

GA1358

Posted on 27.02.2024 by Steve Forward

Category: [General Aviation](#)

Report Title NOTAM Understanding

Initial Report

I was planning a flight from [Airfield 1] to [Airfield 2]. As part of my planning I saw a NOTAM raised in the [Town] area, 4nm diameter, surface to 3200ft amsl, 24/7, for the flying of drones and model aircraft. It's a very congested piece of airspace constrained laterally by [Airfield 3] MATZ and [Airfield 4] ATZ. Vertically it is adjacent to the London TMA.

I always try and follow the GASCo advice of take 2 miles laterally and 200ft vertically, so I was pretty interested in what might be out there to bump into. As a courtesy, I elected to call the number given to see if they were operating. The person's tone at the other end was demeaning, became insulting and finally threatening by demanding my details because they were going to immediately contact the CAA. As the conversation had become threatening, I advised I would not continue and terminated my call. I'm glad I was operating as a rear-seat pilot not as P1 because by this point I was thoroughly irritated and distracted.

Their understanding of NOTAM use and the rights they give is different to mine. They considered that: the NOTAM had been raised by the CAA to protect my life (if in error I apologise but I thought NOTAMs were raised by the originator); I was not permitted to fly through that airspace; there is no requirement for the drone operator to maintain lookout; the drones are not required to be kept in line of sight; they had no concept that they were also responsible for separation and avoidance action; in no uncertain terms they advised that I should hold outside their airspace and climb above before proceeding; they could fly their large heavy drones 24/7 with no consideration of other airspace users; and they had no requirement to manoeuvre away should they sight an aircraft.

I remain certain much of the above is not true. I believe the size and use of this NOTAM'ed airspace is inappropriate and have raised that direct with the CAA.

Comment

This report highlights misunderstandings that might exist about NOTAMs versus restricted areas and TRAs. Although published by NATS on behalf of the CAA, NOTAMs are compiled by the requestor of the activity. In this particular case, the NOTAM was a navigation hazard warning with no requirement to avoid it although sensible to do so given the activity likely to be conducted within

with small models/drones. For their part, those operating drones/UAS within such NOTAM'ed areas still have a duty to avoid collisions with other aircraft and so they must maintain visual contact with their drone/model at all times – all airspace users have a duty to avoid collisions and must give way to aircraft to the right of their own. Given the often small size of drones/models, there is extra importance in drone/UAS operators avoiding aircraft that they see given that their drone/model will likely be very difficult to detect by an aircraft pilot. In short, unless specific arrangements have been made to operate BVLOS^[1] (which requires a TRA at present), a model/drone operator is required to maintain lookout (either themselves or by an observer if using FPV^[2]) and must keep any model/drone within their line-of-sight.

^[1] BVLOS – Beyond Visual Line of Sight.

^[2] FPV – First-Person-View, i.e. using heads-down video or virtual reality goggles.

The NOTAM itself was poorly drafted with a number of errors in heights. The upper limit was erroneously described as the surface altitude in one part and 2500ft agl in another (implying a top height of 3200ft amsl). The intended top-height was 1500ft agl (2200ft amsl) and this was corrected in a subsequent issue of the NOTAM. Whilst we're all prone to mistakes and errors at times, it shows the importance of understanding the NOTAM compilation process and double-checking any entries to make sure they are correct. NATS have produced [NOTAM Guidance Material](#) (see also QR code), wherein Paras 3.2 and 3.3 (reproduced below) give an explanation of how to decode NOTAMs. Although many electronic navigation and planning aids do this automatically for users, those compiling NOTAMs need to understand the various entries and what they mean.



Finally, the 3Cs of Caution, Consideration and Courtesy to others should be our watchwords in aviation. There's nothing to be gained from being rude or obstructive when people query or ask for further information about a NOTAM, a confrontational tone only causes stress and distraction to others.

[NATS NOTAM Guidance Material](#) referred to in this report

3.2 NOTAM Format

NOTAM are required to conform to an explicit template. Using the example below, an explanation of the format follows:

- A1234/14 NOTAMN
- Q) EGTG/QMRLC/IV/NBO/A/000/999/5129N00028W005

- A) EGLL
- B) 1408231500
- C) 1409310500
- D) 1500-1600, 0430-0500
- E) RWY 09R/27L CLOSED DUE WIP

3.3 The NOTAM Construct:

A1234/13 represents the NOTAM Series, followed by a sequential 4-digit number, followed by two digits to indicate the year. (Max 9999/YY).

NOTAMN Indicates this is a new NOTAM. Other options are R for NOTAM replacing another or C for one cancelling another. Replacement NOTAM can only be used to replace a NOTAM that is already in effect.

