombudsman's complaint cites a number of potential consequences to the three primary deficiencies in process.

#### 3.7.1 "6.3.2 *The scientific paradigm of the Group*"

This section of our complaint describes how the group may have unreasonably rejected qualified scientific opinion if there was otherwise no published study that was performed exactly under the conditions under consideration.

#### 3.7.2 "6.3.3 and 6.3.4 *Lack of medical input to the proposals*"

These sections of our complaint describe how EASA has not taken account of the potential long periods of wakefulness on pilot health, such as the propensity to develop heart disease and diabetes. Additionally, the EASA group seem to have little awareness of matters arising from the genetic determinants of resilience to sleep deprivation. Pilots and the public at large may have the view that following sleep deprivation, their fatigue and objective parameters of their fatigue such as attention performance, is wholly a function of external influences such as recent patterns of work and sleep and time of day and body clock and so on. However, this is not the case, as in part people vary in their resilience to sleep deprivation due to genetic factors. The particular importance of this in the current context is that FRMSs tend to push pilots to the limit and those limits are determined by various means but prominent amongst these means are fatigue reports. On this basis, amongst the general panoply of disincentives to pilots reporting fatigue is that in doing so they may in part be admitting to a personal vulnerability. The problem of this is that there may be no legislative framework to prevent indirect employer discrimination in this area.

#### 3.7.3 "6.3.5 *Use of accurate English and the certainty of interpretation of the text of the Opinion*"

In this section of the complaint we explain that the word "maximum" is an important word and it appears in the Opinion some 23 times. On some 19 of these occasions "maximum" does not have its plain English meaning, in fact it has a near opposite meaning. In the language of the proposals a "maximum" flight duty period is taken to be the number of hours of the basic flight duty period. However, there can be further time added to this "maximum", such as "standby", "delayed report", "extension", and "discretion" and so on.

Another point of confusion that can occur innocently, or otherwise, is in relation to what is meant by the "EASA Opinion". Strictly speaking the Opinion refers to the Implementing Rule (IR) and not to the documents that are associated with it which are the associated certification specifications (CSs), guidance material (GM) and acceptable means of compliance (AMC). However, as EASA states, the Opinion cannot be interpreted without the CS, GM, and AMC. It is on this basis that, as an economy of speech, "the Opinion" is often used as a collective term for all four documents. At the same time that EASA published its Opinion (IR) it also published its associated drafts of CSs, GM and AMC because these are needed to understand the impact of the Opinion. These drafts remain as drafts until such time as the Opinion enters into force. It is misleading to say that some provision is not in the Opinion (because the provision is in the draft CS, AMC or GM that become no longer drafts but part of the rule when the Opinion is adopted) and then make no further qualifying statement that the provision is in fact the drafts of either the CS, GM or AMC. In plain terms, if a provision is in the drafts of the CS, GM or AMC it is in effect, after adoption of the Opinion, part of the Opinion.

An important allied point here is that it is only the production of the initial Opinion that requires Parliamentary scrutiny. The production of the CS, GM and AMC are not subject to any kind of parliamentary scrutiny and can be changed, subject to a weak rule making process, by an unelected EASA Executive Director. Moreover, in our view important parts of the fatigue impact of the proposals sit in these non-IR components of the proposals. The evolution of the EASA proposals following the publication of the initial EASA FTL NPA involved a shift of material that was previously in the IR into the non-IR parts of the rules. In general, rules can be moved from IR to non-IR parts of the rules for legitimate reasons; however, it can also be the case that in doing so the rule, even though a non-IR, still has a substantial regulatory impact but it is subject to less scrutiny. The following example illustrates how components of the rules play out in a real world scenario. For example, a pilot is due to report for duty at 8 am. Let us say that this involves the pilot waking from sleep at 6 am in order to get ready and travel to the airport so that he is in the crew room at 8 am. The Opinion (Implementing Rule) ORO.FTL.205(b)(1) then states that his "maximum" flight duty period is 13 hours. However, to this maximum can be added a pre-planned extension (Certification Specification FTL.1.205(2)"pre-planned extensions") of one hour and if there were technical problems a further discretionary period of 2 hours (Implementing Rule) ORO.FTL.205(f)(1)(i) "Commander's discretion", resulting in the pilot landing the aircraft 18 hours after he had woken. However, let us say that the pilot receives a phone call at 6 am advising him that his flight had been delayed due to a technical problem such as an aircraft engine problem or heavy snow at the airport where large numbers of aircraft are delayed. Thereafter, the pilot receives a number of calls about an on-going problem that is finally resolved and the pilot is given a new report time of 4 pm. The pilot's new "maximum" FDP is calculated as being the most limiting of the actual or delayed reporting times. In this case the most limiting FDP is for the delayed reporting time which is 11.25 hours. On

