

AIRPROX REPORT No 2013137

Date/Time: 22 Sep 2013 1525Z (Sunday)

Position: 5150N 00150W
(Northleach Roundabout VRP)

Airspace: Oxford AIAA (Class: G)

Reporting Ac Reported Ac

Type: Vigilant T1 C172

Operator: HQ Air (Trg) Civ Trg

Alt/FL: 1000ft 2000ft
QFE (1004hPa) QNH (NK hPa)

Conditions: VMC VMC

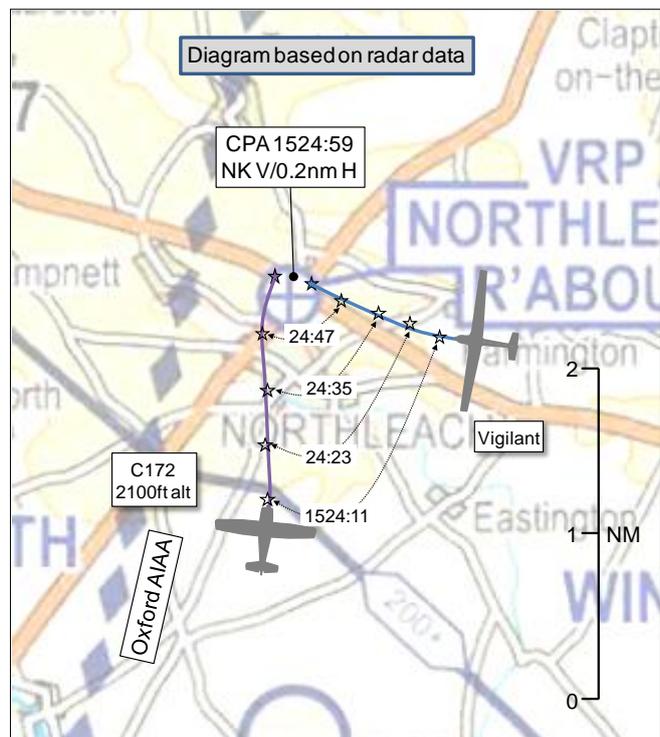
Visibility: 15km >10km

Reported Separation:

100ft V/400m H 300ft V/0.5nm H

Recorded Separation:

NK V/0.2nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE VIGILANT PILOT reports conducting an instructional sortie. His predominantly white aircraft had navigation, landing and strobe lights selected on, as was the SSR transponder with Mode A only; the aircraft was not fitted with Modes C/S, or with a TAS/ACAS. The pilot was operating under VFR in VMC, without an ATS but listening out on Rissington Radio. During tuition of a general handling exercise, heading 270° at 60kt and in level cruise at height 1000ft, he saw a black Cherokee/Cessna-style aircraft at a range of 500m, closing from the left 11 o'clock at approximately the same height. He initially took no action as he had 'right of way'; however, as the aircraft appeared to be turning in front of his flight path he opted to take avoiding action in the form of a descending turn to the right. The pilot noted that the incident occurred over the Northleach roundabout on the A40, with his aircraft just to the north of the road and the other aircraft (heading in a west-northwesterly direction, he thought) south of the road. A phone call to the Radar Analysis Cell was attempted post landing, but the pilot was unable to get through. Subsequently a phone call was made to RAF Brize Norton to try and gain more information; however, they were unable to provide any further information.

He assessed the risk of collision as 'Low'.

THE C172 PILOT reports tracking inbound to the Northleach VRP. The blue and white aircraft had navigation and strobe lights selected on, as was the SSR transponder with Modes A, C and S. The aircraft was not fitted with a TAS or ACAS. The pilot was operating under VFR in VMC, in receipt of a Basic Service from Brize Norton Radar. Upon reaching the VRP, he started a gentle right turn over the roundabout to track towards Banbury. He was aware of the Little Rissington glider site and that his planned track would take him 2nm from the overhead. He briefed his two passengers to look for gliders or other traffic as they passed the area, and to let him know immediately should they see anything; nothing was reported. He stated that he was in receipt of a Basic Service from Brize Norton but was not alerted to any traffic in his local area. When in the turn, he noticed a motor-glider in his 2 o'clock, performing a steep diving turn to its right, away from him, approximately 300-500ft below and 'within 1nm'. The glider turned 180° to track in the opposite direction. He felt there was no threat of danger and maintained his track to Banbury. He also noted that, if no avoiding action had been taken by the glider, the risk of collision was still negligible as he was flying at a constant altitude, above the 'un-powered aircraft'.

