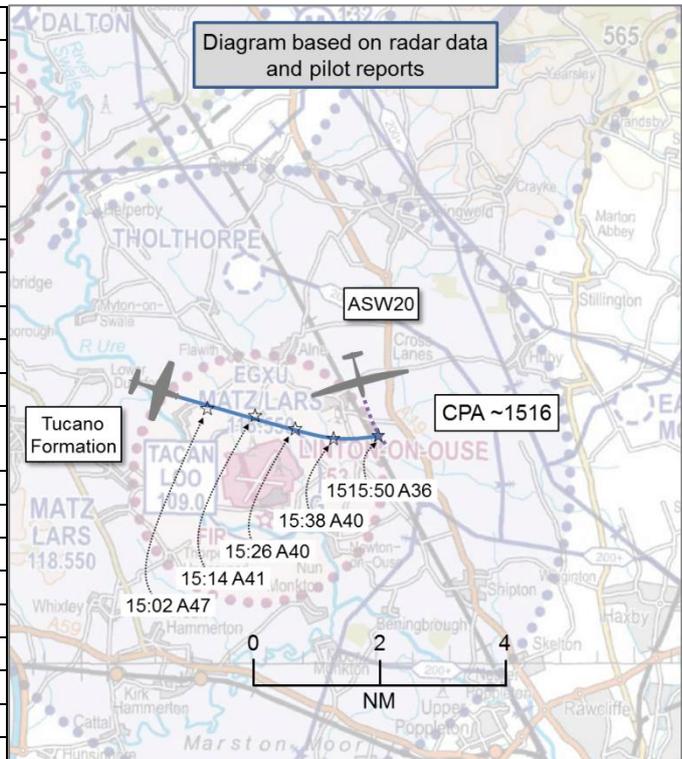


AIRPROX REPORT No 2015077

Date: 3 Jun 2015 Time: 1516Z Position: 5403N 00111W Location: 3nm NE Linton on Ouse

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Tucano	ASW20
Operator	HQ Air (Trg)	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	None
Provider	Linton Approach	N/A
Altitude/FL	3600ft	NK
Transponder	A, C, S	Not fitted
Reported		
Colours	Black	White/Orange
Lighting	Strobes, nav, landing	None
Conditions	VMC	VMC
Visibility	30km	30km
Altitude/FL	3600ft	3500ft
Altimeter	QFE (1020hPa)	NK (1013hPa)
Heading	140°	Average 160°
Speed	165kt	40-160kt
ACAS/TAS	TCAS I	FLARM
Alert	Nil	Nil
Separation		
Reported	100ft V/700ft H	Not Seen at CPA
Recorded	NK	



THE TUCANO PILOT reports leading a formation pair, descending from 9000ft to 2000ft QFE as part of a close-formation recovery with the number 2 positioned echelon left. On passing 3600ft in a gentle left-hand turn, the rear cockpit QFI of the lead aircraft saw a glider in the right 2 o'clock, slightly above the formation. It was initially tracking parallel to the formation but then turned gently away. Separation was judged to be approximately 700ft laterally with the formation 100ft below the glider. The Airprox location was passed to Linton Approach whilst airborne. The pilot stated that no avoiding action was taken by the formation as the conflict had passed before useful action could be taken. He also noted that there were other TCAS contacts in the area they were descending towards, that their lookout was directed to the left towards their direction of turn, and that they were positioning for a visual join with a medium-to-high workload.

He assessed the risk of collision as 'Low'.

THE ASW20 PILOT reports thermaling above Linton on Ouse between 3500ft and 6000ft. When at about 3500ft he heard aircraft engine noise from below and to the right. About 10sec later he saw a Tucano below him on approach to Linton. The pilot commented that he was listening out on the Linton VHF combined LARS/MATZ penetration service frequency and, consequently, 'had knowledge of traffic'.

He assessed the risk of collision as 'Low'.