this basis the pilot could be landing the aircraft after 21.5 hrs after waking at 6 am or 22.5 hrs after waking if the one hour extension is applied, and even to this figure could be added a further 2 hours discretion if something went wrong during the flight taking his total time of wakefulness to 24.5 hours at the time of landing. However, completion of the flight duty period is still not completion of duty; the pilot would still have to complete a further 0.5 hrs of post flight duties and then find their way to their bed.

3.8 Our complaint has been taken up by the Ombudsman,<sup>14</sup> who has put some specific questions to the Executive Director of EASA. He has until 31 October to answer the following questions:

- *Can EASA provide documents to understand how the EASA rulemaking group was constituted?*
- *To what extent did EASA inform itself of the qualifications of the rule making group?*
- *Can EASA comment on the complainant statement that it has found no evidence that, at any time, a medical consultant was involved to assess the impact of the proposals on pilots' health?*
- *Taking into account the complainant's statement that it would be satisfied to receive information about the rulemaking group's qualifications in anonymised form, could EASA explain if it is now in a position to disclose information in this regard?*
- *Could EASA explain to the Ombudsman if it has procedures in place for managing possible conflicts of interest and, if such procedures exist, could EASA explain how it applied such procedures to the members of the rulemaking group in this case?*
- *Could EASA explain the relevance of the 13 March 2013 revision of its rulemaking procedure to this case?*

We would be happy to keep the Committee informed of the progress of our European Ombudsman complaint, including the answers to these important questions if and when we receive answers via the Ombudsman's office.

#### 4. EUROPEAN SCRUTINY COMMITTEE, 6<sup>th</sup> REPORT, SESSION 2013–14. 4 CIVIL AVIATION SAFETY

We are concerned to ensure that the European Scrutiny Committee is provided with the full facts of this matter, and has the assertions put to it by the Minister corrected. We are very disappointed to see our legitimate and important concerns misrepresented by the Minister in his submission to the European Scrutiny Committee.

In section 4.4 of the report it is stated:

*“The EASA published an updated impact assessment with its Opinion, which concluded that the proposed Regulation would introduce significant safety improvements over the current EU legislation, have a limited economic impact on EU operators, provide a positive social impact and a positive impact on regulatory harmonisation and coordination at EU level”.*

This statement requires the following clarification:

“current EU legislation” refers to the legislation that is applied in some EU member states and excludes the UK and a number of other major member states. The impact assessment only compares the proposals with sub-part Q and so the entire document is, from a UK perspective, about other countries. Additionally, there are further misleading elements to this. In paragraph 5.2 of BALPA's Ombudsman's Complaint it is explained that with regard to the impact of a scheme of FTL there is neither a metric, nor a model, for the fatigue related detriment. In plain terms, there is no agreed way to measure fatigue or on how to assess its effect across the whole of a national aviation industry. In sections 2.3 and 5 of the EASA impact assessment the difficulties that the EASA group had in measuring and assessing the impacts of fatigue are described. In consideration of these difficulties the EASA group determined:

*“This RIA therefore assesses the safety impact based on two main elements: the review of scientific evidence and operational experience”.*

*“For the review of scientific evidence the members of the OPS.055 rulemaking group provided the agency with a comprehensive list of scientific studies, reports and evaluations, which includes more than 200 items (see Bibliography). In a thorough process the rule making group discussed each option to identify which scientific study included some evidence to support or discard a particular option”.*

Notwithstanding the doubts that BALPA had about the scientific and medical qualifications of the group, even if the group were appropriately qualified, it was implausible to us that such a “thorough process” could have taken place in the time available. On 25 January 2013 we wrote to the EASA Executive Director asking for a full disclosure of the notes, minutes and any other record of the thorough process. Ultimately, in answer to this request we were not sent a specific document rather we were granted access the EASA groups' intranet site that recorded material relating to the groups' work. On searching through this material we were not persuaded that such a thorough process took place. Moreover, in relation to “operational experience” we found that this was not generally appreciated in any structured statistical sense.

