

AIRPROX REPORT No 2014031

Date/Time: 31 Mar 2014 1130Z

Position: 5121N 00129W
(5nm n of Andover)

Airspace: LON FIR (Class: G)

Aircraft 1 Aircraft 2

Type: A109 Untraced light ac

Operator: MoD ATEC Unknown

Alt/FL: 2500 NK
QFE (998hPa)

Conditions: VMC NK

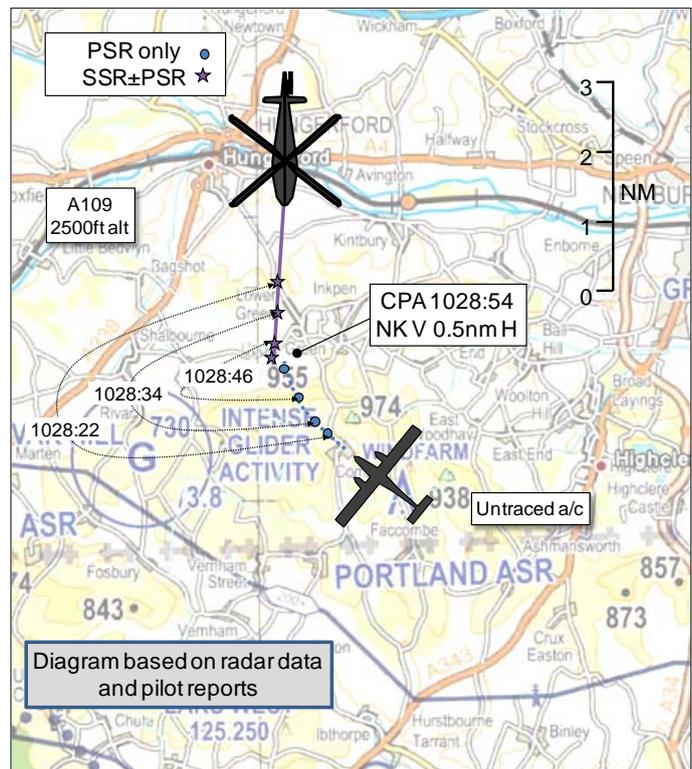
Visibility: 10k

Reported Separation:

300ft V/0.25nm H

Recorded Separation:

NK /0.5nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE A109 PILOT reports flying a blue and white helicopter with strobe lights and red beacon on, and SSR transponder Modes 3A, C and S selected. TAS was fitted, but the pilot received no warnings. He reports receiving a Traffic Service from Boscombe APP whilst undertaking an IFR transit from the IF practice-hold at Benson to Boscombe Down. ATC called traffic 10 o'clock, 5nm with no height information, but the crew could not identify the traffic visually. The traffic was called again, but still could not be seen. A further call was received, and the conflicting traffic was sighted in the 10 o'clock position, 0.5nm at about 300ft below. The conflicting traffic crossed 0.25nm ahead and 300ft below from left to right, but was seen too late to take any avoiding action. He described the aircraft as a high-wing white single-piston aircraft with no lights. He reports that had the traffic been any higher there would have been a risk of collision with no mitigations in place. An airborne Airprox was called and it was established that the other aircraft was not squawking.

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

THE UNTRACED LIGHT AIRCRAFT: It has not been possible to trace the other aircraft.

THE BOSCOMBE APPROACH CONTROLLER reports that he was instructing with a controller under training in the Radar App position, with low traffic levels and no other aircraft on frequency at the time of the incident. The A109 requested and was given a vector for Andover. An intermittent primary only contact was called south of the A109 at 6nm, the traffic information was updated at 4nm and again at 3nm and then the contact disappeared from radar. The A109 was informed that the contact had faded from radar and, shortly afterwards, the A109 advised of the Airprox.

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

THE BOSCOMBE SUPERVISOR reports that the A109 was correctly identified and a Traffic Service applied, he requested vectors to Andover to join south-side by the railway line. He was given accurate and timely traffic information, and was regularly updated on the progress of the traffic. The primary only contact was intermittent and was not in contact with Boscombe Down.

