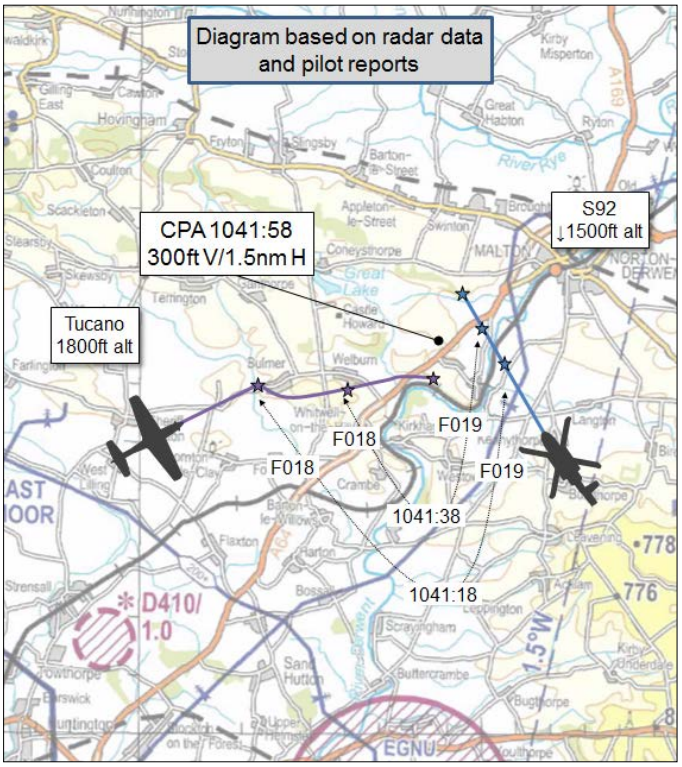
AIRPROX REPORT No 2017183

Date: 02 Aug 2017 Time: 1041Z Position: 5404N 00051W Location: Malton, North Yorkshire

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	S92	Tucano
Operator	HEMS	HQ Air (Trg)
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	Basic
Provider	Linton	Linton
Altitude/FL		
Transponder	A, C. S	A, C, S
Reported		
Colours	Red, White	Black, Yellow
Lighting	HISL, Nav, Strobe	HISL, Landing, Nav
Conditions	VMC	VMC
Visibility	20km	
Altitude/FL	2000ft	
Altimeter	QNH	
Heading		
Speed	130kt	
ACAS/TAS	TCAS II	TCAS I
Alert	Information	Information
Separation		
Reported	0ft V/1nm H	NR
Recorded	200ft V/1.5nm H	



THE S92 PILOT reports that they were tasked to a SAROp near Chester Le Street. Following a departure from Humberside they were handed over to Linton Zone and a requested Traffic Service was provided. The crew noticed a TCAS contact closing from the left at the same height; as the contact closed to within 2nm, a descent was initiated to increase vertical separation. Shortly afterwards visual contact was gained with the fast-moving aircraft. It passed behind, then indicated on TCAS that it was descending to the same level. It was then seen to take a turn towards the S92, so a climb was initiated again to gain vertical separation. After that the contact turned away. The Commander asked the controller whether they had seen the contact because Traffic information was not passed. The controller stated that they knew about it, but did not consider it to be a factor so hadn't mentioned it. Whilst the actual risk of collision was probably low, the aircraft was estimated to be within 1nm at the same height and fast moving, and caused them to manoeuvre vigorously. Had they been told about it from ATC, they may not have felt the need to take avoiding action. Although an Airprox was not declared at the time, upon reflection they decided to report it due to the lack of Traffic Information and the need to take avoiding action.

He assessed the risk of collision as 'Low'.

THE TUCANO PILOT reports that he was notified about the Airprox almost a month after it happened; consequently, he had limited recollection of the event and was not able to provide all of the details required on the report. However, he had discussed it with his student and they both recalled seeing a medium-sized civil helicopter (that at the time they assumed to be coastguard) in the vicinity of Malton, as they prepared to descend into low-level. They maintained a separation of greater than 2nm, adjusting their track to achieve this, and descended below its level so that they could go below and behind, well clear, en-route to the low-level entry point approx 6nm away. This

maintained separation both horizontally and vertically and they were visual throughout. TCAS displayed the traffic but did not sound any alerts. There was no risk of collision.