4.1 In section 4.9 of the European Scrutiny Committee Report it is stated that:

<sup>14</sup> <http://www.balpa.org/My-Airline/Airlines/Balpa/Document-library/Flight-Safety/2013-07-IN-Ombudsman-response.aspx>

*“in its (the CAA) view, the package of proposals set out in the Opinion contains a number of welcome provisions that will deliver a significant improvement in safety across the EU as a whole;..”*

This is an unsupported assertion. It is not informed by any documented analysis. To be clear, we do not believe that any contemporaneous document exists that represents a UK CAA sponsored or EASA sponsored quantification of the State by State changes in pilot fatigue detriment following implementation of the proposals. The CAA view is in fact a guess.

4.2 The intent of the new regulation is to harmonise the hazard, that is to say the potential to cause harm, so that the pilot fatigue-attributable risk of passenger death or injury is the same per unit time, say per hour flown, across all European States. The actual risk of pilot fatigue attributable passenger death or injury is given by the hazard multiplied by the frequency (the number of hours flown). There are two facts that have particular bearing. Firstly, the UK has the most hours flown of all European States and secondly, the UK has a different current scheme of FTL from all other States that is arguably, but most probably, more protective than all other States.

4.3 To illustrate the problem of guessing, let us say (as we suspect to be the case) that the CAA are incorrect in their estimate that the fatigue hazard in the UK will remain the same, and that in reality the fatigue hazard will increase (even if only slightly) and let us also say that in some other EU States that currently do not have well developed FTL schemes the fatigue hazard will decrease. The following will be true:

- After the implementation of EASA FTL, when all States will have a harmonised fatigue hazard, then regardless of the size of that hazard, the United Kingdom will, by virtue of the number of hours flown on its aircraft, always be the most likely of all States to experience the pilot fatigue related death or injury.
- Compared to all other EU states, small increases in hazard in the UK industry become larger changes in the absolute risk.

And to emphasise that this is not a UK centric issue, the absolute changes in risk to the States with high numbers of hours flown, eg UK, France Germany etc. may contribute to the overall European risk such that even if safety would be increased in more States than those where safety would be decreased, the overall effect of the change in absolute safety is to increase the overall European accident rate.

4.4 In section 4.9 of the European Scrutiny Committee Report it is also stated that:

*“the CAA considers that, as a whole, the package provides a similar level of safety to rules set by other leading aviation regulator, such as the US Federal Aviation Administration,..”*

It remains the case that this statement is also a guess but it is not in our view a reasonable guess. One of the fundamental differences between the FAA and EASA rule sets are the prescriptive hard limits that are written in plain English in the FAA rule set. For example, the FAA FTL scheme describes “stick time” as the time when the pilot has his or her hands on the controls (stick) flying the aircraft. The hard limit on this is 9 hours during defined day time and 8 hours during defined night time. There are no exceptions to this. In this regard, should the EASA proposals enter into force, for aircraft with 2 crew (Captain and Co-pilot), at the time of landing, American pilots cannot have flown the aircraft for more than 9 hours, whereas EU, including UK pilots could have flown the aircraft for up to 15 hours or so.

4.5 On 25th May 2012 BALPA sent a recorded delivery letter to all members of the CAA Board advising Board members of BALPA’s concerns.<sup>15</sup> In this letter we explained that our central concern was that the qualification and experience of the members of the EASA working group were such that the group did not have the capacity to undertake its assigned task, and the result has been an unsafe set of proposals. In essence, the EASA scientific review was not conducted by scientists. We also stated that we were concerned about the adequacy of the advice that was informing the CAA position, we asked:

*“..please provide the names of those persons that are providing medical and scientific advice on FTL to the CAA and precise level and subject area of their qualification”.*

The CAA’s response is attached;<sup>16</sup> the CAA were not prepared to provide the level and subject area of qualification of any named advisor.

