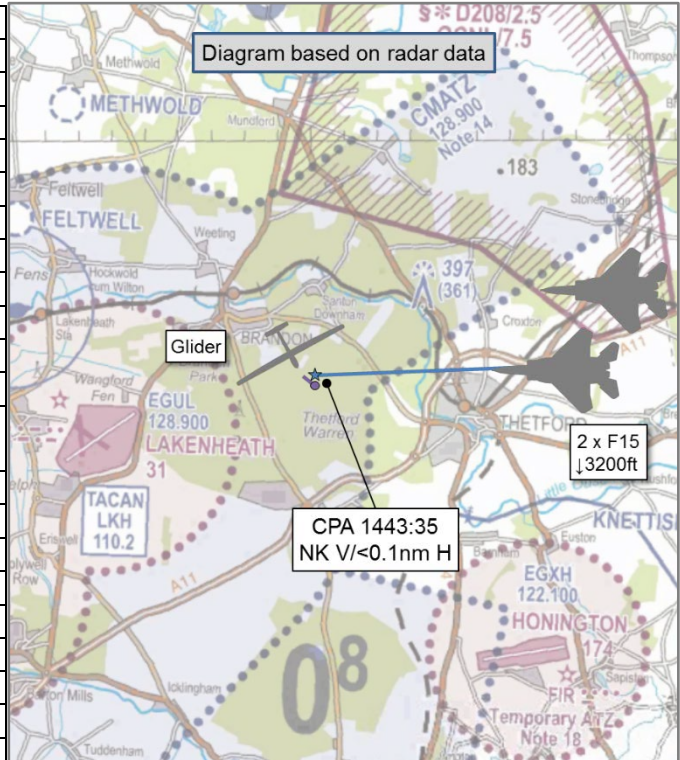


AIRPROX REPORT No 2018212

Date: 14 Aug 2018 Time: 1443Z Position: 5225N 00040E Location: Lakenheath

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	F15	Duo Discus glider
Operator	Foreign Mil	Civ Gld
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	ACS	Basic
Provider	Lakenheath	Lakenheath Zone ¹
Altitude/FL	3100ft	NK
Transponder	A, C, S	Not fitted
Reported		
Colours	Grey	White
Lighting	Anti-cols, Position lights	Nil
Conditions	VMC	VMC
Visibility	10km	10nm
Altitude/FL	3200ft	2500ft
Altimeter	RPS	QFE
Heading	270°	Circling
Speed	330kt	52kt
ACAS/TAS	Not fitted	FLARM
Alert		None
Separation		
Reported	100ft V/100m H	0ft V/250m H
Recorded	NK V/<0.1nm H	



THE F15 PILOT reports that he was in a flight of 2 F15s, on a visual recovery to Lakenheath at FL190. At 25nm, they were advised of multiple gliders to the east, north-east and north of the field, including in the vicinity of the initial point.² The weather was scattered at 4000-6000ft. They conducted a descent with the intention of reporting high-initial due to the clouds and glider traffic, and found a significant break in the clouds just east of Thetford, which is immediately south of the approach corridor to initial-RW24. Lakenheath App then handed the F15s over to Lakenheath Twr, who did not pass updates on the glider traffic. On the 072 radial inbound to the Lakenheath TACAN at 7DME and 3500ft MSL, they spotted a glider passing down the right-hand-side of the formation at about 0.5nm from the formation, but not a collision risk. About 15 sec later at 3200ft at 5.2DME, they saw a glider in a sharp right-turn at 10 o'clock, 100m away and about 100ft below. The lead pilot directed the formation to level off and, 5sec later, they were clear of the glider.

He assessed the risk of collision as 'High'.

THE DUO DISCUS PILOT reports that he was participating in a gliding competition, in Class G airspace and receiving a Basic Service from Lakenheath Zone for safety (he recalled). At the time of the Airprox he was beginning to thermal to gain height. He recalled being given Traffic Information on the inbound formation and then saw two fast-jets a mile away. He decided to continue to circle for conspicuity and saw them fly safely past, he felt that there was adequate separation.

He assessed the risk of collision as 'Low'.

¹ As recalled by the pilot

² The military 'Initial Point' is a point that fast-jet aircraft flow through at circuit height as they join the airfield for a 'run-and-break', normally 3nm just deadside on the extended centreline.