THE LINTON APPROACH TRAINEE CONTROLLER reports the Tucano formation called for a visual recovery, was given a Basic Service, and was asked to squawk ident. When the ident feature appeared, the formation was approximately 20nm northwest of Linton, heading approximately 100°. Approximately 12nm west of Linton, the formation number 2 called a practice-pan, to which they then

received a steer of 090°. The formation then requested to join via the overhead, not below 3000ft QFE. A climb-out restriction was placed with Tower, not above 2000ft QFE. At this time Linton had radar traffic in the approach lane, approaching 4nm and 12nm. The formation was passed this information. The formation informed him that there was a glider present in the overhead, at 3600ft. No Airprox was called on frequency. There was no primary contact on the glider, probably due to it being close to the overhead, within the cone of silence. The glider subsequently appeared on radar approximately 3nm southeast of Linton.

He perceived the severity of the incident as 'Low'.

THE LINTON APPROACH SCREEN CONTROLLER reports the Tucano formation called for a visual join when about 10nm west of Linton. They were put on a Basic Service and given airfield details. Linton were using RW21RH and the formation requested to route through the overhead, west to east, not below 3000ft while conducting a practice emergency. This was approved and they continued as requested. Whilst in the overhead they reported that they had become visual with a glider about 2nm east of the overhead at about 3600ft and that they had passed approximately 500ft from it. There was no primary radar return in this position at the time and there had been no observance of a track entering the area of the airfield overhead. Subsequently a faint radar return became visible and tracked eastwards away from the airfield.

He perceived the severity of the incident as 'Low'.

THE LINTON SUPERVISOR reports he did not witness the incident; however, once he had been informed of the event, he 'checked on FLARM' to see if there was any glider activity in the vicinity but could not see any FLARM contacts. He stated that the unit's workload at the time was medium-to-low.

Factual Background

The weather at Linton was recorded as follows:

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METAR EGXU 031450Z 27012KT 9999 SCT044 SCT250 15/04 Q1022 BLU NOSIG
METAR EGXU 031550Z 27011KT 9999 FEW046 16/03 Q1023 BLU NOSIG
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Analysis and Investigation

Military ATM

The incident occurred on 03 Jun 15 at 1516 between a pair of Tucanos, under a Basic Service with Linton Approach, and a glider.

At 1511:24, the formation requested a visual recovery and Linton Approach agreed a Basic Service, with a squawk ident at 1511:31. The formation simulated an aircraft system failure and Approach provided a steer for Linton as 090° at 1512:10.

Approach warned the formation of radar traffic approaching Linton at 5nm and the formation requested an overhead join, not below 3000ft. Approach approved the join, not below 3000ft, at 1513:50. At 1515:45, the formation leader transmitted, "[Number 2 C/S], *glider right one o'clock, high they're* {unintelligible 2 to 3 words} *break*".

At 1516:01, the formation advised Approach of a glider seen at 3600ft, 500ft away. The RAC estimated that CPA occurred between 1516:02 and 1516:10 with the Tucanos at 3300ft. The glider did not appear on any of the radar replays.

The Linton Approach controller had applied a Basic Service and identified the formation to pass Traffic Information on inbound Linton radar traffic. It would appear that the glider was not detected by the Linton radar as a primary return, possibly because it was in the radar overhead.

Subsequently, a non-squawking return was observed leaving the radar overhead which was believed to be the glider. The formation crews had elected for a visual recovery and were responsible for their own collision avoidance, as per UK FIS; the formation leader had become visual with the glider and called it to the number two in the formation.

The normal barriers for aircraft in Class G airspace under a Basic Service would be ACAS/TAS and the principles of 'see-and-avoid'. The crew were under a Basic Service and routing close to the radar overhead, which would have limited any potential Traffic Information available from ATC. The glider was non-squawking and would not provide a TCAS alert; the formation lead pilot first saw the glider at an estimated 700ft separation with the aircraft already on a diverging path.

UKAB Secretariat

The Tucano and ASW20 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as converging then the Tucano pilot was required to give way to the ASW20². If the incident geometry is considered as overtaking then the ASW20 pilot had right of way and the Tucano pilot was required to keep out of the way of the other aircraft by altering course to the right³. The glider did not appear on radar recordings, and CPA was estimated on the basis of the Tucano pilot reporting passing altitude 3600ft.