He assessed the risk of collision as 'None'.

THE LINTON ZONE CONTROLLER reports that he was informed about the Airprox 5 days after the event and had no recollection of events.

Factual Background

The weather at Linton was recorded as follows:

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METAR EGXU 020950Z 17011KT 9999 SCT021 BKN060 BKN090 18/13 Q1009 WHT NOSIG=
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Analysis and Investigation

Military ATM

Figures 1-7 show the positions of the S92 and Tucano at relevant times in the lead up to and during the Airprox. The screen shots are taken from a replay using the Claxby radar, which is not used by Linton ATC and therefore is not necessarily representative of the picture available to the controller.

At 1038:40 (Figure 1), the Linton Departures Controller agreed a Basic Service with the Tucano, which was climbing out of Linton-on-Ouse. Figure 2 shows the subsequent geometry of the two aircraft at 1040:48.

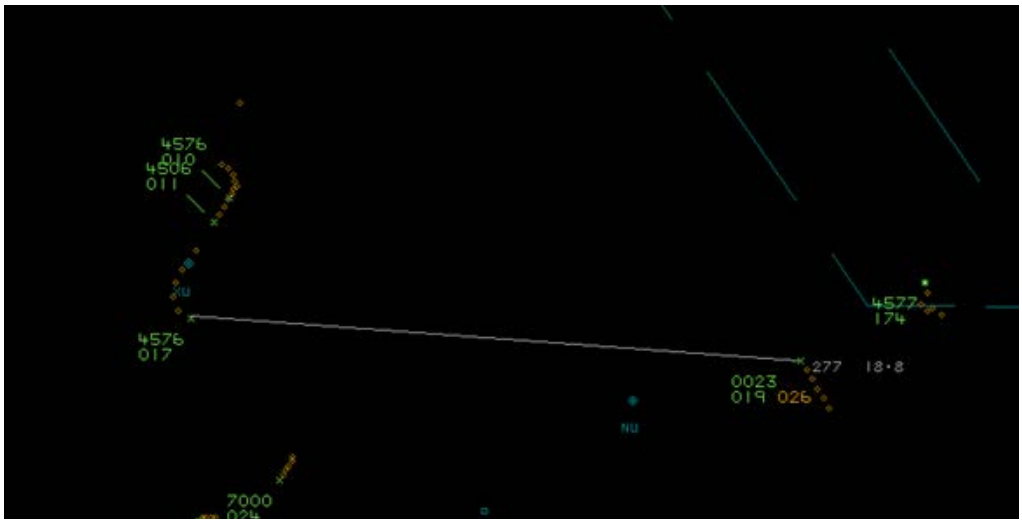


Figure 1: Geometry at 1038:40 (S92 0023; Tucano 4576)

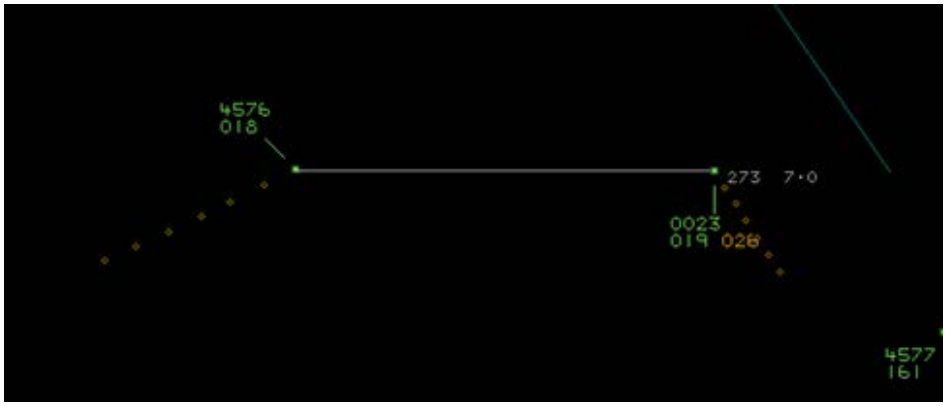


Figure 2: Geometry at 1040:48 (S92 0023; Tucano 4576)

Figures 3-6 show the S92 and Tucano as they closed, with neither receiving Traffic Information (TI) on the other. Figure 6 shows the closest point of approach, with 200ft vertical and 1.5nm lateral separation.

