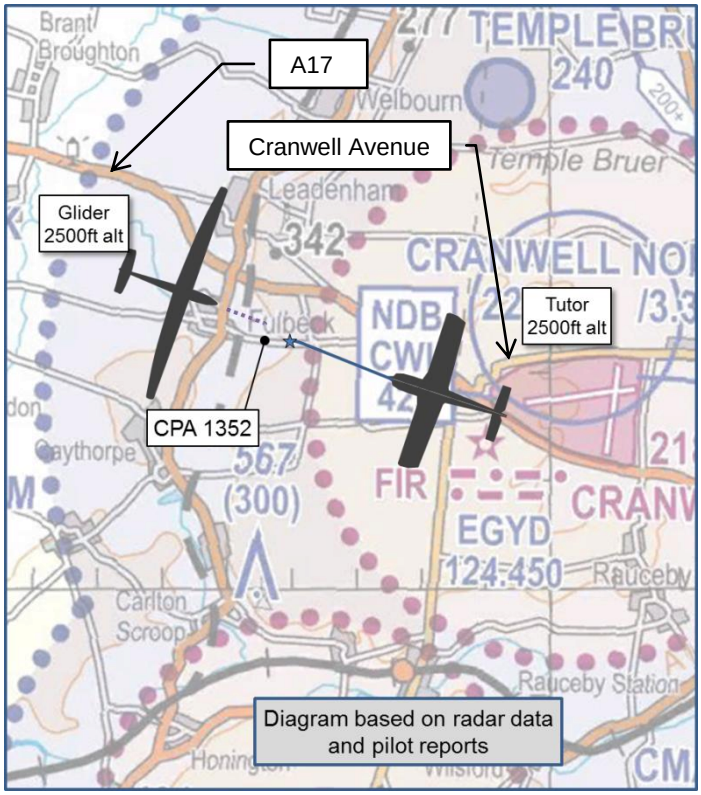
AIRPROX REPORT No 2015119

Date: 18 Jul 2015 (Saturday) Time: 1352Z Position: 5302N 00034W Location: 3nm w Cranwell

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Tutor	Astir
Operator	HQ Air (Trg)	Civ Club
Airspace	Cranwell MATZ	Cranwell MATZ
Class	G	G
Rules	VFR	VFR
Service	None	None
Altitude/FL	2500ft	2500ft
Transponder	A,C,S	None
Reported		
Colours	White	White/green
Lighting	HISLs Nav	Nil
Conditions	VMC	VMC
Visibility	40km	40km
Altitude/FL	2500ft	2500ft
Altimeter	RPS (1008hPa)	QFE(1008hPa)
Heading	270°	110°
Speed	75kt	60kt
ACAS/TAS	TAS	Not fitted
Alert	Nil	N/A
Separation		
Reported	0ft V/50m H	5-10m V 175m H
Recorded	NK	



THE TUTOR PILOT reports he was conducting his eighth and final passenger trip of the day. He had departed from RW26 and climbed ahead; conducting look-out weaves as required. On passing 2000ft, he was clear of the Cranwell ATZ and so he set the RPS and checked in on the Cranwell quiet frequency to inform other Cranwell traffic of his intentions. RAF Waddington had closed early, and so he was unable to receive a Traffic Service from any of the local ATC units. After broadcasting his operating levels and intentions, he looked right and saw a flash of white glider raise its right wing and bank away. He immediately executed a hard left turn and searched the area for the glider. He saw it level at 2500ft with an estimated separation of less than 50m. After establishing safe separation, he switched to Cranwell Tower frequency to report the Airprox. He believed that the glider pilot had probably seen him and turned away to prevent a potential collision.

He assessed the risk of collision as 'High'.

THE ASTIR PILOT reports gliding in a Cranwell glider-club aircraft. He had been soaring and operating almost exclusively within the horizontal, but above the vertical limits of the Cranwell ATZ and CMATZ for about an hour. He was operating to the north of Cranwell Avenue at all times. A few minutes before the Airprox he had been asked by the duty instructor to return and land at Cranwell north. The aircraft was configured to land, with the undercarriage down and locked, and was being flown in a gentle descent. The airspace had been particularly busy with numerous sightings of gliders, Tutors and GA aircraft. During the descent he made a fairly late sighting of a Tutor, which was about ½ a mile away on an almost reciprocal heading and appeared to be climbing. It was apparent that the Tutor would pass fairly close; but that they would not collide assuming both aircraft maintained their heading. Turning right would have caused him to cross the path of the Tutor and significantly increase the risk, so he elected to roll left with about 30° of bank to present the larger bottom plan of the aircraft before returning to wings level to remain visual with the other aircraft; he repeated this twice over a short period of time. The Tutor rocked its wings when it reached the 3 or 4

o'clock position, and passed down the starboard side by about 150-200m. He noted that he considered his look-out to be effective, and employed the recognised techniques to give himself the best chance of seeing other aircraft, but even so his acquisition of the Tutor was late and the closing speed was quite high. He opined that if both the glider and the Tutor had been fitted with FLARM then they both would have been aware of each other's presence much earlier. Although he did not consider there to be a significant risk of collision because he was aware of the Tutor just in time to take action, and was not alarmed by the encounter, he had mentioned the incident to the club duty instructor upon landing.

