

AIRPROX REPORT No 2013140

Date/Time: 26 Sep 2013 1339Z

Position: 5407N 00110W
(5 nm NE of Linton on Ouse)

Airspace: Vale of York AIAA (Class: G)

Reporting Ac Reporting Ac

Type: Tucano P68 Observer

Operator: HQ Air (Trg) Civ Comm

Alt/FL: 1500ft 1500 ft
QFE (1017hPa) QNH (NK)

Weather: VMC VMC

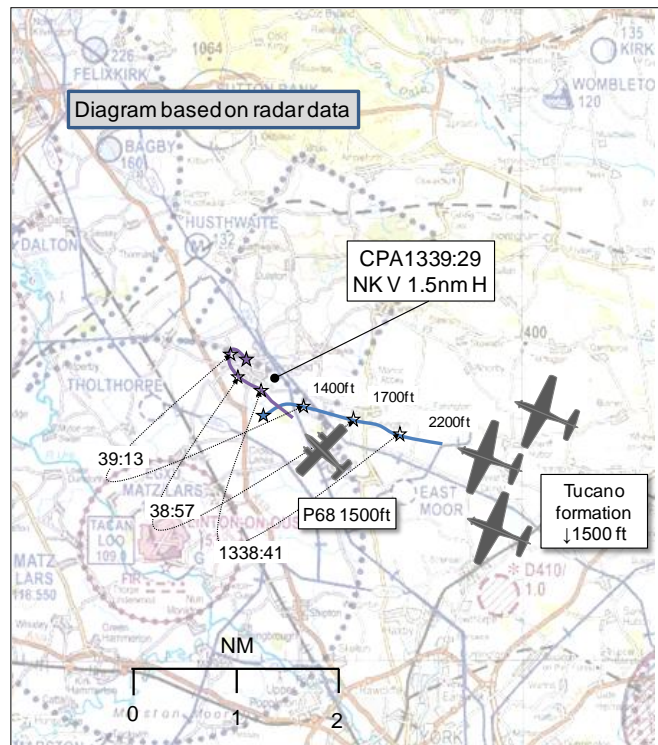
Visibility: 25km 10km

Reported Separation:

0 V/<1nm H NK V/NK H

Recorded Separation:

NK V/1.5nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TUCANO PILOT reports flying as the lead of a formation of 3 aircraft, in a black aircraft with yellow flashes, with 'all lights on and serviceable', and with SSR Modes A, C and S selected. The formation was flying at 250kt, in VMC, receiving a Basic Service from Linton on Ouse. During the formation's recovery to Linton on Ouse, the Linton Approach controller reported a pipeline inspection aircraft in the area at 1500ft. At 8nm to the airfield, the Tucano pilot reported visual with the airfield and changed to the tower frequency. The Aerodrome Controller (ADC) gave joining instructions to the formation and additionally reported a MATZ crosser at 2500ft, so the Tucano pilot elected to descend the formation to 1500ft. When on the extended centreline at 4-5nm the pilot received a TCAS TA indicating traffic at the same level less than 1nm away. Worried about making sudden movements with his inexperienced students in close formation, he elected to descend slightly to provide separation. He did not see the conflicting traffic. Once in the circuit, the pilot questioned the ADC about the height of the traffic; the controller confirmed the MATZ crosser was indeed at 2500ft.

He assessed the risk of collision as 'Low'.

THE P68 PILOT reports flying a white aircraft with all lights on and SSR Modes A and C selected. He was flying a VFR pipeline inspection, at 1500ft and 140kt, which had been promulgated the day before via the PINS, and had been notified to ATC on the day of the flight. The routing took him over the Easingwold area, which meant transiting the Linton MATZ stub. He was receiving a service from the Topcliffe Approach Controller. He crossed as cleared and did not see any other traffic.

THE LINTON SUPERVISOR reports that he did not witness the incident but, through investigation, discovered that the Tucano crew contacted Linton Approach and were given a Basic Service. Moments earlier, a MATZ crosser had been approved, crossing east of Linton at 2500ft. The Pipeline inspection aircraft was then also approved to cross the MATZ stub at 1500ft. Although information on the first MATZ crosser was passed to the ADC, the pipeline inspection stub crosser was not. Traffic Information on the Pipeline inspection was passed to the Tucano formation on recovery, to which the pilot replied 'looking out'. The pilot then became visual with the airfield and switched to the Tower frequency. As they joined the visual circuit, the ADC passed Traffic Information on the 2500ft MATZ crosser; the formation descended to 1500ft through initials, at which point the incident occurred.

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

THE LEEMING SUPERVISOR AND TOPCLIFFE APPROACH CONTROLLER report that the Topcliffe approach position is situated at RAF Leeming. Neither knew about the incident at the time and were not informed until two months after the event and therefore had no recollection of it.

