



TECHNICAL COMMITTEE NOTES 21st SEPTEMBER 2016

Attendees/ Apologies	Dai	Whittingham (CP)	Chair	Present
	Marion	Wooldridge (CP)	Vice-Chair	Apologies
	Richard	Hall (CP)	Vice-Chair	Apologies
	Peter	Benn (CP)	Master	Apologies
	Chris	Spurrier (CP)	ME	Apologies
	John	Turner (CP)	DAA	Present
	Michael	Cleaver (CP)	Australia	IT prevented participation
	Nicholas	Clutton		Present
	David	Cockburn		Present
	Geoff	Connolly		Present
	Peter	Cox		Present
	Harvey	Crush		Apologies
	John A	Denyer (CP)		Present
	Alex B	Fisher		Present
	Nick	Goodwyn		Present
	Brent	Hawkins (CP)	Hong Kong	IT prevented participation
	Kent	Johnson (CP)	North America	IT prevented participation
	Richard	Lotinga		Apologies
	Chris	Norton		Present
	Phil	Smith		Apologies
Miles	Stapleton (CP)		Present	
Syd	Utting		Present	
1.1 Chairman's introductory remarks	<ul style="list-style-type: none"> Chair welcomed all, apologies noted. Regional reps could not join as IT would not support SKYPE conferencing. <ul style="list-style-type: none"> DAA had advised the reps & requested inputs be forwarded by email. 			
2. NOTES OF PREVIOUS MEETING & MATTERS ARISING				
	<ul style="list-style-type: none"> Nil other than as covered below 			
3. TOPICS FOR DISCUSSION				
3.1 Lasers Update	<ul style="list-style-type: none"> There has been real progress - it is increasingly likely that legislation to cover all misuse of laser devices will be enacted. Senior government concern is driving the issue now after political support was triggered by Virgin aircraft turn-back to LHR Issue spilling over to road, rail and maritime sectors <ul style="list-style-type: none"> Issues of laser power continue Woman blinded in one eye in UK last week Likely legislation route will be for an offence of 'possessing a laser without reasonable cause' - rather than classifying lasers as offensive weapons. <ul style="list-style-type: none"> BEIS still has issues over how import will be controlled Police are not keen on needing to test a laser's power to prove the offence. ANO offence of shining a light at an aircraft is changed from Article 222 to 225. <ul style="list-style-type: none"> The change was not well publicised by CAA, impacting all police forces who recently charged people for dazzling aircraft crew. 			

	<ul style="list-style-type: none"> • A side discussion on Part-SPO implementation followed: <ul style="list-style-type: none"> ○ Part-SPO impacts what can and cannot be done without an AOC. <ul style="list-style-type: none"> • E.g. allows passenger carriage ○ North sea helicopter operator has transferred their AOC from UK to Belgium to benefit from lower charges • Discussion expanded to consider number of aircraft operating in UK on non-UK registrations - does CAA know how many of these there are?
3.2 SKYbrary Update (Table from Pre-meeting papers)	<ul style="list-style-type: none"> • Pre-meeting papers reflected the status of recent articles. In due course DAA would invite the SKYbrary review team to assist but thought the TC members might wish to assist. Committee observed that: <ul style="list-style-type: none"> • G070 Engine Failure after Take Off – Light Twin Engined Aircraft <ul style="list-style-type: none"> ○ Martin Hatton of Instructors WG would be a good candidate ○ Nick Clutton would approach Duncan Wright at ETPS ○ Chris Norton agreed to arrange a review • G074 Night Vision Imaging Systems (NVIS) <ul style="list-style-type: none"> • DAA cautioned this needed much work to bring to an acceptable standard. <ul style="list-style-type: none"> ○ Geoff Connolly volunteered ○ Chris Norton volunteered, as would ○ DAA would when time permitted. • G075 Rejected Take-off <ul style="list-style-type: none"> ○ Nick Clutton volunteered • Pre-meeting papers also asked members to note that http://www.skybrary.aero/index.php/The Honourable Company of Air Pilots listed over fifty SKYbrary articles under Air Pilots' 'Content Control'. These have already been edited and improved and then endorsed by the Air Pilots. Even so, we, we recognised at the time of endorsement that many were still only 'adequate' rather than being exemplar. We have an agreement to review and update these from time to time. TC members are welcome to review any of the articles under Air Pilots' Content Control and to send amendment suggestions to DAA at any time.
3.3 Collation of comments by several members of the new TC	<ul style="list-style-type: none"> • <u>This Paper was tabled at the meeting</u> • DAA explained that the Master had received a written paper. DAA's views were presented to GP&F & GP&F had agreed it should be presented to the TC for discussion. <ul style="list-style-type: none"> • There was disappointment that the authors had written to the Master rather than simply raising any concerns within the committee. • There was a clear aim to engage more with the regions - to improve the influence Air Pilots might achieve. • The Air Pilots have no automatic authority or influence over the regulators - that might have been the position once but it is clearly no longer the case. • <u>DAA to ask TC members for links they have to other organisations</u> Some examples mentioned: NATMAC - Chair + DAA, UK FSC - Chair + Alex, Met Users Group - Chair + Peter, ADS Flt Ops Committee - DAA (+RPE), BADA – DAA, DfT – DAA, MAA – DAA, David Learmont – Miles, Aviation Week - Alex (successful 5/5 in letters being published) • <u>Reach?</u> - How do we improve reach outside? <ul style="list-style-type: none"> • Brexit paper as felt to be an example of success • Most airline management concentrating on today's problems and lack visibility of tomorrows or areas outside their normal comfort zone - e.g. ATC developments that will affect them. • Instructors WG: <ul style="list-style-type: none"> • Provides material for instructors to use and • Influences through the FORUM it runs at RAFC Cranwell • Perhaps Air Pilots should consider if hosting conferences/symposia would be effective • Should Air Pilots set up a Part-NCO WG to assist our members? - <u>DAA to pass all these thoughts on wider engagement to the Strategic Review.</u> • Agreed engagement with the EASA NPA process would not be effective <ul style="list-style-type: none"> • Would need a permanent staff to do so • Still likely to be ignored as not a 'European' organisation • Could Air Pilots link to equivalent organisations in other countries? <ul style="list-style-type: none"> • DAA had searched without success.