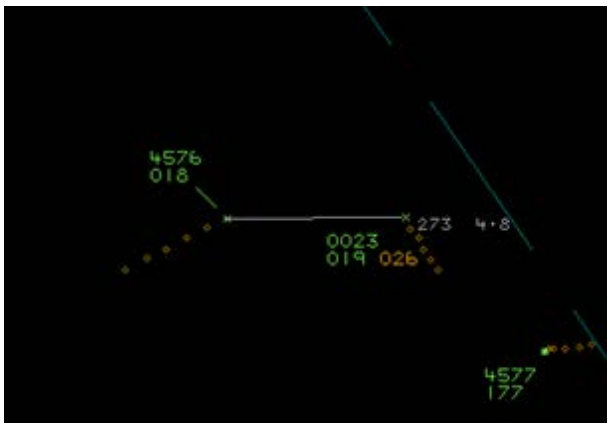


Figure 3: Geometry at 1041:12

Figure 4: Geometry at 1041:27

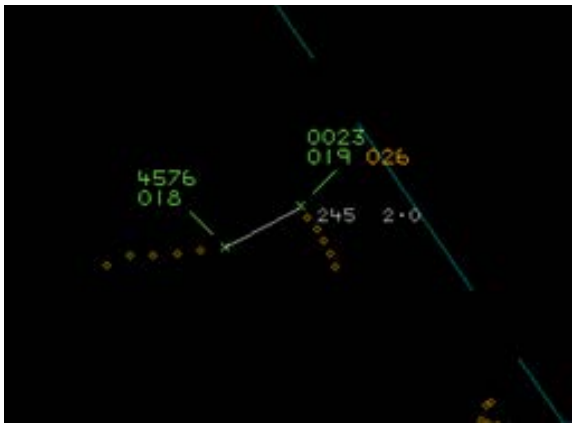


Figure 5: Geometry at 1041:48

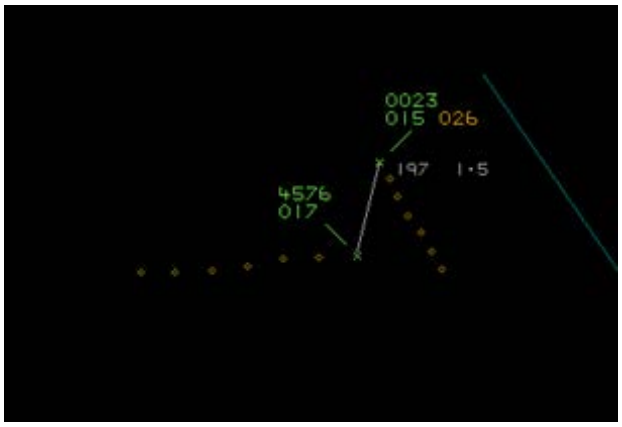


Figure 6: Geometry at 1041:59

The Linton Departures Controller was providing the departing Tucano with Basic Service. Although not required to monitor the flight, the controller had identified and was radar monitoring the aircraft. CAP 774 states that:

> *If a controller/FISO considers that a definite risk of collision exists, a warning shall be issued to the pilot.*

In this instance, the controller deemed that the Tucano's track would take the aircraft behind the S92, with no risk of collision, therefore did not pass Traffic Information to the Tucano pilot.

