

General Aviation Newsletter

Welcome

Welcome to this newsletter. This is the first of a number of newsletters to be produced by the Met Office. The purpose of these will be to keep the GA community fully informed of the latest developments in the Met Office that we feel may be relevant to you as pilots.

As this is the first one, we'd love to hear from you about whether you find these useful, as well as any suggestions for future issues. In fact, anything that you'd like share with us!

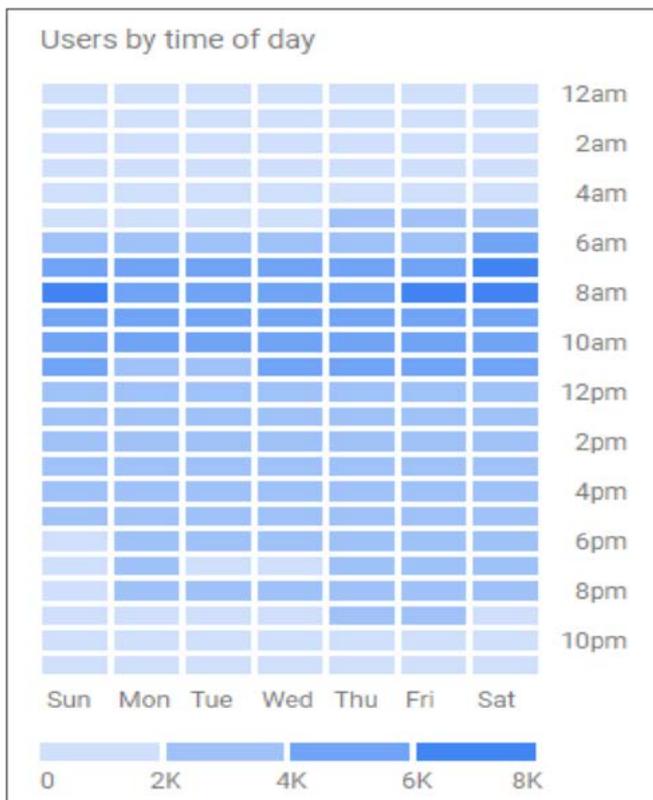
In this issue we take a look at how pilots tend to use the Met Office's [GA weather briefing portal](#) and what we can learn from this, initiatives to improve the guidance material to help pilots make full use of the array of information available and a focus on our aerodrome warnings product.

Darren Hardy

Snr National Aviation MET Advisor, Met Office

GA web site - What the statistics are telling us?

You may not be aware but the Met Office operates analytics software on the GA web briefing portal. The purpose of this software is to help us better understand the pre-flight weather briefing behaviour of pilots, for example peak access time and what products pilots view most etc. The results assist the Met Office to adapt and fine-tune the website so that it provides the best possible user experience.



I'd like to share with you the following statistical highlights:

- Average number of different users per month: **20,000**
- Average session duration: **4min 10 sec**
- The website is busiest between: **6 and 10 am**
- Quietest day: **Christmas Day***
- Area of the most GA users: **South East of England**

* There were still 666 GA users on this day

Most popular products accessed:

- TAF/METAR lists: **62% of weather briefs look at these**
- Searching for individual airport details: **Accessed by 54% of pilots**
- F215 (low level significant weather chart): **Viewed by 36% of pilots**
- F214 (spot wind and temperature chart): **Viewed by 28% of pilots**
- Weather map layers: **Viewed by 28% of pilots (rainfall radar is the most popular)**
- Surface pressure chart: **Viewed by 15% of pilots**

So, what can we deduce from these figures (apart from the fact that 666 people prefer to fly than eat a Christmas dinner!). Well, perhaps the main conclusion is that there is an emphasis on pilots looking at site specific data (i.e. TAFs and METARs) more so than the area forecast (i.e. F215 – Low Level Sig. Weather, and the map layers). Could these figures indicate that there is an opportunity for pilots to enhance their pre-flight briefing through an increased use of area forecasts? It's important of course to ensure that familiarity is sought on the weather that pilots are likely to encounter along their planned route, and potential diversion routes, as well as between the departure and destination points!

