Directorate of Airspace Policy
UK Meteorological Authority

As Distribution List

29 June 2012

Dear Colleague,

Changes to UK Meteorological Observing Practices for Civil Aviation

Further to the Consultation Letter issued on the 25th October 2011, which set out the proposed changes to UK Meteorological Observing practices for Civil Aviation which were as a result of recent developments within the field of aeronautical meteorological (Met) observing.

There were a significant number of responses to this consultation and in light of the comments and suggestions made the CAA has produced at Annex A, a summary of the issues. This document also indicates what changes will be taking place to CAP 746 Meteorological Observations at Aerodromes. It is anticipated that a new edition of CAP 746 will be available in autumn 2012.

If you have any questions or require clarification on the matters detailed in this letter please do not hesitate to contact me

Telephone 020 7453 6527and
Email colin.hord@caa.co.uk

Yours sincerely,

Colin Hord
Met Authority

Annex A:
ICAO Annex 3 amendment 75 – OUTCOME OF CONSULTATION

Proposed change	Short description of item	Comments	CAA Decision on Implementation
Requirement for an Integrated Met Measurement System at Aerodromes operating CAT II and CAT III Runways	Aerodromes that operate CAT II and III runways will be required to have sensors to measure and assess surface wind, visibility, runway visual range, height of cloud base, air and dew-point temperatures and atmospheric pressure. These measurements should be integrated within the Met Observing System and allow the Met Observer to validate the reports before issue.	Newquay and Leeds Bradford felt the change unnecessary and could not see any safety benefit at their locations. They also believed that it would increase costs. AGI and Vaisala noted that requirements of this nature were widely specified for aerodromes across the world.	The CAA notes that the proposal to require all CAT III aerodromes to have the specified sensors has been in place since 2008 when an initial consultation was carried out. Whilst recognising the cost implication the CAA provided evidence in the consultation document where safety enhancements would be delivered. In order to allow time to budget and install the required sensor(s) the CAA have set a deadline of Nov 2014 for all aerodromes with CAT II and III runways to have an integrated Met measurement system installed.
Approval Requirements for Meteorological equipment installed on aerodromes	The title of CAP 746 will be changed to the "Requirements for Meteorological Observations at Aerodromes" to more adequately reflect the status of the document.	None	CAP 746 will be renamed Requirements for Meteorological Observations at Aerodromes when the next edition is published later in 2012.

Proposed change	Short description of item	Comments	CAA Decision on Implementation
	Equipment for measuring the wind speed and direction, atmospheric pressure and air temperature will be required to be subject to safety assessment in accordance with the unit SMS, as required in CAP670 APP01. All Met equipment shall be installed, maintained and operated in accordance with CAP 746.	A number of aerodromes agreed that the proposed approval requirements were proportional. However a few aerodromes along with the GAAC stated that requiring smaller aerodromes to meet CAP 746 requirements for certain MET sensors at aerodromes that operate VFR only traffic was disproportionate. Additionally they believed that requirement to routinely calibrate wind, pressure and temperature sensors was burdensome and expensive.	The CAA conducted a review of all Met sensors installed at aerodromes that are certificated FIS or ATS providers that do not provide METARs or that do not operate CAT I and above runways. A separate response on this matter is attached at Appendix A
	An Integrated Met Measurement System is considered to be captured under the Interoperability Regulation when it provides information to other systems e.g. ATS working position displays and/or ATIS and will require a Declaration of Verification and Technical File to be submitted to the CAA in support of its introduction and use.	None	Requirements for an Integrated Met Measurement System will be included in the next edition of CAP 746.

Proposed change	Short description of item	Comments	CAA Decision on Implementation
Automated Observation Requirements for Present Weather Reporting and Cloud Type Reporting	AUTO METAR shall report, as a minimum, rain, drizzle, snow, rain and snow mixed, fog, freezing fog, mist, haze. In addition, when automated observations are used during the operational hours of the aerodrome, automated local routine and special reports and METAR shall report additionally thunderstorm, thunderstorm in the vicinity, towering cumulus cloud and cumulonimbus cloud.	All respondents were in favour of this proposal, the Met Office suggested that for completeness freezing rain (FZRA) and freezing drizzle (FZDZ) should be specified.	Requirements for automated present weather sensors will be provided in the next edition of CAP 746 which include FZRA and FZDZ. Where automated observations are provided for a short duration i.e. during a duty break at a 24 hour aerodrome the proposal for including thunderstorm, thunderstorm in the vicinity, towering cumulus cloud and cumulonimbus cloud will not be required at the current time.
METAR observations at Aerodromes operating 24 hours a day.	Aerodromes that operate 24 hours a day are required to provide METAR, or where agreed, AUTO METAR observations at all times, and to ensure that the ATIS is updated as required.	None	This is the current position but will formalised in the next edition of CAP 746.