The Linton Zone Controller was providing Traffic Service to the S92. CAP 774 states that:

> *The controller shall pass traffic information on relevant traffic, and shall update the traffic information if it continues to constitute a definite hazard… Traffic is normally considered to be relevant when, in the judgement of the controller, the conflicting aircraft's observed flight profile indicates that it will pass within 3nm and, where level information is available, 3,000ft of the aircraft in receipt of the Traffic Service or its level-band if manoeuvring within a level block. However, controllers may also use their judgment to decide on occasions when such traffic is not relevant, e.g. passing behind or within the parameters but diverging.*

Although the Tucano did transit within 3nm of the S92, its track took it behind by 1.5nm therefore the Linton Zone Controller used judgement and deemed it not relevant to pass Traffic Information. Had it been passed, the S92 pilot may have had greater situational awareness of the Tucano approaching, but there was no requirement to pass such Traffic Information.

UKAB Secretariat

The S92 and Tucano 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 converging then the Tucano pilot was required to give way to the S92[2], which he did.

Comments

HQ Air Command

In this encounter, the available barriers to MAC in Class G airspace (namely electronic conspicuity, a surveillance-based ATS and lookout) all either worked or were not required. Both the S92 pilot and Tucano pilot were aware of the presence of the other aircraft through on-board alerting systems (TCAS I and TCAS II) and also became visual with each other at a similar time. The Tucano pilot was receiving a Basic Service from Linton Departures and the S92 a Traffic Service from Linton Zone. The departures controller deemed – correctly – that the Tucano would pass behind the S92 and therefore did not issue Traffic Information to the Tucano pilot; the zone controller also recognised that the Tucano would pass behind the S92 and so did not consider that it was necessary to pass Traffic Information on the Tucano to the S92 pilot. That said, the tape transcripts do not indicate a particularly high workload on the Zone controller so perhaps Traffic Information could have been passed if only to reassure the S92 pilot that, from the controller's point of view, the aircraft were safely separated. It is unfortunate that there was not an Airprox declared on the frequency in use at the time as once the controllers were informed of this event a few days later they had no recollection of it.

Summary

An Airprox was reported when a S92 and a Tucano flew into proximity at 1041 on Wednesday 2nd August 2017. Both pilots were operating under VFR in VMC, the S92 pilot in receipt of a Traffic Service from Linton Zone and the Tucano pilot in receipt of a Basic Service from Linton Departures.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board first noted that the S92 was receiving a Traffic Service from Linton Zone, and having seen the Tucano on TCAS with no Traffic Information forthcoming from the controller, the S92 pilot was concerned enough by its proximity and track to adjust her flightpath as the Tucano continued towards them. Members commented that this concern was not unreasonable given that the display of contacts in azimuth on TCAS is prone to inaccuracy. Notwithstanding, some Board members thought that if she was concerned then she could have asked the controller about the other aircraft and, the controller could have then reassured her that it was going to pass behind. Although subsequently visual with the Tucano, once it turned to pass behind there remained an element of doubt as it then appeared to turn back towards the S92. Now unable to see the other aircraft, the Board could understand the pilot's continued concern because she was not aware that the other pilot was visual with her aircraft.

For his part, the Tucano pilot was visual with the S92 and turned to go behind. Members briefly discussed whether he could have turned earlier to avoid worrying the other pilot, but quickly agreed that 1.5nm was a suitable margin behind, and that he could not have been expected to do any more.

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

The Board then turned to the actions of the Linton Zone controller. Notwithstanding that CAP 774 stated that controllers could use their judgement when passing Traffic Information on aircraft that would pass behind, all of the controller members agreed that they would have passed Traffic Information in the same circumstances. Whilst acknowledging that the Board had the benefit of NATS radar pictures rather than the local Linton ones that the controller would have seen, it was noted that Traffic Information for anything relevant passing within 3nm should be called by 5nm. At the point when the Tucano was 5nm away from the S92, members felt that it was not obvious that it would pass behind (see Figure 3 showing the aircraft 4.8nm apart, with the Tucano heading towards the S92). Therefore, in their opinion, Traffic information should have been called at that stage, especially given that the controller was not busy at the time. By not calling the Tucano, the controller denied the S92 pilot situational awareness, leaving doubt in her mind as to its intentions; the Board felt sure that an Airprox would not have been reported had the S92 pilot received more information.