	<ul style="list-style-type: none"> ● DAA would ask Gabriel Tilmann in margins of CityU visit ● Should Air Pilots' produce news releases on regular basis? <ul style="list-style-type: none"> ● Potential route but need to establish standard policy views on items of interest - and likely to catch media attention ● This is a question of choosing/driving agendas for others! ● EASA Exit Group - Peter, with previous experience in establishing JAR, suggested Air Pilots should use those with that experience to prep a guidance paper in case that became necessary. ● Chair proposed Core message preparation - prepared single-issue short position statements on issues - can be used reactively with Press or carried as reminder cards for Air Pilot reps at external meetings <p><u>ACTION ALL - offer two or three topics you would like the committee to have positions on.</u></p> <ul style="list-style-type: none"> ● Airprox ● Drone issue ● Fatigue ● Regulation change ● Common rules ● See & Avoid in UAVs <ul style="list-style-type: none"> ● DAA noted that while Shoreham was unfortunate and had made things difficult for him personally in meeting the various demands from government, regulators and media, it had also provided an opportunity for DAA to work with the following: <ul style="list-style-type: none"> ● No 10 Downing Street staff ● Secretary of State for Transport ● DfT senior aviation staff ● CAA – Mark Swan & Head of GA Unit and his staff ● RAF – AOC downwards ● MAA – Director and staff down to Sqn Ldr ● President of International Council of Air Shows (USA) <p>These connections also allowed Air Pilots views to be heard, since DAA's multiple roles were well understood across the agencies above.</p> <ul style="list-style-type: none"> ● Committee agreed the subject should be closed without further discussion.
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4. WORKING GROUPS (NOT COVERED ABOVE)

4.1 WG- Admissibility of AAIB evidence in court	<p>Led by DAA</p> <ul style="list-style-type: none"> ● Currently maintaining a watching brief – Sussex Police application for Shoreham Accident evidence from AAIB <ul style="list-style-type: none"> ● Evidence requested included go-pro video and witness statements. ● Committee noted the witness statements were not taken under PACE so the police would be obliged to re-interview everyone. ● <u>DAA would prepare Company Position Statement for next TC/Air Pilot.</u>
4.2 WG – True North (TN)Heading Reference for CAT	<p>Led by Miles</p> <ul style="list-style-type: none"> ● Actions are coming together. Committee endorsed a global move to TN. <ul style="list-style-type: none"> ● Nav Canada believes switching all operations to TN would provide a safety benefit and avoid errors in Magnetic Variation tables. ● <u>DAA to investigate options for putting joint position with RIN to ICAO</u> ● RAeS support would help - need to elicit their support. (DAA by email to president?) ● Ask NZ, Canada - do they know people in NAV Canada, Aus. ● Miles is standby speaker at the RIN conference in Glasgow later this year. <ul style="list-style-type: none"> ○ David Cockburn is a member of RIN too - they had a conference in RAF Club some 20 years ago when GA members were in favour of a change to TN. He is still involved in the RIN GA group. ● Alex presenting this to FOG. ● <u>Miles will approach Master Mariners - maritime switched some 40 years ago</u> ● The vision is that all aviation everywhere changes to TN. <ul style="list-style-type: none"> ● Initial Implementation could be above 60 lat if necessary ● Regional phase in if necessary. ● Money is with CAT - who are affected most <ul style="list-style-type: none"> ● In GA flying, mag var doesn't change very much in a single trip! ● If faced with an E2 only, can always apply variation in reverse to fly a heading. ● <u>Chair will send his article in focus magazine to Miles</u> – PMN COMPLETE