Proposed change	Short description of item	Comments	CAA Decision on Implementation
Continued Met Observer Accreditation and Refresher Training	The minimum number of observations that a Met Observer is required to make in any 90 day period is raised from 10 to 20.	There were a number of comments especially from HIAL airports who felt that the proposal was not viable due to the limited time FISOs are able to spend in the tower during each 90 day period. HIAL proposed that 15 observations in any 90 day period would be acceptable.	CAA recognises the issues that were raised during the consultation and accepts the suggestion to raise the number of observations made in any 90 day periods from 10 to 15.
	Met Observers who undertake the annual competency checking at an aerodrome will be required to attend a Met refresher training course as a minimum of every 5 years	Newquay disagreed with the proposal, however a number of other airports agreed. It was further pointed out by HIAL that they already mandate those who conduct Met competency checks to attend refresher training.	CAA recognises that mandating additional training is costly, however in order to ensure that observations are being made to the standards required it is important that those who carry out competency checking have up to date knowledge especially for less frequent and often hazardous weather conditions. The Met Office currently provides a suitable course as detailed in the Accredited Meteorological Observer Training AIC. The CAA will develop a syllabus which will enable applications by ANSPs to use other providers, including in-house provision. All Met Refresher courses will be subject to approval by the CAA.

Proposed change	Short description of item	Comments	CAA Decision on Implementation
Calibration Guidance	The CAA has developed some additional guidance related to the calibration of wind and pressure measuring equipment installed on aerodromes for inclusion within CAP 746	All those who responded were supportive for this information to be included in CAP 746.	Additional guidance will be included in the next edition of CAP 746.

Requirements for Meteorological Equipment Installed on Aerodromes not providing METAR or having CAT I or above operations

Introduction

There are 21 aerodromes that are certificated by the CAA under the SES Common Requirements as Air Navigation Service Providers which do not provide METAR or have CAT I or above runways. These consist of 5 ATC locations and 16 FIS locations. It should be noted that 3 of these aerodromes (Barra, Lasham, and Yeovil) own or publish an instrumented approach.

However it is noted that ANSPs certificated by the CAA under the SES Common Requirements are required to ensure that the meteorological information passed to pilots is accurate. This implies that the meteorological equipment used is of a suitable specification, adequately sited, maintained and calibrated.

The CAA proposed in a recent consultation that for the 21 ANSPs only the following meteorological parameters should be regulated; surface wind, air temperature and pressure (QNH and QFE) and the measuring equipment should meet the specifications set out in Chapter 7 of CAP 746 Meteorological Observations at Aerodromes

Currently the only CAA document that sets out the requirements for Met instruments at aerodromes is CAP 746 “Meteorological Observations at Aerodromes” most of which is derived from International Standards and Recommended Practices developed by ICAO. While this level of specification is required for aerodromes that provide METAR, the CAA has considered whether a reduced level of specification should apply for smaller aerodromes that operate only light aircraft.

The CAA undertook a review of all the Met equipment currently operated by the 21 ANSPs that do not provide METAR or have CAT I or above runways. This review showed that much of the equipment in place is either within or close to the requirements set out in CAP 746. However the review showed that of the aerodromes using aircraft altimeters, 5 had no calibration, 3 had been calibrated within the last year and one not since 2007; of the 8 Altimeters in use, one Altimeter was noted in the Met Liaison Report as being in error by 2 hPa and another by 3 hPa. Neither of the altimeters had been calibrated recently. Only 4 of the FIS units have their anemometers calibrated whereas all 5 ATC units have their anemometers routinely calibrated. For this reason the calibration guidance proposed in the Consultation Letter will be included in CAP 746. Regular calibration of wind and pressure sensors used on aerodromes will be required to be undertaken.

CAA Decision

Since the 21 aerodromes that are certified but do not provide METAR or have instrumented runways provide a VFR traffic service, an additional set of specifications for wind and pressure sensors that are installed at aerodromes without published or airport owned instrument approach procedures will be developed. These specifications recognise that for VFR operations the wind and pressure values passed to aircraft are for information purposes.