In determining the cause of the Airprox, the Board agreed that the incident was best described as the S92 pilot being concerned by the proximity of the Tucano, but that a contributory factor had been the lack of Traffic Information from the controller. However, they quickly agreed that there had been no risk of collision; this had been a benign situation with both pilots being visual with each other and the Tucano pilot taking early action to pass behind the S92. They therefore assessed the risk as Category E, normal safety standards had pertained.

The Board wished to highlight to all pilots the merits of reporting Airprox on the frequency at the time of occurrence in order to ensure that all parties were aware and had the opportunity to make a note of the details. In this case, both the controller and the Tucano pilot could not remember the incident in detail at a later stage.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The S92 pilot was concerned by the proximity of the Tucano.

Contributory Factor: The Linton controller did not provide Traffic Information to the S92 pilot.

Degree of Risk: E.

Safety Barrier Assessment[3]

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

ANSP

Situational Awareness & Action was assessed as **partially effective** because the controller did not give Traffic information to the S92 pilot.

Flight Crew

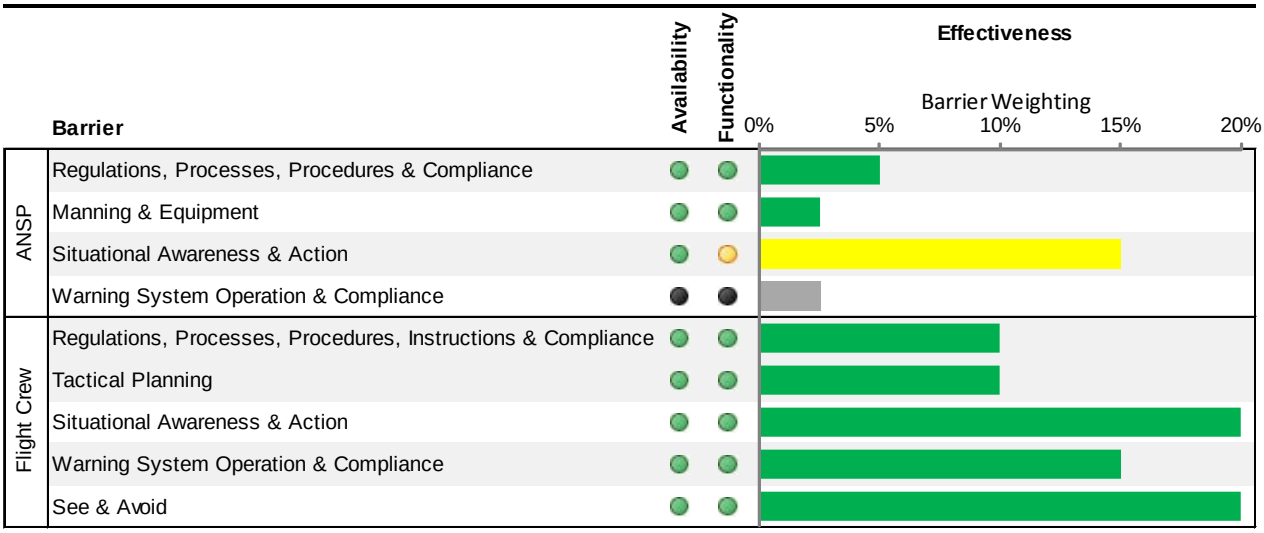
Tactical Planning was assessed as **fully effective** because the Tucano pilot adjusted his track to go behind the S92.

Situational Awareness & Action was assessed as **fully effective** because both pilots received Traffic Information from their TCAS.

See and Avoid was assessed as **fully effective**; the Tucano pilot was visual with the S92 and routed behind it.

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

Airprox Barrier Assessment: **2017183** Outside Controlled Airspace



Key:

Availability	Fully Available	Partially Available	Not Available	Not Present
Functionality	Fully Functional	Partially Functional	Non Functional	Present but Not Used, or N/A
Effectiveness	Effective	Partially Effective	Ineffective	Not present / Not Used