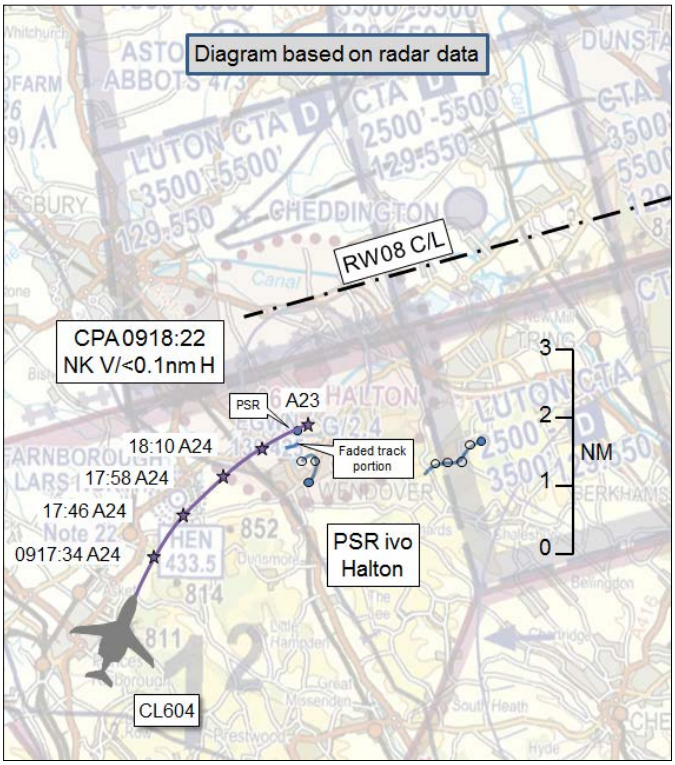
AIRPROX REPORT No 2017111

Date: 25 May 2017 Time: 0918Z Position: 5147N 00044W Location: Halton airfield (elev 366ft)

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASK 21	CL604
Operator	HQ Air (Trg)	Civ Comm
Airspace	Halton ATZ	London FIR
Class	G	G
Rules	VFR	IFR
Service	AGCS	Traffic
Provider	Halton	Luton
Altitude/FL	NK	NK
Transponder	Nil	A,C,S
Reported		
Colours	White	Mainly white
Lighting	N/A	Beacon, recognition, nav
Conditions	VMC	VMC
Visibility	20km	>10km
Altitude/FL	1750ft	2400ft
Altimeter	QFE (1008hPa)	QNH (1025hPa)
Heading	040°	030°
Speed	50kt	~220kt
ACAS/TAS	FLARM	TCAS II
Alert	None	None
Separation		
Reported	~100ft V/NK H	400ft V/NK H
Recorded	NK	



THE SCHLEICHER ASK 21 GLIDER PILOT reports that, whilst conducting a training flight and operating on the ridge southeast side of the airfield, he was passed at similar height [glider altimeter indicating 1750ft QFE] by a business jet. His track was south to north and the business jet was flying on the same heading but was flying between himself and the ridge approximately 100ft above he estimated. He made an immediate announcement on Halton Radio; no communication was heard from the business jet pilot. Due to the proximity of the business jet to himself and 3 other gliders, an Airprox was filed. Depending on the outcome of the Radar Analysis it was difficult to ascertain whether airspace was infringed or whether the business jet flew across the top of the ATZ (2370ft QNH). From the observations it appeared to him that the business jet did infringe the ATZ.

He assessed the risk of collision as 'Medium'.

THE BOMBARDIER CL604 CHALLENGER PILOT reports that, whilst in receipt of a Traffic Service from Luton (he was inbound to Luton), multiple gliders were noticed at Halton. His track would have taken him through the Halton overhead and so the automatic pilot was disconnected and a heading change of approximately 30° to the right was made to avoid. He estimated that the gliders were first spotted at 3nm and they passed south abeam the traffic by 1nm. He also estimated that the highest glider was approximately 400ft below their aircraft. The weather was CAVOK, with good visibility. He believed they were flying at around 220kt.

He assessed the risk of collision as 'Low'.

Factual Background

The weather at Luton was recorded as follows:

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EGGW 250850Z AUTO VRB03KT 9999 NCD 22/16 Q1025=
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Analysis and Investigation

CAA ATSI

The Glider pilot was operating out of Halton under VFR on a local flight. The CL604 was being vectored for an ILS approach to RW08 at Luton. At 0913:58, the CL604 was routing to Henton at 2400ft; the CL604 pilot called Luton Radar and a Traffic Service was agreed..