Factual Background

The weather at Linton on Ouse was reported as:

METAR EGXU 211350Z 19009KT 9999 FEW032 BKN040 21/13 Q1020 BLU NOSIG

Analysis and Investigation

Military ATM

All heights/altitudes quoted are based upon SSR Mode C from the radar replay unless otherwise stated. Live mic recordings were available.

At 1332:51, the Zone controller had approved a MATZ crosser to remain 3 miles east of Linton at 2500ft on the Barnsley RPS 1014 hPa, on a 4530 squawk; the ADC was informed, via the Ground controller, at 1333:30. As part of the pipeline inspection, the P68 requested a crossing of the Linton MATZ, approximately 5nm to the north of the airfield (Figure 1). As per UK Mil AIP AD2, Linton has a standard 5nm MATZ with the stub aligned for RW 21 in Class G airspace; Linton were operating on RW 21. At 1336:25, the Zone controller confirmed, '[P68 callsign] stub crossing of Linton approved, not above 1500' on the Barnsley'. The Zone controller had requested the stub crossing through APP but because he believed it would be outside the 5nm MATZ circle, the ADC was not informed.

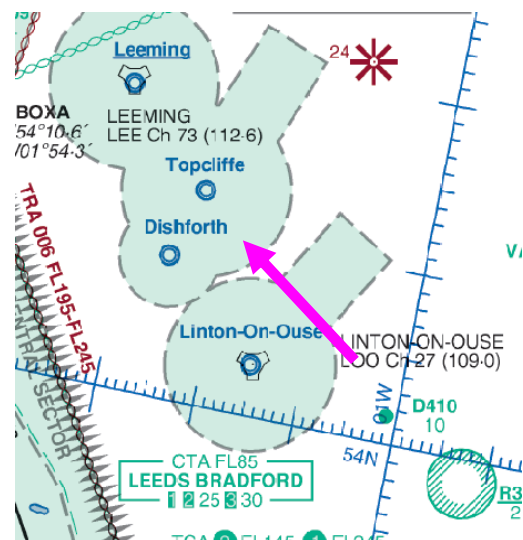


Figure 1: Approx routing of Pipeline Inspection.

At 1333:01 the Tucano formation free-called APP for a visual recovery. At 1337:00 APP called accurate TI to the Tucanos on the P68, '[Tucano callsign], traffic west, 5 miles, tracking northwest, its err Pipeline inspection, not above 1500 feet on the Barnsley, routing to Bagby.' Figure 2 details the radar replay at the time of the TI.

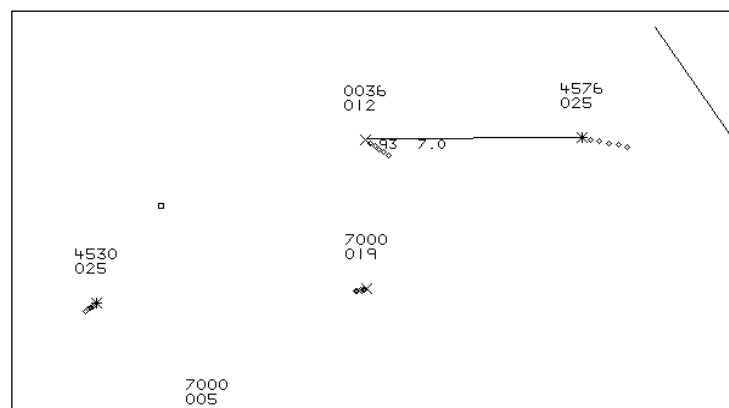


Figure 2: TI at 1337:00
(Pipeline squawk 0036, Tucanos 4576 and other MATZ crosser 4530).

At 1338:21, the Tucano pilot reported the field in sight, and a change of frequency, to ADC; with 4.4nms separation on the P68 (Figure 3).

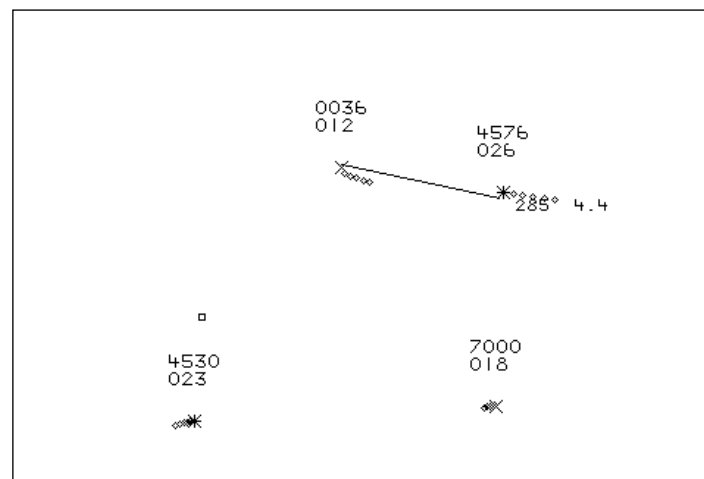


Figure 3: Aircraft geometry at 1338:21 as Tucanos changed to ADC.