Comments

HQ Air Command

This Airprox took place in Class G airspace where both aircraft were perfectly entitled to be operating. The Tucano formation were under a Basic Service which was appropriate for their task at the time. Unfortunately, the limitations of radar cover meant that regardless of which Air Traffic Service was chosen, the controllers were unaware that there was any glider activity in the area. It is pleasing to see that the glider pilot was listening out on his radio; however, a transmission to let ATC know of his presence could have provided enough situational awareness to ATC to pass on to other aircraft thus enabling more focussed lookout.

Summary

An Airprox was reported when a Tucano formation and an ASW20 flew into proximity at about 1516 on Wednesday 3rd June 2015. Both pilots were operating under VFR in VMC, the Tucano formation leader in receipt of a Basic Service from Linton Approach and the ASW20 pilot not in receipt of an Air Traffic Service, but listening out on the Linton VHF combined LARS/MATZ penetration service frequency.

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 considered the actions of the Linton ATSU. The glider was not fitted with an SSR transponder and so would have presented as a primary return only, as is common with most gliders. Both the Linton Approach Trainee and Screen controllers did not observe an approaching track and the Airprox occurred near the airfield overhead where, it was supposed, the radar could not provide a return. Subsequently, the Screen controller reported observing a faint primary return tracking eastwards, away from the airfield. Members were heartened to learn that the Supervisor had FLARM

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c) (2) Converging.

³ SERA.3210 Right-of-way (c) (3) Overtaking.

data available and had interrogated it to see if any situational awareness could be gained; the Board considered that it was unfortunate that the glider did not appear, given that it was reported as being fitted with FLARM. Given these constraints, members agreed that the controllers had no opportunity to pass Traffic Information to the Tucano formation regarding the glider.

Turning to the actions of the glider pilot and noted that although he had heard the Tucano formation, the Board surmised that he did not see another aircraft until after CPA. The Board considered that it was unfortunate that he had not contacted Linton on RT. Whilst it was agreed that his listening out would undoubtedly have helped him gain some awareness, members felt that contact with Linton would have been far more useful to everyone else. A military member stated that thermaling above the busiest military flying training airfield in the UK without contacting them presented a serious risk to operations that could have been effectively mitigated by making contact. Gliding members pointed out that many glider pilots did not possess an RT license and so were not legally allowed to communicate on the radio. They also opined that, anecdotally, controllers often tried to apply an Air Traffic Service to glider pilots when they did call up which, when they were often highly loaded and attempting to remain airborne, resulted in a reluctance to make contact at all. Notwithstanding, they reported that the BGA had recently issued a note to all its glider pilots reminding them of the desirability of contacting ATC when operating near or above ATZs. Some members also pointed out that RT contact from every glider pilot approaching the overhead in a competition, for example, would result in the frequency becoming unusable. The Board agreed that there was a balance to be had and that this was a matter for Linton in its liaison activities with local aviation communities. Members ultimately agreed that the radio remained a very useful means to mitigate collision risk, and that training and usage should be encouraged in order to lead to a better understanding from both pilots and controllers.

The Board noted that the Tucano formation had not received Traffic Information on the glider for reasons already covered, and that their TCAS I was not capable of receiving FLARM information. With the 2 aircraft in close formation, the number 2 crew would naturally have been concentrating their lookout on the leader, the student was also dealing with a practice emergency, and it was the rear seat QFI in the lead crew who saw the glider first. The Board noted that he assessed that there was no time to take effective action, but that there was also was no immediate risk of collision.

The Board considered the cause and agreed that, in this circumstance, the Airprox was due to the late sighting by the Tucano pilot and, because he did not see any Tucano until after CPA, effectively a non-sighting by the glider pilot. Members agreed that, although lower than would be preferred, the Tucano pilot's estimate of separation meant that safety margins had not been reduced to the point where there had been a risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	A late sighting by the Tucano pilot and effectively a non-sighting by the glider pilot.
<u>Degree of Risk:</u>	C.