Factual Background

The weather at Boscombe Down was reported as:

METAR EGHI 311020Z 13003KT 090V180 9999 FEW040 12/07 Q1013

Analysis and Investigation

Military ATM

The Approach controller was instructing a trainee; the A109 was the only aircraft on frequency and the Supervisor assessed the unit and controller workload as 'low'. The controller recalled calling the intermittent primary contact at ranges of 6, 4 and 3nm and informing of the loss of radar contact. The Supervisor witnessed the event and confirmed that the intermittent contact was not in contact with Boscombe.

At 1025:16, the A109 was placed under a Traffic Service from Boscombe Approach. The first set of Traffic Information was at 1026:27, as per Figure 1, "[A109 C/S] traffic south, 6 miles manoeuvring, height unknown."

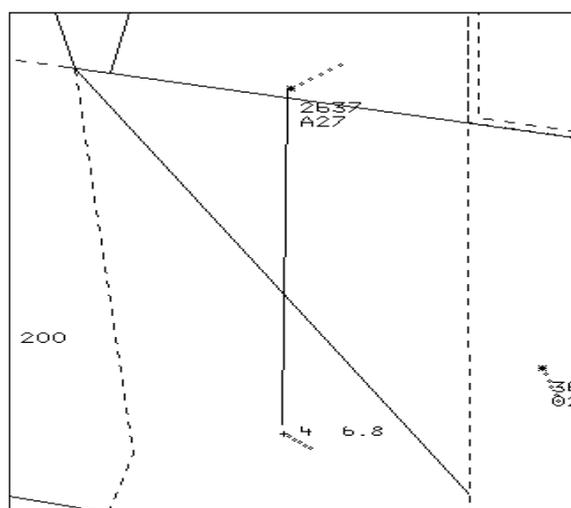


Figure 1: Aircraft geometry at Traffic Information at 1026:27 (A109 squawking 2637).

At 1027:43, the Traffic Information was updated, "[A109 C/S] previously reported traffic south, 4 miles manoeuvring, height unknown."

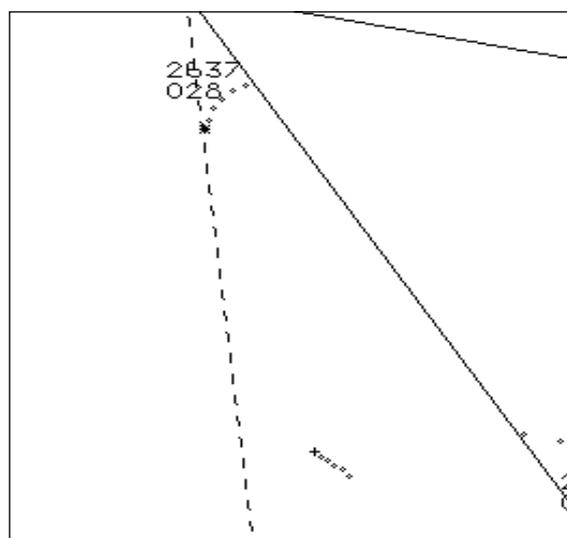


Figure 2: Aircraft geometry at 1027:43.

The final update was at 1028:08, as per Figure 3, “[A109 C/S] *previously reported traffic south, 3 miles, tracking north-west, height unknown.*” The A109 pilot reported that the crew were looking.

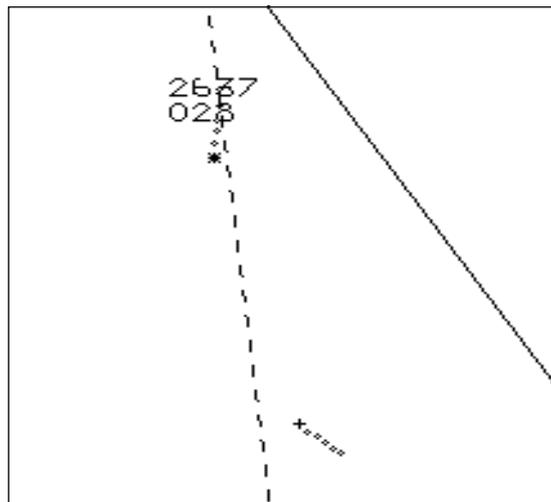


Figure 3: Aircraft geometry at traffic update at 1028:08.