THE LAKENHEATH APP CONTROLLER reports that the F15s were at FL190 when they called for a Traffic Service. They were given a direct initial approach to RW24 and descent to 2500ft. He then issued a blanket Traffic Information call about multiple gliders north and east of Lakenheath. The pilot acknowledged the call and asked for confirmation of the location of the gliders, which was given, along with information on further traffic on the RW24 centreline. The pilot requested a high tactical initial at FL80, but the controller could not accommodate this request because of the cloud-base being reported as 4900ft at Lakenheath. The pilot then asked to fly through at FL60 to re-enter at point 'D' (a point 5nm east of the runway), this request was approved, and he was told to switch to Tower frequency.

THE LAKENHEATH TOWER CONTROLLER reports that it was a clear day and he was given a call from radar to tell him that a glider pilot had called to inform them that there were multiple gliders to the north/northwest of RAF Lakenheath, routing to the southwest; a few gliders could be seen on the radar screen. They were informed that the F15s were coming through initial, this was updated to say that due to the glider activity they would recover from the south at a higher altitude. They approached from the south-east and, once on frequency, reported that they had passed over a glider by 300ft. The glider was not visible on the radar, and the Tower controller was not visual with it.

THE LAKENHEATH VCR SUPERVISOR reports that it was a clear day and glider activity was known to be present in the area. They were given an advisory from the Radar App controller that there was a heavy concentration of gliders to the north of the Lakenheath ATZ. There were several primary contacts on the Tower Display Workstation (TDW), however, the glider targets are usually intermittent and not transponder equipped, so no height information is displayed. The Wing aircraft were beginning their arrival phase and the radar controller was issuing Traffic Information as needed, prior to switching the aircraft to Tower. When necessary, Tower also issued Traffic Information to arriving aircraft on any primary contacts seen. The F15 flight were inbound for initial RW24 and reported that they had just passed a glider by about 300ft. There were no observed primary targets on the TDW in the vicinity of the F15, so Traffic Information could not be given, and generic Traffic Information had already been passed to them. To their knowledge, all the gliders were clear of the ATZ and in Class G airspace, so operating completely legally.

THE LAKENHEATH RADAR SUPERVISOR reports that the F15s were handed over by Swanwick(Mil) to the App controller and had requested initial for their recovery. There was known glider activity in the vicinity of Lakenheath and he observed the App Controller issue multiple traffic calls and updates to the affected recovering aircraft. The F15 pilot changed his request to a high-tactical-initial recovery once he was informed of the glider activity, which would have taken him above all of the glider activity. However, the weather was not what was needed to allow the formation to recover this way. The App controller descended the aircraft to FL50 and sent them to Tower frequency to allow them to descend directly over the field and entre the Tower pattern via Delta, (a point 5nm east of the runway). All information was passed to both the Tower controller and the pilots, and the F15s were sent to the frequency 10nm east of the field. The App controller was not in contact with the glider and there were reports of many more gliders than they could see on the radar. Other aircraft recovering at the same time recovered via direct initial without any issues.