At 0916:00 (Figure 1) Luton Radar passed Traffic Information to the CL604 pilot (code 4466) about opposite direction traffic indicating 1000ft below. The pilot of the CL604 remarked they had the traffic on TCAS and requested what their routing would be after the Henton (HEN) NDB. The Luton Radar controller issued an instruction to leave HEN on a heading of 055° which would then intercept the localiser for RW08 at Luton. This routing also took the CL604 over the ATZ at Halton which has an upper limit of 2400ft.

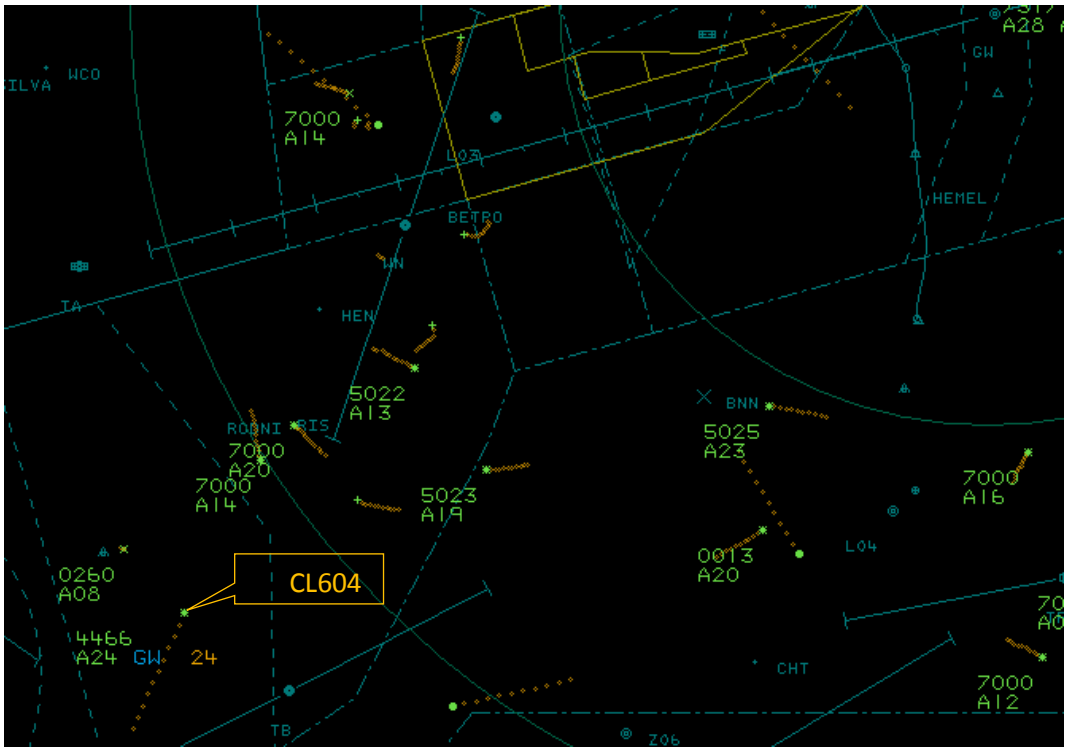


Figure 1 – 0916:00.

At 0917:38 (Figure 2) the controller passed further Traffic Information about a weak radar contact manoeuvring in the 1 o'clock position with no height information. The CL604 pilot reported visual with a glider and then, following further similar Traffic Information from the controller, the pilot reported deviating to avoid some gliders.