Q) EGTT/QMRLC/IV/NBO/A/000/999/5129N00028W005

The Qualifying line, or Q Line, is an AIS tool used to categorise the NOTAM according to its scope. It consists of up to eight fields separated by a stroke (/) comprising FIR, Q Code, Traffic, Purpose, Scope, Vertical Limits, Co-ordinates and Radius.

EGTT is an ICAO code, identifying the (London) FIR to which the NOTAM refers. Should the activity take place in more than one FIR then the code EGXX is applied and the specific FIRS affected are inserted into field A of the NOTAM

QMRLC is a 5 letter NOTAM code identifying subject and status. In this case **MR** is a Runway, **LC** indicates a closed status. **IV** indicates that this information is significant for both IFR and VFR operations while **NBO** indicates a message for immediate attention, for inclusion in a PIB and operationally significant.

A represents the scope which in this case is an Aerodrome NOTAM as opposed to an EnRoute **E** NOTAM or Navigation Warning **W**. Combinations **AE** and **AW** can also be applied according to the subject being described.

000/999 represents the lower and upper limits expressed as a flight level. In this case it is left as a default as it is not applicable.

5129N00028W005 is the 'Centre point' using degrees and minutes followed by a radius of influence. In this case the default value of 5NM has been applied based on the aerodrome ARP. A default radius of 999 is applied for NOTAM that cannot be associated to a specific area and for those that affect the whole FIR.

Position (Where)

A) EGLL is the ICAO code of the aerodrome (Heathrow). While it is possible to insert more than

one FIR into this field, it is only possible to enter one Aerodrome. This means that separate NOTAM are required if the impact is on two or more aerodromes.

Effective from (Begins)

B) 1408231500 is the Date/time group in UTC when the NOTAM becomes effective. Year, Month, Day, Time. NOTAM used to replace or cancel other NOTAM can only be issued With Immediate Effect (WIE) and cannot have a future effective (start) date.

Effective until (Finishes)

C) 1409310500 is the Date/time group in UTC when the NOTAM ceases to be effective. Temporary NOTAM shall exist no longer than 90 days.

Where an expiry date/time can only be estimated EST may be included in Field C for temporary NOTAM. Sponsors shall take action to cancel or replace the NOTAM before the EST expiry time.

Planned Schedule (Optional)

D) 1500-1630, 0430-0500 this provides the opportunity to describe a schedule of events within the effective date of the NOTAM. This is particularly useful for events that take place over a period of days or weeks. Irregular schedules that do not meet certain criteria will have to be described in the plain language part of the NOTAM

Plain Language (Free-text)

E) RWY 09R/27L CLOSED DUE WIP is the textual part of the NOTAM indicating that Runway 09/27 is closed due to work in progress.

This item describes the 'subject' and 'condition' and is probably the most important part of the message. The information should be explicit giving the reader the ability to quickly assess the impact to their operation.

Start with a 'headline' to describe the subject and event e.g. RWY...CLOSED, TWY... WIP, DANGER AREA ... ACTIVATED, FREQUENCY ... U/S. After which supplemental information may be considered to describe the impact.

Avoid information that may be considered as 'nice to have' or complementary. Use internationally recognised abbreviations (as per ICAO Doc 8400) unless their use creates misunderstanding. A list of abbreviations is available in the General (GEN) section of the AIP but note that National abbreviations (in italics) cannot be used for NOTAM.

Use of Coordinates

If there is a requirement to describe an area or polygon, the provision of coordinates

Degrees/Minutes/Seconds shall be used e.g. 521049N 0012035W. When describing an area repeat the first coordinate in full to close the polygon.

Supplementary Information

The judgment needed to assess the extent of information required in a NOTAM can be problematical. Too much information can serve to overwhelm the reader, whereas not enough information will fail to provide them with an opportunity to assess the impact on the operation.

Guidance in composing the text of a NOTAM can be obtained by contacting the NOTAM Office directly to establish that the proposal clearly captures the objective.

Vertical Parameters

F) & G) describe lower and upper limits. They are not used for Aerodrome NOTAM scoped A; however, they are used for airspace notifications such as navigation warnings, airspace reservations and Danger Area activities. The sponsor should ensure that appropriate values are included in the NOTAM proposal e.g. FL090, 3000FT AMSL.

When the values in Fields F and G are expressed as a flight level (FL) or altitude (AMSL) the associated FL values will also be applied in the Q Line. It is recommended that the use of AGL is avoided in fields F & G, as it demands a calculation based upon the highest terrain elevation for the region or FIR.

Key Issues

Dirty Dozen Human Factors

The following 'Dirty Dozen' Human Factors elements were a key part of the CHIRP discussions about this report and are intended to provide food for thought when considering aspects that might be pertinent in similar circumstances.

Stress – caused by confrontational tone of communication.

Knowledge – understanding of NOTAM relevance and meaning.

Communication – erroneous NOTAM; confrontational tone of communication.

stressStress

lack_of_knowledgeKnowledge

poor_communicationCommunication