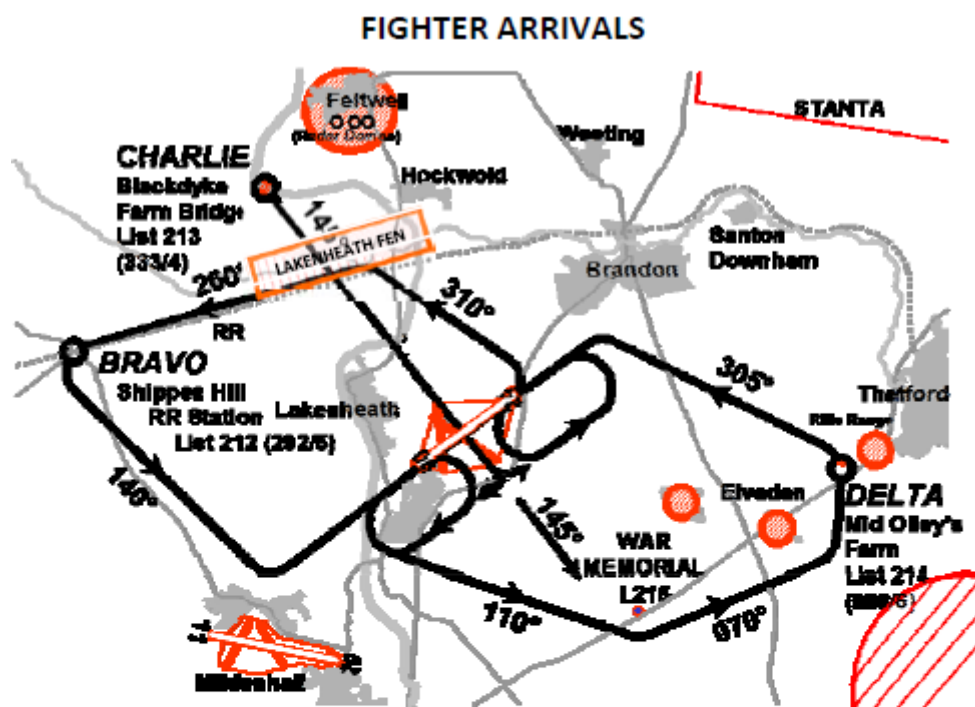
Factual Background

The weather at Lakenheath was recorded as follows:

METAR EGUL 141356Z AUTO 26007KT 9999 FEW039 BKN049 22/13 A2998 RMK A02 SLP155
T02220127

METAR EGUL 141456Z AUTO 28011KT 9999 FEW044 SCT055 24/13 A2997 RMK A02 SLP152
T02410127 58001

At Figure 1 is a guide to arrivals at RAF Lakenheath:



RWY 06: Recover via PT BRAVO or PT CHARLIE.

RWY 24: Recover via PT DELTA, DIRECT INITIAL, or PT CHARLIE.

ALTITUDES: RAPCON will bring fighters in at 2500' (3500' FRP @ PT CHARLIE). Pilot may descend to 2000' (3000' FRP @ PT CHARLIE) when VFR and able to clear own flight path. Descend to 1500' at INTIAL or DOWNWIND. (FRP—Descend to 2000' when clear of the FEN)

BRAVO: Request BRAVO to INITIAL with ATC. Rpt PT BRAVO and proceed direct 3nm INITIAL. Avoid EGUN ATZ.

DELTA: Request DELTA to INITIAL with ATC. Rpt PT DELTA and proceed direct 3nm INITIAL.

INITIAL: Rpt 3nm INITIAL. Do not overfly Brandon.

CHARLIE TO DOWNWIND ENTRY: (single-ship, 2-ship, or 2+2 only, spread) Rpt PT CHARLIE with TWR. Proceed to downwind. If denied, maintain altitude and re-enter at PT DELTA.

Figure 1

Analysis and Investigation

UKAB Secretariat

Screenshots taken from the NATS radar (which is not the radar seen by the Lakenheath controllers) show an intermittent primary only contact, thought to be the glider, appear on the radar for two sweeps before fading.

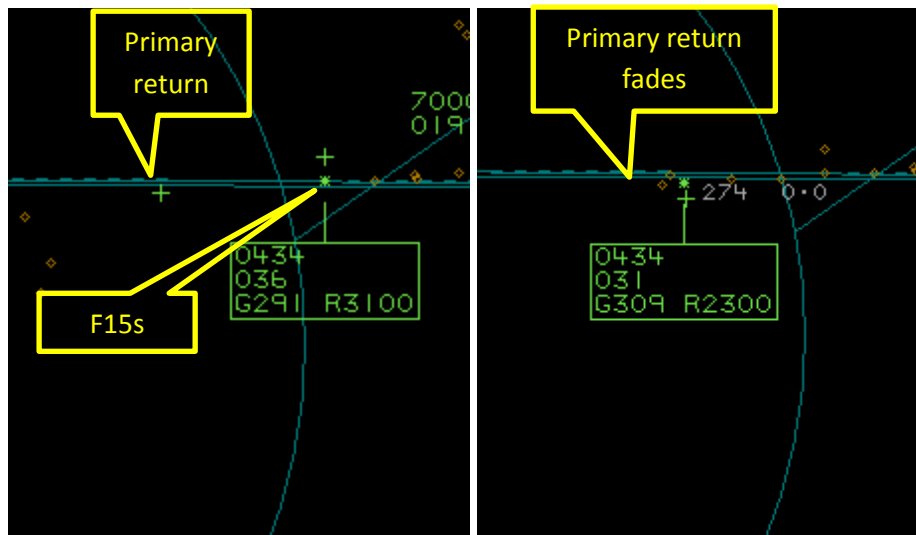


Figure 2: 1443:20

Figure 3 (CPA): 1443:35

F15 0434 Squawk

The F15 and glider pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a danger of collision³. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right⁴. If the incident geometry is considered as converging then the F15 pilot was required to give way to the glider⁵.