Because the P68 would need to cross the Topcliffe MATZ, the Linton Zone controller arranged to hand the aircraft over to TOP APP to provide the crossing authority. As the P68 crossed the Linton extended centreline for Rwy 21, the Zone controller handed it over to TOP APP at 1338:46. Upon completing a non-work related landline conversation at 1339:14, the ADC informed the Tucano crews of the southerly MATZ crosser squawking 4530, '[Tucano callsign], *MATZ crosser, southwest to northeast 2500 feet on the Barnsley, no closer than 3 miles east.*' At this point the ADC was not aware of the pipeline inspection aircraft. According to the Occurrence Report from the Tucano pilot, the information on the MATZ crosser (at 2500ft) compelled him to descend the formation to 1500ft to provide them with separation. The Tucano crew were not aware of the position of the P68, despite previous TI, because they descended to a similar height. However, a TCAS traffic alert warned the lead pilot of an aircraft that was at the same level and within 1nm, as the formation were 4-5nms final on the extended centreline. Figure 4 shows the radar replay at CPA with the estimated minimum separation of 1.4nm.

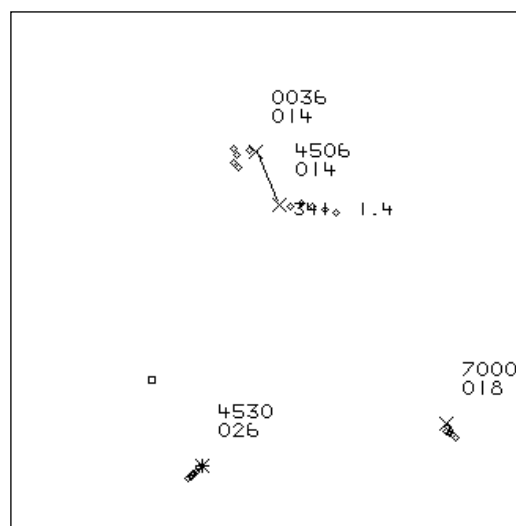


Figure 4: Aircraft geometry at CPA 1339:29.

The ADC was not aware of the P68, although it should have painted on the Hi-Brite radar screen. At this time, the Truck Runway Controller (TRC) called the ADC to query a potential glider sighting 2-3nms to the NE, circling at 500ft; nothing was seen by the ADC. The lead Tucano pilot then requested the height of the crosser at initials (Linton initials are at 3nms final offset south). The ADC confirmed at 1340:55, '*Not aware of err height any traffic at initials but there was traffic 2 and*

a half miles to the southeast as you joined at 2500 feet on the Barnsley. The pilot pointed out that there was traffic at initials at 1500ft on his TCAS and the TRC added that that was possibly the sighting that they had recently reported. It is not known if there was an additional glider, or if the TRC had mistaken the glider for the pipeline aircraft; however, no other aircraft painted on the radar replay at the time of the CPA . When more information was requested from the Tucano lead on RT he replied, *'Yeah, I didn't get visual with any traffic but err he just came out of initials and that wasn't the SA I had from your initial call.'* The ADC stated that the call from the TRC had forced them to look at the Hi-Brite to look for traffic. At the time that the TRC called the ADC, the P68 was 6nms from Linton on a bearing of 015, indicating 1400ft on QNH 1017; it cannot be determined if the P68 had painted on the Linton radar, but it was in the same vicinity and at the same height as the Tucanos, who did paint satisfactorily on radar. Hi-Brite is a useful tool for calling traffic to the ADC, as sanctioned by the MMATM, but it is unknown if the ADC was distracted by looking for the glider, or if the P68 did not paint.

Further details emerged following a unit investigation; Zone contended that as the P68 was a stub crosser, there was no need to pass TI to the ADC. At the time, the Linton procedure for MATZ crossers was to report all crossers of the circular MATZ to ADC but to report MATZ stub crossers on an ad hoc basis, depending on whether the information was thought to affect ADC. This was a non-standard procedure and meant that the passage of valuable information was based on controller perception. The MMATM Ch 25, confirms that the Surveillance Approach controller should coordinate a request for a MATZ crossing with the Aerodrome Controller. As a result of this incident, the Linton Controllers Order Book has been updated to promulgate that all MATZ crossers should be reported to ADC. Additionally, the ATC procedure and training package has been updated to include the passing of all MATZ transits to the ADC, including the stub; and a Standards Bulletin reminded of the need to avoid distractions in the working environment.