He assessed the risk of collision as 'None'.

Factual Background

The weather at RAF Brize Norton was recorded as follows:

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METAR EGVN 221450Z 26003KT 9999 BKN025 20/15 Q1028 BLU NOSIG  
METAR EGVN 221550Z 22004KT 9999 BKN025 20/15 Q1027 BLU NOSIG
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Analysis and Investigation

Military ATM

This incident occurred at the Northleach Roundabout VRP at 1254:54 on 22 Sep 13, between a Vigilant Glider and a Cessna 172. The Vigilant was on a training flight, operating out of Little Rissington, and the Cessna 172 was on a flight from Kemble to North Weald. The Vigilant was in radio contact with Little Rissington but was not in receipt of an ATS; it was squawking 3737, Mode C was not fitted. The C172 was under a Basic Service from RAF Brize Norton LARS Controller, squawking 3716 (not a conspicuity code). The Airprox report was initiated by the pilot of the Vigilant Glider who spoke to RAF Brize Norton, post flight, to gain more information. The RAF Brize Norton controller and ATCO I/C did not recall the incident and no further information was available for the Vigilant pilot. The controllers were not aware that an Airprox report was initiated and, as a result, they did not complete their occurrence reporting until 2 Oct.

The tape transcript and radar replay captures the C172 allocated squawk, and radar confirms the matching profiles described by the Vigilant pilot. Whilst the reporting pilot's C172 has a blue and white colour scheme, as opposed to black; the darker part of the aircraft is underneath the fuselage and this darker colour scheme would have been visual to the Vigilant pilot, against a lighter background of the sky. All heights/altitudes quoted are based upon SSR Mode C from the radar replay unless otherwise stated.

At 1519:54, Brize LARS controller allocated a squawk of 3716 to the C172 pilot and agreed provision of a Basic Service; the C172 pilot reported at 2300ft on QNH 1022hPa. At 1520:37, the Brize LARS controller suggested a left turn of five degrees for the C172 to remain clear of the Brize CTR. At 1522:31, the Brize LARS controller entered into a protracted landline conversation that was frequently interrupted by RT calls; the unit workload was described as 'medium to high'.

Analysis of the radar replay at 1524:48 determined that the Vigilant, squawking 3737 and the C172, squawking 3716 were 0.5nm apart on a converging heading with the speed of C172 expected to take it ahead of the Vigilant (see Figure 1 below).

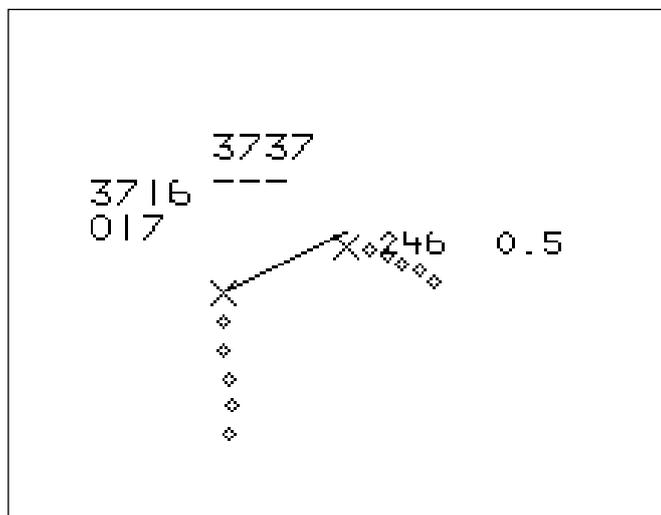


Figure 1: Vigilant in relation to the C172 at 1524:48.