In addition:

- For surface pressure sensors used at aerodromes without published or airport owned instrument approach procedures the accuracy specification shall be ± 1.0 hPa with a resolution of 1.0 hPa.

- For wind sensors used at aerodromes without published or airport owned instrument approach procedures, the specification shall be a speed accuracy of ±2kt or 5% whichever is greater and a direction accuracy of ±10˚.

- No changes to the requirements are to be made to the specification of temperature sensors since all those in use are within the requirements set out in CAP 746.

Civil Aviation Authority
CAA House K6G1 45-59 Kingsway London WC2B 6TE www.caa.co.uk
Telephone 020 7453 6527 Fax 020 7453 6565 colin.hord @caa.co.uk

- FIS units and ATS units that do not provide METARs or operate scheduled traffic by aircraft whose maximum total weight exceeds 5,700 kg may provide an instantaneous wind speed, unless a 2 minute average is available. For all other ATS units the requirements in CAP 493 apply i.e. that a 2 minute wind average be provided as well as the extremes in direction and speed (gust and lull) during the past 10 minutes as standard, with an instantaneous wind only provided on request.

- All Pressure and Wind sensors installed on the aerodrome are required to be calibrated. This will require surface pressure sensors to be calibrated annually and wind systems to be calibrated every 2 years.

- Equipment for measuring the wind speed and direction, atmospheric pressure and air temperature will be required to be included within the Unit Safety Case or the unit's safety assurance documentation whichever is applicable.

CAA House K6G1 45-59 Kingsway London WC2B 6TE www.caa.co.uk
Telephone 020 7453 6527 Fax 020 7453 6565 colin.hord@caa.co.uk

Distribution List

Action addressee:

Mr J Proudlove, GM ATS, Heathrow Airport
Mr S Anderson, GM ATS, Gatwick Airport
Mr J Mayhew, GM ATS, Aberdeen Airport
Mr M Ruddy, GM ATS, Belfast International Airport
Mr P Healey, GM ATS, Edinburgh Airport
Mr T West, GM ATS, Glasgow Airport
Mr D Healey, Manager ATS, Cardiff International Airport
Mr G Dixon, GM ATS, London City Airport
Mr A Young, SATCO, Belfast City Airport
Mr P Mirams, M ATS, Biggin Hill Airport
Mr M Gregory, GM ATS Manager, Birmingham International Airport
Ms C Willoughby-Crisp, Manager ATS, Bournemouth International Airport
Mr G Paterson, General Manager ATS, Bristol International Airport
Mr T Billings, SATCO, Cranfield Aerodrome
Mr N James, Manager ATS, East Midlands International Airport
Ms D Zost, Air Traffic Control Manager, Humberside Airport
Mr D Smillie, Manager ATS, Leeds Bradford Airport
Mr K Cooper, ATC Manager, Liverpool John Lennon Airport
Mrs G Clark, General Manager ATS, London Luton Airport
Mr Peter Snell, General Manager Air Traffic Operations, Newcastle International Airport
Mr A Kenyon, GM ATS, Southampton Airport
Mr T Clark, SATCO, Southend Airport
Mr K Cooper, SATCO, Durham Tees Valley Airport
Mr N Warner, GM ATS, Prestwick Airport
Mr D Foster, Manager ATS, Farnborough Airport
Mr P Templeman, GM ATS, London Stansted Airport
Mr D MacCamley, SATCO, Blackpool Airport
Mr Michael McDowell, Operations Manager, City of Derry Airport
Mr D Lewington, SATCO, Gloucester Airport
Mr J Lamont, Airport Manager, Campbeltown Airport
Mr M Morgan, Airport Manager, Cambridge Airport
Mr P Langley, SATCO, Norwich Airport
Mr D Thomas, SATCO, Exeter Airport
Mr P Thompson, Manager ATS, London-Manston Airport
Mr P Jones, Manager ATS, Manchester Airport
Mr A Hicks, Airport Manager, St. Mary's Airport
Mr I Nunan, SATCO, Scatsta Airport
Mr A Wang, Manager ATS, Shoreham Airport
Mr D Dalrymple, SATCO, Kirkwall Airport
Mr A Smith, SATCO, Sumburgh Airport
Mr I Craighead, SATCO, Wick Aerodrome
Mr B Warrender, SATCO, Inverness Airport
Mr D MacGillivary, Airport Manager, Islay Airport
Mr K O'Brien, SATCO, Benbecula Airport
Mr I MacIver, SATCO Stornoway Airport
Mr A MacInnes, Airport Manager, Tiree Airport
Mr T Gulson, SATCO, Dundee Airport
Mr B May, Manager ATS, Bristol Filton Airport
Mr K Packer, SATCO, Carlisle Airport
Mr S Underhill, SATCO, Hawarden Airport
Mr T Maskens, Manager ATS, Lydd Airport
Mr M Wilshaw-Rhead, SATCO, Robin Hood Airport Doncaster Sheffield
Mr T Eddleston, Station Manager, Oban Airport
Ms K Williamson, SATCO, Warton Aerodrome
Mr D Heaselgrave, SATCO, Coventry Airport
Ms A Evans, SATCO, Oxford Airport