<p>4.3 WG- Human Factors – Fatigue & FRMS</p>	<p>Led by Nick Clutton</p> <ul style="list-style-type: none"> ● Draft Paper had been circulated on the web page before the meeting <ul style="list-style-type: none"> ● Paper top & tail by DAA for presentation to court. ● First chance to present at a Conference? ● Note there are separate annexes that contain the detailed evidence from which the report is produced. These are not included in the paper. ● Discussion: <ul style="list-style-type: none"> ● 777 crash at Dubai, following generous lay-over in Sri Lanka. Not an Acute fatigue issue but could have been underlying Chronic fatigue issue. <ul style="list-style-type: none"> ○ Reporting forms usually only ask about 'fatigue', not about acute or chronic. - So the issue might be lost in reporting stage, ○ Ex Monarch pilot flying for Emirates says life is much easier in Emirates. ● Distributing the Paper - How do we publish? <ul style="list-style-type: none"> ○ Patrick Ky? ○ CAA - Andrew Haines? ○ FAA - Kathy Abbot? ○ ICAO - ? ○ Need Exec Summary for Air Pilots - shorter version in advance. ● Chair thanked Nick for his & his team's huge amount of work.
<p>4.3.1 Pilot Fatigue & Nutrition</p>	<ul style="list-style-type: none"> ● DAA had been approached by Advanced Medicine Group, a partner of The University of Aberdeen College of Life Science and Medicine and its Institutes and the Rowlett Institute if the Air Pilots could assist in providing experienced airline pilots to assist in work that is planned to look at the role of nutrition in fatigue. ● Although fatigue may be made up of several factors, including nutrition, there is a real paucity of published peer reviewed papers on this in international medical libraries and journals. In contrast, there is a huge deluge of diet/health advertising, associated products and pseudo-scientific advice, so most people are understandably confused. ● The aim is to deliver either on-line or within-an-App an education program on nutrition focussed on pilots, cycled over 3 years. <ul style="list-style-type: none"> ● Would present evidence-based nutritional science in a series of 6-10 minute "bites" (perhaps 90-120 minutes in total) ● Each section would also allow pilots to ask a question; perhaps they may wish to know more on a subject, or an area that we have not covered. ● Replies would be aggregated with the answers delivered in the form of updates or another "bite". ● Programme will cover pre-flight, mid-flight, post-flight and long term health. ● This knowledge would allow pilots to understand the science and adapt for themselves, and to also develop guidelines and strategies. ● Testing to date with a few pilots shows they recognise that it may be ideal to have a low glycaemic breakfast, but if you are flying a 0430hrs its unlikely to happen, therefore some alternative strategies will be offered. ● There will be many other situations like this that will have to be thought through. <ul style="list-style-type: none"> ● Therefore, to put this into context it is key that a couple of the scientists could speak to a few pilots who operate short, medium and long haul. ● The other part is to ask those undertaking the educational program to complete a questionnaire for research purposes. The University would host this separately on their system to provide confidentiality and to comply with medical ethical guidelines, and it would be anonymised. The results would first be delivered to the participants and then published in a medical journal if appropriate. ● Work on an outline curriculum of the course suggests it would cover the principles of nutrition, some basic human biology, composition foods and effects but very importantly circadian rhythms and biological rhythms. <ul style="list-style-type: none"> ● The human body's biological rhythms such as the liver, kidney and gut do not know that the natural day has changed, whereas the brain knows immediately. ● This is the field of chrono nutrition which will be very useful for pilots on long haul. ● They have asked us to provide some currently flying - or retired from flying within the last 6 months - senior captains willing to talk over the telephone/skype to the programme leaders. In general the objective is to educate the team on the airline pilot's occupation and some topics to be covered would be:- <ul style="list-style-type: none"> ● Assess current nutritional habits in pilots on shift and off shift ● Review the current nutritional composition of foods provided/offered on shift (during flying)