The reasons for the briefing patterns that we see are likely to be wide and varied, and we know that some products are in general more valuable than others. However, we are aware that more can be done to 'demystify' some of the products (which may present a barrier to using them) and also to provide some practical guidance on making the best use of them in the context of effective pre-flight briefing. For example, are you comfortable with all those abbreviations on the F215 and do you know the type of weather you typically get behind a cold front or in a warm sector? The Met Office is putting in place a number of initiatives to provide pilots with the confidence needed to make full use of the entire suite of aviation briefing products.

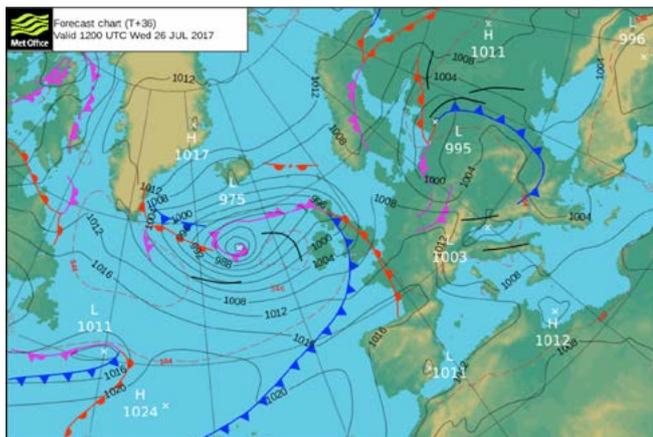
New guidance for GA pilots

Providing aviation weather forecasts and observations is only ever useful if pilots can confidently make full use of all the information. This means supporting pilots with explanatory information and practical guidance on interpreting the forecasts issued. Providing aviation weather forecasts and observations is only ever useful if pilots can confidently make full use of all the information. It is known that weather can be a significant contributory factor in a number of incidents and the CAA and Met Office are keen to support pilots with explanatory information and practical guidance on interpreting all of the forecasts issued. It is hoped that an important contribution to safety can be made by helping pilots to enhance their knowledge and confidence in using the full range of valuable information available.

The Met Office and CAA Met Authority have therefore set in place a number of initiatives designed to improve the guidance material available so that pilots may fully and confidently utilise the extensive array of weather briefing information provided on behalf of the CAA.

'Pilot Resource Portal'

Over recent months we've been constructing a web page that exists as a repository for guidance on a wide range of aviation weather briefing products. We've called this our 'Pilot Resource Portal'. Hopefully pilots will find that the guidance contained in the portal is useful, and that where appropriate they will use the information as part of their pre-flight weather briefing routine.



A significant amount of guidance material now exists on these pages, for example on interpreting synoptic charts, and practical guides to interpreting TAFs, aerodrome warnings and F215s amongst others. Please take a look at our the pilot resource portal [here](#).

The Met Office intends to regularly review and update this portal with additional information. For example, we hope to add guidance on applying Threat & Error Management principles for weather. We welcome your feedback regarding any guidance that is felt would enhance pilots' use of weather briefing material, and ensure safe and efficient flight planning.

Met Office support to the CAA

The Met Office is supporting the CAA in a review of guidance material for pilots on the subject of making effective weather-related decisions. It's felt that it would be useful to create a single document including all existing guidance, along with new guidance, to provide practical assistance to pilots in making the most of the weather information provided by the Met Office. It's intended that such a document would complement the [Skyway Code](#) (CAP1535), which includes a useful but brief MET section.



Met Product focus - Aerodrome Warnings

What are aerodrome warnings?

Aerodrome Warnings are issued by the Met Office in accordance with CAA and ICAO requirements and are designed to provide advice to pilots on potential weather hazards that may affect the aerodrome they are operating from or to, including your diversion airfield(s). The warnings provided include, amongst others, strong wind, fog, thunderstorm and frost.