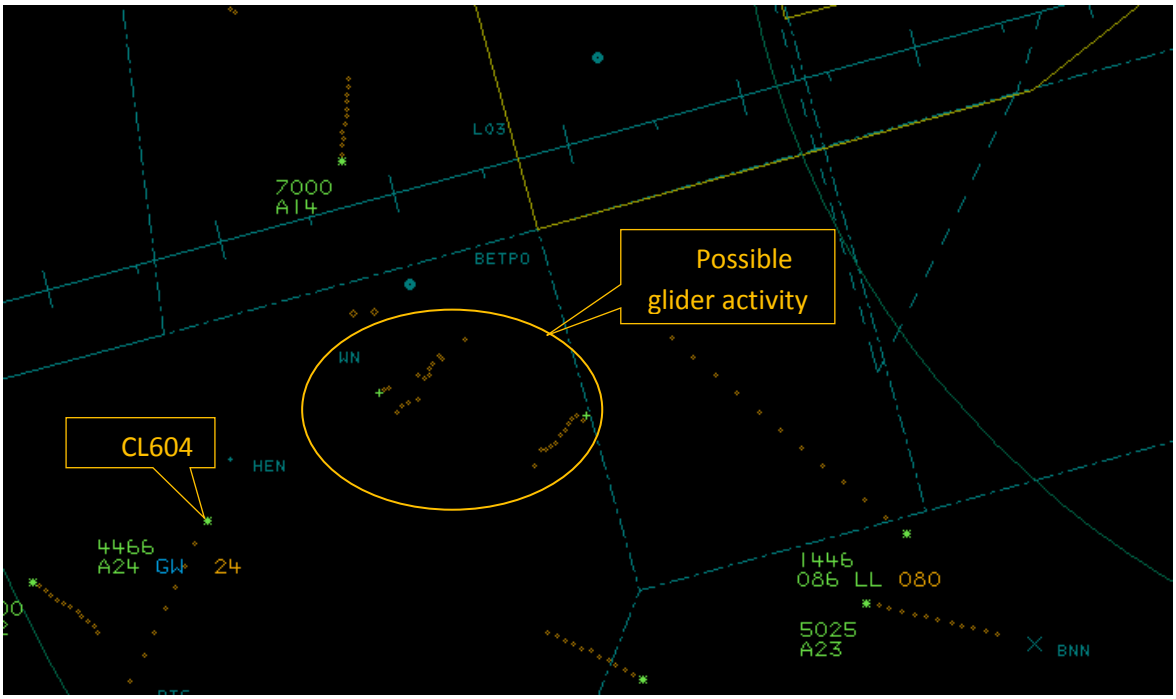


Figure 2 – 0917:38.

CPA as seen on the radar recording occurred at 0918:19 when one of the intermittent contacts, which was possibly a glider, appeared 0.4nm north of the CL604. There was no height information associated with this radar contact. The CL604 had been indicating 2400ft but this temporarily changed to 2300ft for 4 consecutive returns before returning to 2400ft.

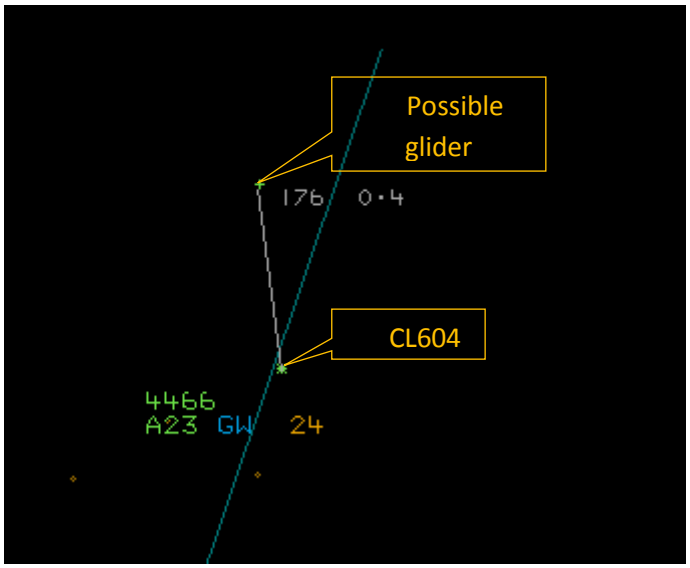


Figure 3 – CPA 0918:19.

At 0918:33, the controller instructed the CL604 pilot, when possible, to turn left heading 040° to establish the localiser (for RW08 at Luton).

There is a letter of agreement between RAF Halton and Luton Radar detailing the delegation of local airspace. This only applies when RW26 is in use at Luton. However, there is also mention that the area can be extremely active with glider, micro-light and other traffic, and that transiting traffic, in receipt of a service from TC Luton, should be encouraged to avoid the ATZ, or contact Halton Radio prior to transiting the area.

A Traffic Service is a surveillance-based type of UK FIS where, in addition to the provisions of Basic Service, the controller provides specific surveillance-derived Traffic Information to assist the

pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the pilot remains responsible for collision avoidance.

UKAB Secretariat

The ASK 21 and CL604 Challenger pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1]. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right[2]. If the incident geometry is considered as converging then the CL604 pilot was required to give way to the glider[3]. If the incident geometry is considered as overtaking then the glider pilot had right of way and the CL604 pilot was required to keep out of the way of the other aircraft by altering course to the right[4].