Comments

USAFE

Notwithstanding that the glider pilot was in Class G airspace, just above the CMATZ, and apparently in receipt of a Basic Service from Lakenheath, the wisdom of operating just to the south of the extended centreline of the main instrument runway of one of the busiest fighter bases in the UK must be questioned. Further, one pilot's view of "adequate separation" is not necessarily another's.

BGA

It's good to see that glider pilots are making more use of UK FIS than historically has been the case, which led to improved situational awareness for all involved. If not identified on radar, it would be worth giving position reports when operating near the centreline of an active runway because that area is likely to have a higher concentration of traffic.

Summary

An Airprox was reported when an F15 and a Duo Discus glider flew into proximity near Lakenheath at 1443hrs on Tuesday 14th August 2018. Both pilots were operating under VFR in VMC, the F15 pilot in receipt of a ACS from Lakenheath Tower. Although the glider pilot reported receiving a Basic Service from Lakenheath Zone, Lakenheath could not find evidence of this on their RT recordings.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, transcripts of the relevant R/T frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

³ MAA RA 2307 paragraph 1 and 2, Avoidance of collisions and SERA.3205 Proximity

⁴ MAA RA 2307 paragraph 13, Approaching Head-On and SERA.3210 Right-of-way (c)(1) Approaching head-on.

⁵ MAA RA 2307 paragraph 12, Converging and SERA.3210 Right-of-way (c)(2) Converging.

The Board first looked at the actions of the F15 pilots, they had been told about the gliders by ATC, but the cloud-base had constrained the type of approach that they could do. Although they wanted to remain high and overfly initial, they had to descend to get beneath the cloud at some point. Consequently, having found a gap in the clouds as they positioned to join the visual circuit, they ended up flying through the initial point at a similar height to the gliders. One member with military fast-jet experience wondered whether military fast-jet aircrew in general had become fixated on recovering to military airfields via a run-and-break through initials. He opined that if the cloud base was below 3000ft, subject to cloud and operating constraints, it may have been possible to join through Point C and join the circuit downwind, thus avoiding the gliders known to be in the vicinity of initials. As it was, the F15 pilots were fortunate to have become visual with two of gliders and were able to level-off in time to avoid the Airprox glider.

The Board were informed by the glider member that the gliders were operating from a local gliding site and were involved in a local gliding competition. Because this competition only concerned local pilots, all of whom were familiar with the local airspace, the competition had not been NOTAM'd. As a result of this Airprox, the BGA had reviewed how such local gliding competitions should be promulgated and had subsequently provided new guidance to gliding clubs about when a NOTAM should be issued. In future, irrespective of whether the competition was local or not, when more than 20 gliders are involved a NOTAM will be issued. There followed considerable discussion about this, with some members pointing out that more than even just a few gliders in the vicinity of an aerodrome could still be a problem. The gliding members acknowledged this and recognised the difficulty in setting specific numbers for the issue of a NOTAM. In some mitigation, they informed the Board that the BGA was also encouraging members to talk directly to local ATC units to notify them of competitions or events in their vicinity. They also noted that, in this case, the gliding club had said that they did not have a contact for Lakenheath ATC at the time of the Airprox, and that that was why they had not contacted them. The club had since attended a Regional Airspace User Working Group, and this had now been rectified. The Board were heartened to hear this, although they noted that planning documents such as Pooleys provide a telephone number for ATC or Ops for all units covered, which included all RAF airfields and the majority of civilian ones, and that this could provide a good starting point for notifying any activity to affect.

Turning to the glider pilot, although he reported that he had called Lakenheath, they could find no evidence of the call on their frequencies. Nevertheless, the glider pilot reported being aware that the F15s were recovering and so the Board concluded that he was at least listening out on the Zone frequency. He reported seeing the F15s from a mile away, and elected to continue to circle to provide the best visual conspicuity. The Board agreed that his changing aspect probably allowed the F15 pilots to become visual with him. The glider pilot was content with the separation, perhaps because he had the benefit of seeing the F15s from a distance, rather than the likely startle-factor that the F15 pilots had of suddenly seeing the glider in close proximity. That he assessed the risk of collision as low caused some members to wonder whether he had a particularly robust approach to the risks of fast-jets flying so close by.