	<ul style="list-style-type: none"> Assess the practical and theoretical improvements in nutrition provision that could be implemented for pilots' health and wellbeing <ul style="list-style-type: none"> The team assembled to undertake this are:- <ul style="list-style-type: none"> Prof Steven D Heys BMedBiol, MBChB, MD, PhD, FRCS(Eng), FRCS(Ed), FRCS(Glas), FHEA, Head, School of Medicine, Medical Science and Nutrition, Chair in Surgical & Nutritional Oncology Professor James Ferguson FRCS(A&E), FRCS(Ed), FRCEM, FRCP(Ed), MBCh. Chief Medical Advisor, Advanced Medicine Group Professor Peter Morgan BSc PhD FRSE, Director of the Rowett Institute Dr Alexandra Johnstone BSc, PhD, PGCE Medical Sciences & Nutrition Senior Research <p>Rowett Insitute The Rowett has Institute has a well-deserved reputation as a world leader in nutrition research. This began over 100 years ago, when the Institute was set up in 1913. They have both in terms of scientific investigation and national policy making over the intervening years the Institute made considerable contributions to human nutrition, many having major implications on the global marketplace and food production in particular. One of the 5 Nobel prizes made to the University was awarded to the founder of the Rowett.</p> <p>University of Aberdeen and College of life Science and Medicine</p> <p>Over 1,500 people work in the Institute of Medical Research which includes state of the art Investigative and diagnostic equipment. 5 Nobel prizes have been awarded to researchers at the University where Life science employs 1,500 people. This is the highest concentration of life scientists in Europe in one area</p> <p>The University of Aberdeen, which has over 14,500 students and is a university ranked consistently among the top 1% of the world's universities. 76% of research assessed through the UK's Research Excellence Framework (REF14) is 'world leading' or 'internationally excellent'</p> <p>http://www.abdn.ac.uk/smmsn/ http://www.abdn.ac.uk/rowett/ http://www.abdn.ac.uk/ims/</p> <ul style="list-style-type: none"> TC fully supported assisting in this work and were gratified to see that academia shared our own concerns over fatigue and flight crew education. TC felt we should not necessarily restrict our volunteers to UK, nor to the older pilot. <ul style="list-style-type: none"> Syd Utting volunteered immediately, Nick would provide likely candidates from the Fatigue WG and suggested the draft paper be forwarded to Aberdeen DAA would find others from the wider membership
4.4 WG- Human Factors – Flight Deck Automation & Pilot skill erosion	<p>Led by Nick Goodwyn but had to withdraw – no current leader</p> <ul style="list-style-type: none"> Nil further Nick will report on the International Flight Crew Training conference – Unprecedented Global Training Demand - at the next meeting
4.4.1 Addressing 'skill fade' – a Low Cost Training Aid	<p>Led by Alex Fisher</p> <ul style="list-style-type: none"> Graham Green (CAA Dir of Research) has agreed a further meeting, following his initial response that startle was the important factor. <ul style="list-style-type: none"> DAA & Chair offered to accompany Alex to a meeting at Gatwick <ul style="list-style-type: none"> Graham would invite Mark Searle. Committee agreed that tackling either startle or instrument flying skills was not an adequate approach and that both should be addressed in parallel. Chair noted the difference between T-layout instruments and the latest electronic displays with strip speed height, etc. meant that pilots instrument scans had to be very different.
4.5 UK Flight Instructors	<p>Led by Syd Utting</p> <ul style="list-style-type: none"> Last meeting last week. Forced landing and upset recovery training documents being progressed. Hope to present latter at the forum - RAFC Cranwell, 4 April 2017. Aim for 2 or three major themes, so there is time for discussion on each. Likely topics: <ul style="list-style-type: none"> Degraded visual environment for GA Integrating GPS into visual navigation Declared Training Organisations - poss from an EASA representative (Kerry Booth)
4.6 Air Pilots' Good Neighbour Initiative	<p>Led by Marion Wooldridge</p> <ul style="list-style-type: none"> Nil further
4.7 Pilot Contracts	<ul style="list-style-type: none"> No progress - needs a review of WG membership - DA to review membership and update
4.8 Unmanned Air Vehicles	<p>Chris Norton agreed to continue as WG lead, albeit with a 'watching brief' task.</p> <ul style="list-style-type: none"> DAA noted the RAeS Drones in Daily Life Conference. He was unable to attend but the Air Pilots could cover cost of registration (member rate) if a TC member was able to go in his place and report back. There were no volunteers.