Notwithstanding that the pilot ultimately remains responsible for collision avoidance under a Traffic Service, in accordance with Traffic Service procedures a controller, when providing headings/levels for the purpose of positioning and/or sequencing or as navigational assistance, should take into account traffic in the immediate vicinity based on the aircraft's relative speeds and closure rates so that a risk of collision is not knowingly introduced by the instructions passed.

Comments

BGA

It is interesting to note that the Challenger pilot could have operated up to 1000ft higher, reducing the risk of conflict with Halton ATZ and traffic (a mix of gliders, motor gliders, GA aircraft and winch launching) and anyone else in the area (busy with transits to/from Wycombe) and still have been in Class G. This would have also facilitated an earlier entry into Luton CAS and it might even have been possible to negotiate a clearance into the lower part of the London TMA to avoid this very congested area completely.

Summary

An Airprox was reported when an ASK 21 glider and a CL604 Challenger flew into proximity at 0918 on Thursday 25th May 2017. The ASK 21 pilot was operating under VFR in VMC, in receipt of an Air/Ground Service from Halton. The Challenger pilot was operating under IFR in VMC, in receipt of a Traffic Service from Luton Radar.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, the controller concerned, area radar recordings and reports from the appropriate ATC and operating authorities.

The Board began by discussing the routing of the Challenger. The pilot had been carrying out a positioning flight from Farnborough to Luton under IFR, opting to remain outside Controlled Airspace. At the time of the Airprox he was in receipt of a Traffic Service from TC Luton Radar, and the Commercial Pilot members all shared their concern at operating an aircraft the size of a Challenger through what is acknowledged as busy Class G airspace. Acknowledging that it may have been more protracted, one pilot member opined that a safer option would have been to leave Farnborough tracking south to enter CAS and then proceed to Luton under a Radar Control Service within CAS. Nevertheless, the Board agreed that, although ill-advised, the Challenger pilot was entitled to route outside CAS if he wished.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(1) Approaching head-on.
[3] SERA.3210 Right-of-way (c)(2) Converging.
[4] SERA.3210 Right-of-way (c)(3) Overtaking.

The Board noted that the Challenger pilot had contacted Luton Radar whilst routing to Henton NDB at 2400ft. A Traffic Service had been agreed and he was instructed to leave Henton heading 055° to position towards the localiser for RW08 at Luton. Henton is approximately 3nm southwest of Halton airfield and, consequently, this track would take the Challenger towards the Halton ATZ (a circle of 2nm radius with an upper altitude of 2366ft), albeit, at 2400ft, to pass just above it. Members wondered whether a better plan would have been for the controller to have offered a more northerly track to avoid Halton to the west before turning the Challenger in for the localiser. The NATS advisor commented that, although this may have been possible, it was likely that the airspace to the west of Halton would be equally busy and so of limited advantage. ATC members agreed and added that the 055° heading would have taken the Challenger to the west of the traffic as displayed on the radar (which was assumed to be from gliders), and, arguably, it was the right turn by the pilot that had resulted in the aircraft going closer to the primary returns shown on the radar display. All agreed that it was unfortunate that his turn had taken him towards the gliders as he made efforts to avoid the Halton overhead, and they agreed with the BGA comments that the other, better, option would have been for the Challenger pilot to climb above 2400ft; the base of CAS in the Halton vicinity being 3500ft.

The Board noted that the ASK 21 pilot had reported that a business jet had passed him about 100ft above when he was operating on the ridge southeast of the airfield at an altitude of 2120ft. He commented that it also passed close to three other gliders. The Challenger pilot reported that he had maintained 2400ft throughout. The radar recordings show the Challenger's Mode C at 2400ft initially, although this did drop to 2300ft for four sweeps. However, this is within the Mode C tolerance of ±200ft. At 2400ft, the Challenger would have been 200-300ft above the glider and some members wondered whether the ASK 21 pilot had mistaken the actual separation as a result of the large size of the Challenger compared to other local aircraft. After much discussion, the Board concluded that they could not say for sure whether or not the Challenger pilot had flown into the ATZ (but if not he was likely only just above), or that he had flown into conflict with the gliders (which he was trying to avoid laterally). As a result, they agreed that the incident was probably best described as the ASK 21 pilot being concerned by the proximity of the Challenger. There then followed a further protracted debate about the risk of collision. The radar recordings did not show the vertical separation, because only the Challenger was showing Mode C; consequently, the Board had to rely on the estimates reported by both pilots. The Challenger reported the vertical separation as 400ft and the ASK 21 pilot as 100ft. The Board opined that it was probably somewhere between the two given that the ASK 21 pilot had reported at an altitude of 2120ft and the Challenger at 2400ft. Members noted that neither pilot had considered it necessary to take avoiding action and, in view of this, although not agreed universally (including the Glider member), the majority of the Board determined that the risk should be assessed as Category C; safety had been degraded but there was no risk of a collision.