CAA House K6G1 45-59 Kingsway London WC2B 6TE www.caa.co.uk
Telephone 020 7453 6527 Fax 020 7453 6565 colin.hord@caa.co.uk

Mr A Ormshaw, SATCO, Newquay Cornwall Airport
Mr F Ramage, Managing Director, Penzance Heliport
Mr C Pearson, SATCO, Lands End / St Just Aerodrome
Mr G Jones, SATCO, North Denes Heliport
Mr F Frost, SATCO, Lasham Aerodrome
Mr P Wright, SATCO, Redhill Aerodrome
Mr J Browne, SATCO, London Heliport
Ms C Dyer, SATCO, Wycombe Air Park
Mr B Forster, Aerodrome Manager, West Wales / Aberporth Airport
Mr M Galbraith, Airport Manager, Barra Airport
Mr A Miles, ATS Manager Blackbushe Aerodrome
Mr M Gibb, Aerodrome Manager, Chichester / Goodwood Aerodrome
Miss A Paul, Aerodrome Manager, Denham Aerodrome
Ms Helen Holliday, Aerodrome Manager, Duxford Aerodrome
Mr M Murphy, Aerodrome Manager, Elstree Aerodrome
Mr M Littler, Aerodrome Manager,Wellesbourne Mountford Aerodrome
Mr A Wang, Operations Manager, Fairoaks Aerodrome
Mr N Duriez, Operations Manager, Manchester Barton Airport
Mr G Bell, Aerodrome Manager, Northampton / Sywell Aerodrome
Mr K Carr, Airport Manager, Rochester Airport
Mr M Stocker, Aerodrome Manager, Shobdon Airport
Mr T Rowlands, MATS, Wolverhampton Halfpenny Green Airport
Mr N Loxton, SATCO, Yeovil Aerodrome
Mr N Howard, Airport Manager, Kemble / Cotswold Airport
Mr J DeMain, Aerodrome Manager, Shuttleworth Old Warden Aerodrome
Mr G Morrison, Aerodrome Manager, Tingwall Airport
Mr J Ismay, Aerodrome Manager, Walney Island Aerodrome
Mr P Holley, Manager ATC Ops, Jersey Airport
Mr F McMeiken, Manager ATS, Guernsey Airport
Mr A Hisscott, S Met O, Ronaldsway Airport, Isle of Man
Mr N Gait, Regulated Aviation Services Manager, Met Office
Mr A Pallot, Principle Met Officer, States of Jersey Airport

Info Addressee:
Mr A Wells, Hd UK Met Authority, CAA
Mr P Brook, Flight Operations, CAA
Mr P Fraser-Bennison, Aerodrome Standards, CAA
Mr K Crowley, Air Traffic Standards, CAA
Mr T Perry, Air Traffic Standards, CAA
Mr D Cockburn, General Aviation, CAA
Mr S Dingle, CACC Operations, NATS
Mr M Skipper Operations Manager, Copperchase Ltd
Mr D Lynd, Technical Manager, Stonefield Systems (Europe) plc
Mr B Mott, Met Engineering UK Ltd,
Ms A Craig, Regulatory Compliance Manager, Muir Matheson Ltd
Mr I Clark, Business Manager, AGI Ltd.
Mr M Brettle, Campbell Scientific Ltd.
Mr P Goodall, Managing Director, StormGeo Ltd
Mr D Hardy, Senior National Aviation Met Advisor, Met Office
Mr A Kerr, Senior Airport Met Advisor, Met Office
Mr I Simpson, Airport Met Advisor, Met Office
Mr D Handley, Airport Engineering, Heathrow Airport, NATS

CAA House K6G1 45-59 Kingsway London WC2B 6TE www.caa.co.uk
Telephone 020 7453 6527 Fax 020 7453 6565 colin.hord@caa.co.uk