In our letter we also asked:

*“Accordingly, and so that we can all be absolutely clear, we ask the Board of the CAA to provide the evidence that a person who is either...*

- *a specialist in fatigue science, qualified to at least PhD level, having published several peer-reviewed fatigue science papers and working within a scheme of governance such as may be provided by a large employing organisation, or*
- *a medical specialist appearing on the UK specialist register in a relevant speciality and working in a scheme of governance such as may be provided by a large employing organisation...*

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<sup>15</sup> [http://www.balpa.org/My-Airline/Airlines/Balpa/Document-library/Flight-Safety/Dame-Deirdre-Hutton-Letter-to-the-CAA-Board-on-\(1\).aspx](http://www.balpa.org/My-Airline/Airlines/Balpa/Document-library/Flight-Safety/Dame-Deirdre-Hutton-Letter-to-the-CAA-Board-on-(1).aspx)

<sup>16</sup> <http://www.balpa.org/My-Airline/Airlines/Balpa/Document-library/Flight-Safety/2012-06-18-IN-Deirdre-Hutton-response-to-RH.aspx>

*...is prepared to sign an affirmation that they have advised the UK CAA that the statement below made by the CAA, in relation to this provision of 20 hours of combined duty (some 22 hours of wakefulness at the time of landing), is reasonable:*

*“we are confident that the discretion reporting process, approval of accommodation, the CAA’s experience of split duty using accommodation, and the additional oversight provided by the proposals will allow these duties to be safely managed.”*

In their reply no such affirmation was forthcoming.

In our letter we also asked that:

*“For the purposes of ensuring that the CAA is best informed on matters of fatigue science, the CAA should set up an independent (of the CAA) Fatigue Science Advisory Panel that should be comprised of equal numbers of scientists and medical specialists as described above and whose advice should be faithfully recorded. A task for this Panel may include the oversight of the determination of “how tired is too tired” in the context of the piloting task. The lack of quantification of the acceptable limits of fatigue<sup>17</sup> in commercial pilots is a fundamental flaw of the EASA proposal and other schemes of FTL. Separate from the safety implications, this flaw means that there can be no real claim of a “uniform” or “high” standard.*

The CAA declined to do this.

4.6 In section 4.9 of the European Scrutiny Committee Report it is also stated that:

*“it (the CAA) is satisfied that there is no scientific evidence to suggest that any of the limits established in the Opinion are unsafe”*

**In this regard, BALPA believes that the CAA has misled Government.**

The ETSC report states in its introduction:

*“the (EASA) proposals do not fully and properly reflect the scientific evidence that should underpin fatigue management. Nor do they fully incorporate the scientific evidence which EASA itself commissioned”*

We believe that the UK CAA should be challenged to defend its position as cited in Section 4.9 of the European Scrutiny Report. It is not acceptable that the CAA should seek to defend such a position by stating that they have excluded the non-IR draft provisions as, in accordance with EASA’s statement, the Implementing Rules cannot be interpreted without the non-IRs.

We suggest that the UK CAA should be called upon to ask if any UK scientist, qualified in fatigue science and that has published several peer reviewed papers on the subject of fatigue science, is prepared to support this position taken by the CAA, and with respect to medical science, if any UK medical specialist in a speciality allied to fatigue and sleep medicine is prepared to support the position taken by the CAA.

4.7 In section 4.10 of the European Scrutiny Committee Report it is stated that:

*“The minister then tells us that: Organisations representing pilots have focused on reviewing each specific limit proposed by EASA, rather than concentrating on the overall effect of the proposals;...”*

BALPA has concentrated on specific limits because in this regard statements can be made accurately. It is not possible to concentrate on the overall effect of the proposals and describe these accurately as there are generally neither agreed metrics nor an agreed model to do this. Furthermore, in no part of the regulatory impact assessment is such a task undertaken and, as far as we know, neither the CAA nor EASA have at any stage undertaken such an analysis.

4.8 We wish to make it clear that the EASA mandate was to produce a scheme of FTL that reflected the state of the art of science and medicine and that it should also achieve a high level of safety. EASA’s legal mandate makes no reference to CAP 371. However, done properly, given the legal mandate, we would expect that the EASA’s proposals to be an improvement on CAP 371.

4.9 In section 4.10 of the European Scrutiny Committee Report it is also stated that:

*“...the measures set out in the EASA Opinion are comprehensive and provide an adequate level of safety;...”*

The proposals do not address the key question of how tired is too tired, which is the only real way of determining an “adequate” level of safety. There are a number of scales used to rate fatigue and what we would expect of a comprehensive approach to this issue is the description of a limiting fatigue score beyond which a pilot should not fly. BALPA is currently engaged in research to determine the answer to this question. Moreover, for reasons that have been previously stated, when the Minister speaks of an “adequate level of safety” we take this to be a figure of speech rather than a parameter that has been defined in any scientific way.

<sup>17</sup> It is understood that there are limitations to the prediction and quantification of fatigue, much as there are limitations to other forms of prediction and estimation of pilot medical incapacitation; however, the advantages of this approach outweigh the disadvantages. In the case of fatigue there are a number of scales that can be used; amongst these the Karolinska Sleepiness Scale is important because it captures the risk of involuntary sleep.