The warnings are designed to be used alongside the wide range of other aviation forecasts that are provided by the Met Office on behalf of the CAA, to develop the fullest possible picture of the expected weather conditions for each aerodrome.

All issued aerodrome warnings are available on the [GA weather briefing portal](#).

Recent changes introduced

The content of aerodrome warnings follows a standardised format agreed with the CAA. The standardised text in the warnings helps the Met Office to issue aerodrome warnings efficiently to over 100 UK airfields routinely every 6 hours.

The use of phrases such as 'likely to occur' and 'may occur' have recently been introduced to help convey information on the potential likelihood for a warned of weather hazard to occur at an aerodrome. For example, a warning stating that 'Thunderstorms may affect the airfield at times' will be used to infer that there is up to a 40% probability for thunderstorms to occur at or in the vicinity of the airfield during the defined period. A warning stating that 'Thunderstorms are likely to affect the airfield at times' will be used to infer that there is at least a 40% probability for thunderstorms to occur at or in the vicinity of the airfield during the defined period.

Shoreham (EGKA)

△ Warning issued!

Strong Wind

Issued at: Fri 28 Jul 2017 - 05:31 UTC Valid from: Fri 28 Jul 2017 - 12:00 UTC Valid to: Fri 28 Jul 2017 - 18:00 UTC
SW WINDS WITH MEAN 20KT AT TIMES AND GUSTS OF 28KT ARE LIKELY TO OCCUR.

Differences compared to TAFs

Unlike TAFs where a probability threshold of 30% (denoted by the term 'PROB30') is required before weather can be included, there are no such constraints set for aerodrome warnings. This can mean that on occasions a warning may be issued for an aerodrome alerting to a potential hazard which is not reflected in the TAF issued for the same airfield. It can be inferred in such instances, that the probability of the weather hazard described in the aerodrome warning is less than 30%.

Another difference exists in the requirement for forecasting frozen precipitation in TAFs and aerodrome warnings. For example, a slight snow shower would not necessarily require the issuance of a TAF amendment whereas an aerodrome warning should be issued for the onset of any intensity of snow.

Finally, aerodrome warnings provided for almost all airports are issued at routine intervals and are not amendable outside of these times. TAFs on the other hand are subject to amendment at any time when the meteorological conditions expected on an airfield are expected to significantly deviate from that described in the TAF.

In summary, conveying a consistent 'weather picture' for aerodromes is always uppermost in the minds of the Met Office aviation forecasters. However, it should be recognised that the level of detail between the two products can vary at times.

How accurate are these warnings?

It is good practice to evaluate the value of all our aviation forecasts. For aerodrome warnings we do this by verifying warnings issued for selected weather parameters against the content of METARs for a geographical spread of aerodromes. Recent results have shown that we capture most weather hazards well, but we do issue a number of warnings where the warned of event does not materialise (false alarms). As always, we strive to achieve maximum value for pilots by minimising missed events and false alarms, and we work closely with the CAA to continually improve the accuracy of our products.



Did you know?

As part of our remit to the CAA, the Met Office ensures that pilots flying within the UK can contact the Met Office to seek clarification or amplification on any of the forecasts provided on Met Office's [GA weather briefing portal](#).

What do we mean by clarification and amplification? Well, for example, you may have a question about what part of a TAF means, or what a symbol on the F215 refers to. Or you may have a question about an apparent inconsistency between forecasts issued.

All we ask is that you have first fully pre-briefed and have your clarification question ready. Our duty meteorologists should then provide you with the information you need.

Full details and conditions of use of this service can be found in the [UK AIP](#), GEN 3.5, Section 4 - Types of service, Paragraph 4.2.4.

Please note that if you wish to receive a bespoke full briefing, the Met Office also offers a commercial service called Talk to A Forecaster, details of which can be found [here](#).



We'd like to hear from you!

Should you wish to feedback any comments on the products provided on the Met Office's [GA weather briefing portal](#), or indeed anything relating to this newsletter, please get in touch at aviation@metoffice.gov.uk.