The Board noted that there was a Letter of Agreement (LoA) between Luton Radar and Halton, which detailed the delegation of airspace when Luton is using RW26. Given the less than satisfactory outcome of aircraft transiting over the Halton ATZ under a Traffic Service at or around 2400ft as they positioned for the RW08 localiser, the Board resolved to recommend that Halton and Luton include additional considerations within their LoA regarding approaches to Luton RW08 from that direction.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The ASK21 pilot was concerned by the proximity of the CL604.

Degree of Risk: C.

Recommendation: That Halton and Luton include additional considerations within the LoA regarding approaches to Luton RW08.

Safety Barrier Assessment[5]

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

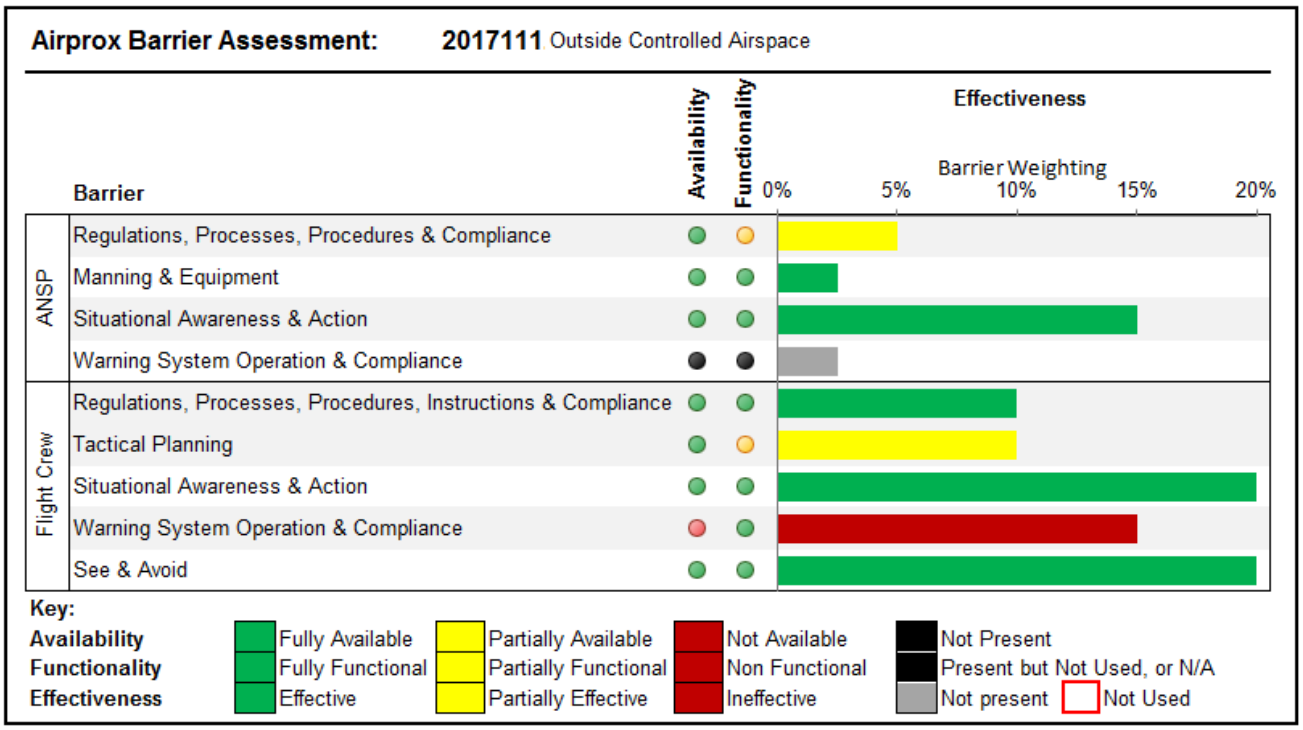
ANSP:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the LoA between Luton and Halton did not include considerations for traffic arriving for Luton RW08 approaches from the southwest.

Flight Crew:

Tactical Planning was assessed as **partially effective** because the CL604 pilot's choice of routeing introduced a high probability of encountering traffic not under radar control, when options existed otherwise.

Warning System Operation and Compliance were assessed as **not available** because only the Challenger was fitted with an electronic warning system and the glider was not transponding.



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