The APP controller called TI to the Tucano formation (who were on a Basic Service) and, at the time of the call 'visual to tower', judged separation on the pipeline aircraft to be 2nm west, tracking away and 1000ft below; it was deemed that an update of TI was not necessary. The ATC unit investigation reminded aircrew and controllers of the benefits of a Traffic Service over a Basic Service. The recommendations put forward by the unit investigation should reinforce the ATM barriers that could have enabled better situational awareness for all involved.

Comments

HQ Air Command

The Tucano formation should have already been aware of pipeline inspection activity at the planning stage of the mission. On recovery, although under a Basic Service, the formation was passed timely and accurate TI on the pipeline inspection aircraft but may well have considered it not to be a factor based on perceived geometry (the fact that the TI was passed under a Basic Service should have alerted the formation that the traffic was likely to be a factor). This could have influenced the decision to switch to Tower frequency at a range of 8nm and without the pipeline inspection aircraft in sight, where a more prudent course of action would have been to remain with APP until either visual with the traffic or confirmed by ATC as well clear. It seems that, based on the information passed by the Tower controller, which did not include the position of the traffic at the time of transmission, the formation deemed the MATZ crosser to be more of a factor than it actually was. In reality, the MATZ crosser was 6nm laterally separated, slow moving and was tracking behind the Tucano formation. There may be an HF element to what followed as the preoccupation with deconflicting from the MATZ crosser could have led the formation to forget about the pipeline inspection aircraft at 1500ft. This was exacerbated by the Tower controller not being informed of the pipeline inspection aircraft due to a local procedure and therefore not being in a position to remind the recovering formation of traffic at 1500ft. It is encouraging to note that local ATC procedures have been amended to ensure that the Tower controller is informed of all MATZ crossing aircraft, including those crossing the stub. This incident serves once again as a reminder of the importance of good lookout, assimilating all information and using all tools available to avoid possible conflicts, particularly the selection of an appropriate ATS.

THE PIPELINE INSPECTOR FLIGHT SAFETY OFFICER comments that the aircraft was on a regularly flown pre-notified route in two-way communication with Air Traffic Control and complying with a given clearance. They were given no warning of the traffic and did not see the formation. The event has been filed as an air safety report and will be reviewed by the company.

Summary

The incident occurred at 1500ft, 5nm northeast of Linton on Ouse between a Tucano formation (on recovery to Linton on Ouse) and a P68 (on a pipeline inspection and cleared for a MATZ stub crossing). The Tucano formation received a TCAS TA and descended to avoid the conflict, but neither pilot saw the other aircraft.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included 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 discussed the actions of the controllers involved, and noted that the APP controller had passed accurate traffic information to the Tucanos despite the fact that they were only receiving a Basic Service. That said, some members felt that the APP controller could have updated this information before the Tucanos switched to the tower frequency. Turning to the actions of the ADC, because the Linton procedures at the time did not require the ADC to be informed of MATZ-crossing aircraft beyond 5nm, he didn't know about the pipeline inspection and therefore couldn't have been expected to pass that information to the Tucanos. That being said, ATC members opined that, in all likelihood, the pipeline inspection aircraft would have been painting on the Hi-Brite, and that a controller monitoring the joining formation might reasonably be expected to have questioned the radar controller about this radar return. Finally, with regard to the Zone controller, who was controlling the pipeline inspection aircraft, it was also mooted that he had handed over the traffic too early to Topcliffe approach, i.e. whilst it was still in the Linton MATZ, potentially leading the other Linton controllers to believe that it no longer affected them.

When considering the actions of the pilots, the Board questioned why the Tucano formation switched to the tower frequency at eight miles away from the airfield after having been given traffic information about the pipeline inspection traffic 5nm east of Linton. It was felt that this action, coupled with the new traffic information on the 2500ft MATZ crosser, caused the Tucano pilot to focus on the MATZ crosser and either forget about the pipeline inspection or conflate the two. His action in descending the formation to provide separation with the 2500ft MATZ crosser brought him into conflict with the pipeline inspection aircraft at 1500ft. Notwithstanding, ultimately the Tucanos and the pipeline inspection aircraft had remained separated by 1.5nm and the Board decided that therefore the degree of risk should be classified as E, and the cause as a TCAS sighting report. The Board considered that the Linton-on-Ouse procedure of only notifying the ADC when MATZ crossers were within 5nm was counter to good practice in ensuring coordinated SA amongst the controllers; they were heartened to note that Linton had changed its local orders to ensure that traffic information on all MATZ crossers is now passed to the ADC.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A TCAS sighting report.

Degree of Risk: E

ERC Score¹: 1

¹ Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.