Finally, the Board looked at the role of ATC in the incident. Although they could find no evidence of a call on the radar frequencies, it was clear that ATC were at least generically aware of the gliders, and the Tower controller reported that radar had warned them about the gliders operating at initial (albeit without any knowledge of their height). The gliders intermittently showed on the radar, enabling the controllers to provide generic Traffic Information to the recovering aircraft. The USAFE advisor told the Board that, unlike some RAF ATC units, Lakenheath ATC did not possess a FLARM receiver and so had no information on the gliders other than reports from other pilots and the brief intermittent primary radar traces; given their location in an area of intensive gliding activity, the Board commended the purchase of a FLARM receiver to Lakenheath as a means of gaining significantly improved situational awareness of gliders in future. Nevertheless, the Board were clear that the controllers had done their best to provide as much information as possible to the F15 pilots as they recovered to the airfield.

In determining the cause of the Airprox the Board quickly agreed that this had been a conflict in Class G, resolved by the F15 pilot. They then discussed the risk and noted that the F15 pilot had reported that he had only seen the glider at the last moment and that the separation had been only 100ft and

100m as they flew past. Notwithstanding, the F15 pilot had been able to level off, and the Board assessed that this emergency avoiding action had materially affected the achieved separation. As such, the Board agreed that safety had been much reduced below the norm and therefore the risk was assessed as Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A Conflict in Class G resolved by the F15 pilots.

Degree of Risk: B.

Safety Barrier Assessment⁶

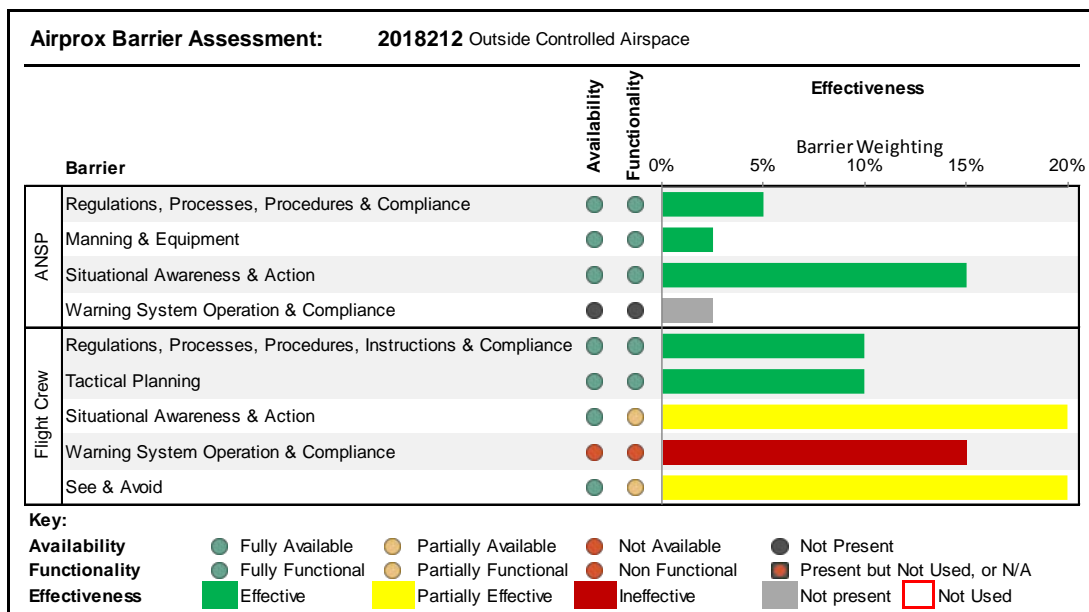
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew:

Situational Awareness and Action were assessed as **partially effective** because although the F15s knew that there were gliders in the area, the information was only generic.

Warning System Operation and Compliance were assessed as **ineffective** because the FLARM on the glider could not detect the F15s, and the F15s had no collision warning systems installed.

See and Avoid were assessed as **partially effective** because the F15s were able to see the glider, albeit late, and level off.



⁶ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).