At 1028:45, the other aircraft disappeared from Boscombe's radar and Approach transmitted, “[A109 C/S] *previously reported traffic err now err gone from the scope, possibly low.*” The Radar Analysis Cell lost the radar contact of the other aircraft between 1028:42 and 1028:47 with 0.5nm separation. The A109 pilot reported visual at 1028:50 and added that the conflicting aircraft was 300ft below and looked like a D42.

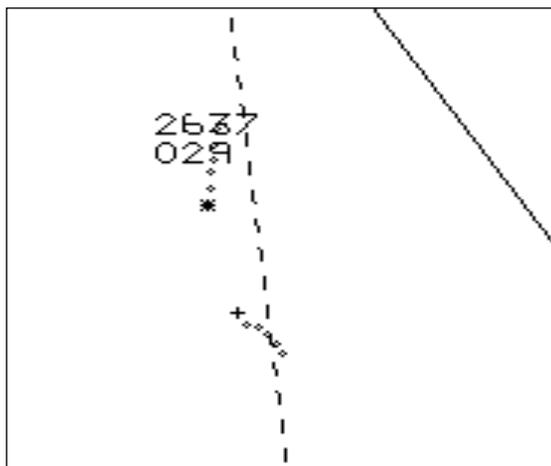


Figure 4: Aircraft geometry immediately prior to loss of radar contact at 1028:46.

The Approach controller provided accurate, persistent and praiseworthy Traffic Information. The information helped the A109 pilot understand the converging nature and range of the other aircraft. The A109 had TCAS fitted but the conflictor was non-transponding and could not be detected. The final barrier of lookout did not work until close range, and it was possibly too late if the other aircraft had been on a collision course. The Traffic Information was the one barrier that did work and, from the constant nature of the information, an earlier turn from the A109 may have built in more separation. The aircraft operators commented that the incident served as a reminder of the use of a safety pilot for lookout whilst conducting IF training in Class G airspace.

UKAB Secretariat

Both pilots shared an equal responsibility for collision avoidance¹. The geometry is considered to be converging and so the unknown aircraft was required to give way.²

¹ Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions)

Comments

HQ Air Command

The controller is to be praised for his persistence in passing TI to the A109, despite the contact being intermittent and on primary radar only. This highlights just how difficult it is to visually acquire another ac when the volume of airspace to look into is not well defined. The constant bearing and reducing range of the light aircraft to the A109 should have alerted the pilot to the fact that a conflict was developing and that a change of A109 track would have increased separation. However, it appears that the A109 pilot continued on course whilst endeavouring to visually acquire the light ac, which he eventually achieved when the separation was minimal.

Summary

An Airprox was report on 31st March 2014 between an A109 and an unknown light aircraft. The A109 was at 2500ft and under a Traffic Service from Boscombe Down, who gave traffic information on the conflicting traffic. Unfortunately it has not been possible to trace the light aircraft.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilot, 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.

Firstly, the Board commended the controller for his timely and persistent Traffic Information with only primary returns available. These cues had provided valuable information to assist the A109 pilot in gaining situational awareness of the potential threat and help him visually acquire the traffic. In discussing the actions of the A109 pilot, the Board reflected that he had been given traffic information on 3 occasions and, despite the altitude being unknown, the bearing had remained the same; the Board noted that he had not taken any action to deviate from his track, and opined that he would have been better served by doing so in order to break the geometry of the conflict in azimuth at least. The Board wondered whether it was possible that he was task focused and did not want to turn, or had possibly been lulled into thinking that the non-transponding traffic was at low-level. However, ultimately he had all the information he needed to prevent this situation from developing yet he waited until he had sight of the traffic, by which time it was too late to take any action. Unfortunately, because the other aircraft has not been traced, it is not possible to know whether he saw the A109.

The Board agreed that the cause of the Airprox was a late sighting by the A109 pilot with a contributory factor being the A109 pilot's inaction despite receiving Traffic Information. The Board assessed that safety margins had been much reduced below normal and assessed the risk as Cat B.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	A late sighting by the A109 pilot.
<u>Contributory Factor(s):</u>	The A109 did not change his track despite the Traffic Information of traffic on a constant bearing.
<u>Degree of Risk:</u>	B
<u>ERC Score</u> ³ :	20

² Ibid. Rule 9 (Converging)

³ 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.