He assessed the risk of collision as 'Low'.

THE CRANWELL ADC reports that the visibility was good and the sky predominately clear of cloud. The controller workload was low. The Tutor got airborne from RW26 and departed to the west. He watched the aircraft depart until it disappeared from view. He looked on the ATM and could see an aircraft squawking 7000, which he assumed to be the Tutor departing NW. He also observed some small intermittent contacts to the north of the airfield, but didn't judge there to be a confliction. The Tutor pilot then reported changing to the weekend common quiet frequency. Another aircraft called to join the circuit and so he stopped looking at the ATM and turned his attention to the joining traffic. Whilst attempting to visually acquire the joining traffic, the Tutor pilot returned to the frequency to report an Airprox with a glider approximately 3nm to the west of Cranwell at 2500ft.

Factual Background

The weather at Cranwell was reported as:

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METAR EGYD 181350Z 26018KT CAVOK 21/05 Q1014 BLU NOSIG
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Analysis and Investigation

Military ATM

The glider was not fitted with a tracker and no position information was available. A post-incident meeting was held to discuss procedures wherein it was agreed that extant procedures were fit for purpose but a Note of Advice was passed to all concerned parties to highlight the recommendations made. It was agreed that the Tutor and glider operations should share information on activity and operating areas to increase respective situational awareness. Furthermore, the respective units agreed that the use of the A17 would provide a clear, unambiguous dividing line between gliders to the north and Tutors to the south, until outside the confines of the MATZ.

The normal barriers to an Airprox in Class G would be see-and-avoid, ACAS or an Air Traffic Service (ATS). Cranwell are not established to provide a radar service at weekends, and the Waddington radar service usually ceased at 1700 Local. On 18 Jul 15, Waddington had opened early for a station movement and this had meant an earlier close time; the reduction in a LARS had been NOTAMed. The Tutor was on the UHF 'quiet frequency' transmitting intentions but the gliders do not use the same frequency. A TAS was fitted to the Tutor but not to the glider. The key barrier for an Airprox of this nature is the lookout element of see-and-avoid to assist crews in finding other airspace users with time to act. However, the limitations of visually acquiring Tutors are well known from previous incidents. The post-event recommendations should allow for horizontal separation of the respective units and a better appreciation of operating areas and numbers.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance and for not flying into such proximity as to create a danger of collision[1]. If the incident geometry is considered as head-on, or nearly so, then both pilots were required to turn to the right[2], notwithstanding that the glider pilot assessed that a left turn would be a better option in these circumstances.

Comments

HQ Air Command

When working through the normal barriers to an Airprox in Class G Airspace for this incident, an Air Traffic service was not available; the Glider did not have any electronic conspicuity equipment fitted; and both ac were not on the same frequency, which prevented coordination between the pilots. Therefore, lookout was the remaining barrier which was successfully utilised. RAF Cranwell's post incident report has identified deconfliction procedures at the planning stages which might help make a repeat situation less likely in future.

Summary

An Airprox was reported on 18th July 2015 at 1352 between a Tutor and a glider. Neither pilot was receiving an ATS, the Tutor had departed the Cranwell circuit and had changed to a quiet frequency and the glider was returning to Cranwell north, and operating on a VHF glider A/G frequency. The glider pilot saw the Tutor and turned to the left. The Tutor pilot did not see the glider until late and then also executed a left turn. The incident could not be seen on the NATS radars so the exact separation is not known.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board first looked at the actions of the Tutor pilot; he had been flying in and out of Cranwell all day and, until that point, had been receiving a Traffic Service from RAF Waddington when out of the Cranwell MATZ. Once Waddington closed, he was unable to get a Traffic Service, although it was noted that there was no guarantee that the Waddington radar would have picked up the glider anyway because gliders are notoriously inconspicuous to radar. The Board noted that he had seen the glider late, and, as such, was probably startled by its presence, which may well account for the differing perceptions of separation between the two pilots.

The glider pilot reported seeing the Tutor at a range of ½ nm, at which point he did a series of manoeuvres to make his aircraft more conspicuous to the other pilot. Whilst some Board members wondered whether he should have taken more positive action at this stage, the gliding members assured them that gliding pilots were used to close separation between other gliders when thermalling, and consequently tended to be less worried about seeing other aircraft in close proximity. Due to his speed, it was thought that he would have been able to take further action had the Tutor pilot not seen him and taken avoiding action.

The Board then looked at the cause of the Airprox, and quickly agreed that it was a late sighting by both pilots. They then discussed whether the avoiding action taken by the Tutor pilot had been taken in sufficient time to affect the separation achieved. In the end it was agreed that it had, and that the risk was category B; although avoiding action had been taken, safety margins were still much reduced below the norm.

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

The Board were heartened to hear that Cranwell had taken measures to help to address this problem in the future by using the A17 as a geographical feature by which to separate gliders and Tutors. The Board were also told by the military members that fitment of FLARM to the RAF fleet of Tutors has started, and that about 50% of their gliders have also had FLARM fitted. Once this programme was completed, it should provide further protection against this type of Airprox.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A late sighting by both pilots.

Degree of Risk: B.