4.10 In section 4.12 of the European Scrutiny Committee Report it is stated:

*“Given the advice from the UKCAA, the UK’s independent aviation safety regulator, the Government supports the proposal set out in EASA’s Opinion;.”*

As previously discussed the CAA’s independence from Government is largely irrelevant. It is the CAA’s dependent interest in the industry that it regulates that is the issue.

## 5. RECOMMENDATIONS

We recommend that:

5.1 On the basis of the evidence available to it, that the Transport Select Committee reiterates its concerns stated in its previous report into Flight Time Limitations.

5.2 On the basis of its concerns, and on the basis that these proposals represent a fundamental shift of power away from the UK CAA and to EASA, that the Transport Select Committee recommends to the European Scrutiny Committee to withhold its approval and to suggest a debate on the matter in the House of Commons.

5.3 The Transport Select Committee asks the CAA to provide the evidence that any named UK fatigue scientist and any named UK medical specialist is prepared to defend its view that there is no scientific evidence to suggest that any of the limits established in the Opinion are unsafe.

5.4 The Transport Select Committee recommends that EASA should begin the process of constructing a new set of FTL again with a properly constituted group of experts that include qualified scientists and medical specialists. Failing that, the CAA and DfT must use the new opportunity afforded to it by the inclusion of a new “safety enhancement” clause to “fill-in” the glaring safety gaps.

5.5 The Transport Select Committee asks the CAA to give, in the case of 2 pilots being on the flight deck, an estimate of the incidence of one pilot involuntarily falling asleep and also an estimate of the incidence of both pilots involuntarily falling asleep at the same time. The CAA should also be asked to explain how these estimates may differ from the actual number of reported events.

5.6 The Transport Select Committee asks the CAA to give an explanation of the analysis undertaken to support its view that the provisions will deliver a significant improvement in safety across the EU as a whole. This analysis should describe on a State by State basis how the fatigue hazard and numbers of hours flown may change following adoption of the proposals.

5.7 The Transport Select Committee gives consideration to a broader inquiry to look at the way the CAA works, its independence, and the work of the European Aviation Safety Agency.

5.8 The Transport Select Committee recommends that a fatigue science advisory panel that is independent of the CAA is set up in the UK.

August 2013

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### Written evidence from the European Transport Safety Council (FTL 10)

Following the Transport Committee’s call for evidence on flight time limitations, the European Transport Safety Council (ETSC), wishes to contribute to the ongoing debate by submitting its own position paper. Based on the scientific input of sleep and fatigue management experts, the paper was published in May 2012 and since then disseminated to the European stakeholders.

In this paper, ETSC draws attention to several points that need to be revised:

- The proposed table on Flight Duty Periods (FDP) should be less complex and adapted to scientific findings regarding lengths of such flight duties. While longer FDP are possible for starts during the morning and early afternoon, flight duty times must be limited to 10 hrs at night (start times of 20:00 to 05:00). Also, the proposal to reduce FDPs only after the second sector is flawed and the table should be adapted to provide for reductions as of the second sector. Finally, the possibility to extend the FDP by 1 hour on two occasions in a week should not be permitted.
- Regarding extensions of a crew’s flight duty times if suitable on-board rest facilities are available to the crew, ETSC welcomes the inclusion of clear definitions (Class 1 and Class 2) and that economy seats are not considered suitable. However, ETSC echoes the experts’ serious reservations about the definition of Class 3 rest facilities which should have a “pitch” requirement.
- ETSC welcomes the support expressed by EASA for the use of Fatigue Risk Management Systems (FRMS). However, the proposals focus on the use of FRMS to justify or support going *beyond* the basic regulatory FTL requirements. This is a misinterpretation of the benefits that an active FRMS at company level can bring.

- ETSC encourages that for airport standby accommodation provided should be comparable with those provided in-flight (ideally equivalent to Class 1). Whilst little specific research on standby (eg at home) is available, taking the precautionary principle into account, standby should count towards the FDP if it interferes with a normal sleep pattern, and long times on duty and awake, when combining home standby and FDP, should be avoided to exclude the potential high levels of fatigue at the end of such duty days when the last landing occurs.
- On disruptive schedules (such as early starts or late arrivals), ETSC recommends that air crew be given adequate protection through FRMS, in addition to minimum measures. Also, it should not be possible to schedule more than three successive disruptive schedules (unless their impact has been fully assessed), or for an early start to be followed by a duty that overlaps the body's deep-sleep phase ("WoCL").