	<ul style="list-style-type: none"> Chair noted the increasing threats and that: <ul style="list-style-type: none"> Last year, LHR experienced 5 airprox with drones plus another 5 encounters Last month, LHR had 5 airprox and 13 encounters! The highest reported airprox in UK to date was at FL130. Airspace management in response to drone infringement is an issue: A knee-jerk response to close the airspace creates an increase in workload for everyone flying and controlling (sequencing, holding, diversion, etc.) for what would otherwise be a relatively small increase in risk. Assessment of drone impacts on windscreens etc. is under investigation but engine manufactures are resistant to suggestions that engine specs might cater for drone strike. 												
5. Notices/Updates from other Committees, Events, etc.													
5.1 UK FSC	Dai Whittingham <ul style="list-style-type: none"> Just had a meeting, minutes not yet complete. Highlights covered - redacted minutes to follow. 60% of CHIRP reports fatigue-related. Many cases of disruptive passenger(DP) PMN: UKFSC report now available with the meeting papers. 												
5.2 GAP	DAA <ul style="list-style-type: none"> Notes of last meeting as in pre-meeting papers 												
5.3 Met Users Forum	Peter Cox <ul style="list-style-type: none"> Ice crystal research Consultation results on use of auto-METAR not yet published. Met office has been re-instated at LHR - led to noticeable improvement in forecasts. Chair also attends Met Users Forum 												
5.4 NATMAC	<ul style="list-style-type: none"> No report - Next meeting 27 Oct 												
5.6 DfT/EASA Briefings	DAA <ul style="list-style-type: none"> Focus on BREXIT – see Air Pilot Paper on BREXIT produced by DAA & Court members WG 												
5.7 Forthcoming Conferences	DAA – <ul style="list-style-type: none"> As provided in pre-meeting papers: <table border="1"> <tr> <td>22-28 September 2016</td> <td>International Flight Crew Training conference -Unprecedented Global Training Demand - Nick G attending & presenting</td> </tr> <tr> <td>3-4 October 2016</td> <td>Drones in Daily Life</td> </tr> <tr> <td>27 October 2016</td> <td>The Brexit Question – What the UK's withdrawal from the UK means for aerospace</td> </tr> <tr> <td>3-4 November 2017</td> <td>BADA/CAA/MAA Post-Season Symposium - DAA attending & speaking</td> </tr> <tr> <td>18-20 April 2017</td> <td>Unmanned Systems Asia</td> </tr> <tr> <td>5-6 October 2016</td> <td>EASA GA Safety Workshop - David C attending</td> </tr> </table> Should the Company arrange its own conferences to float its papers, views, etc? <ul style="list-style-type: none"> or maybe webinars or TED talks or link with the RAeS Human Factors Group for Fatigue? BUT it could be better to talk to the decision makers in a smaller room & insurance industry? <ul style="list-style-type: none"> DAA agreed to pass these thoughts to the strategy group 	22-28 September 2016	International Flight Crew Training conference -Unprecedented Global Training Demand - Nick G attending & presenting	3-4 October 2016	Drones in Daily Life	27 October 2016	The Brexit Question – What the UK's withdrawal from the UK means for aerospace	3-4 November 2017	BADA/CAA/MAA Post-Season Symposium - DAA attending & speaking	18-20 April 2017	Unmanned Systems Asia	5-6 October 2016	EASA GA Safety Workshop - David C attending
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6. Any Other Business													
6.1 Mtg critique	Nil further												
6.2 Australia Region input	<ul style="list-style-type: none"> Since adopting new flight crew licensing rules two years ago (CASR Part 61), CASA has stopped accepting UK military qualifications as a valid basis for issue of civil licenses and endorsements in Australia. Prior to 31 August 2014 a qualification from the UK (among other) military was automatically accepted as a basis for aircraft endorsements and flight activity authorisations (to give them their 'new' titles), whilst licences and ratings (instrument and instructor ratings) would routinely be granted without further training, on the basis of a flight test and usually a special 'conversion' exam. This has been of concern to a number of members whose qualifications would have been accepted in times gone by, but are now denied recognition and being told they must undertake additional training to have these skills recognised - even to such things as formation endorsements. 												
Next meeting(s)													
Next meeting	1330 10 January 2017 - Future meetings – 16 May 2017, 12 September 2017												

Closed at: 1725