The full paper can be read here—[http://etsc.eu/documents/ETSC\\_position\\_FTL.pdf](http://etsc.eu/documents/ETSC_position_FTL.pdf)

July 2013

#### **Further written evidence from the UK Civil Aviation Authority (FTL 04a)**

There has been further press coverage of claims cited by BALPA with regard to EASA Flight Time Limitations. I thought it might be helpful for the Transport select Committee to have further briefing on the specific claims being made with respect to the risk that pilots could "land a plane after being awake for 22 hours".

We believe this scenario is misleading for a number of reasons, principally because it relies on a theoretical awake time before a duty period begins, rather than the duty period itself. The regulations should support the crew member to be able to rest in suitable facilities such that the time provided for rest will enable them to safely operate the flight. It is the crew member professional responsibility to use the time prior to reporting to support them being fit to safely operate.

Using the approach applied by BALPA a very similar scenario could be theoretically possible under existing rules and the EASA legislation restricts such a pattern rather than increases it.

BALPA's example also relies on a scenario whereby a pilot's duty start time is delayed at short notice, and assumes a considerable amount of "awake" time at home, when in fact it would be reasonable to expect pilots to be sleeping or resting during this period.

The example BALPA propose is that a pilot wakes at 6am in order to get ready and travel to the airport for 8am, they are then called several times to have their reporting time delayed, and then a 12.25 hour flight duty period (FDP) finally commencing at 4pm. On this basis, the BALPA example states that the pilot will have been awake for 22 hours when landing the aircraft. A significant portion of that time the pilot will have been in their own home sleeping or at least resting.

To use delayed reporting the pilot would have to have been called before leaving their place of rest. In order to allow for the maximum permitted travelling time this would be at 0630.

The current UK regulations permit delayed reporting and allow for the pilot to be called several times changing the reporting time (rolling delay) but the FDP commences 4 hours after the original report time, even if the pilot had not reported. Under the EASA proposals the pilot can be called once to be notified of a new report time. If the operator needed to contact the pilot again then the allowable FDP would start the earlier of one hour after the call or at the original report time. The new regulations do not permit the delay to be extended and the operator is penalised for contacting the crew member a second time.

In any event, a very similar scenario to the one outlined above could happen today under the existing UK rules. Currently there is no requirement for the operator to keep records of delayed reporting that occurs in the example above, and therefore no method for the CM to monitor or track its use. But the new EASA regulations will require such records to be maintained.

If the delayed reporting scenario quoted by BALPA is used to gauge differences between the two systems then in many cases the current UK regulations are more permissive than the EASA proposals. This is illustrated by the examples below.

Fatigue management regulations are necessarily complex. This highlights that it is not helpful to the debate to isolate one individual requirement in the proposals against another isolated individual requirement or example. That is why we believe the focus should be on the package of requirements and in strengthening the tools and oversight of the application of the regulations in order to best serve flight safety.

I hope this additional information is helpful to the Committee. Please do not hesitate to contact me if you require anything further.

September 2013

EXAMPLES OF PILOT AWAKE TIME—CURRENT UK SYSTEM COMPARE TO EASA PROPOSALS

*Non-extended two sector Flight Duty Period (FDP) reporting at 17:00:*

UK regulations—12 hours 15 minutes + 3 hours of discretion = total FDP 15 hours 15 minutes.

EASA regulations—11 hours + 2 hours of discretion = total FDP 13 hours.

= **UK more permissive**

*Home standby (for a non-extended two sector FDP):*

06:00 standby start time—called for report at 08:00.

UK FDP 13:15 from report + 3 hours discretion = 16 hours 15 mins.

EASA FDP 13 hours from report + 2 hours discretion = 15 hours.

= **UK more permissive**

*Called for report 12:00:*

UK FDP 12 hours 15 minutes starts at report + 3 hours discretion = 15 hours 15 minutes.

EASA FDP 13 hours starts at report + 2 hours discretion = 15 hours.

= **UK more permissive**

*Crew on standby 14:00:*

Called for report at 19:00 (two sector FDP).

UK FDP 11 hours 15 minutes + 3 hours discretion = 14 hours 15 minutes.

EASA FDP 11 hours + 2 hours discretion = 13 hours.

= **UK more permissive**

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