At 1524:56, the C172 pilot altered course to the right, taking it within 0.3nm of the Vigilant. No height information was available for the motor-glider but the C172 was indicating 1700ft on the London QNH 1028hPa.

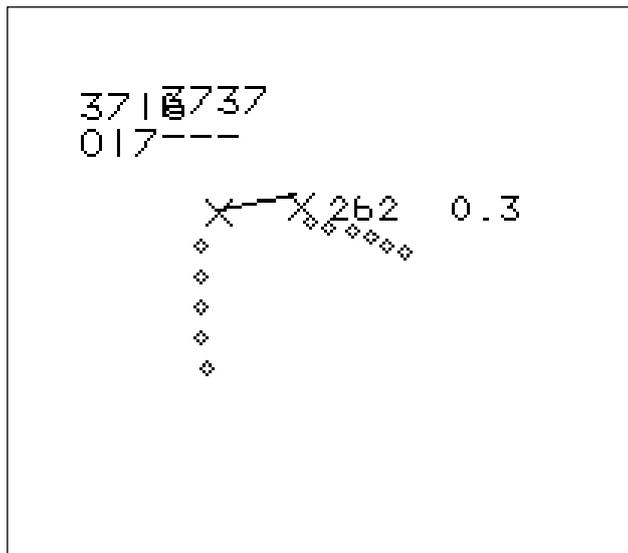


Figure 2: Incident geometry at 1524:56.

At 1525:04 the Vigilant can be seen taking a sharp right hand avoiding action turn which maintains the separation on radar replay at 0.3nm.

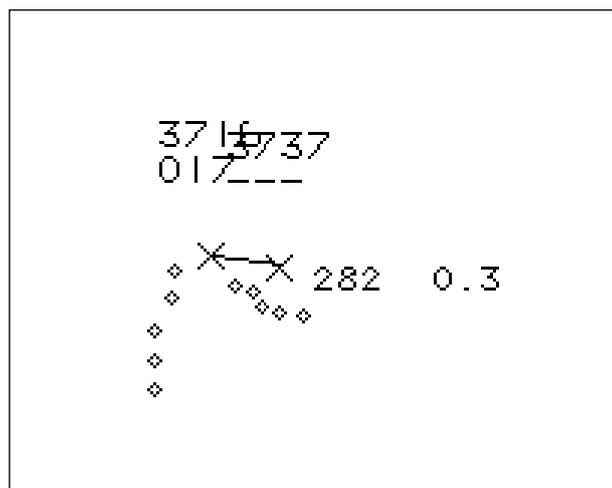


Figure 3: Incident geometry at 1525:04.

The Brize LARS controller terminated the landline call at 1525:23 and at 1525:43, transmitted to the C172 pilot, *“Little Rissington active today with motor-glanders up to flight level six zero”*. The C172 pilot replied, *“Roger, we’ve been visual with a few anyway so we’ll keep a good lookout and avoid the area anyway”*.

Opting for a Basic Service, the pilot of the C172 confirmed that he did not become visual with the Vigilant until after the pilot had initiated avoiding action.

From an ATM perspective, Brize LARS complied with a Basic Service, in the shape of providing information on the gliding activities and advice on avoiding controlled airspace. Whilst the C172 was initially identified, allowing navigational advice, identification for TI was not required, especially considering the LARS controller’s workload increase with higher priority tasks, such as negotiation of an airways joining clearance and handling multiple aircraft on frequency.

Comments

HQ Air Command

The only crew-member with SA of the potential incident was the Vigilant captain, who continued on track despite having visual contact with the C172. Whilst correct in his awareness of the Rules of the Air, proceeding into conflict with SA appears foolhardy; the Rules of the Air assume both parties are visual. The change in aspect of the manoeuvring Vigilant may have enabled the Cessna 172 pilot to finally become visual. Brize Radar appears to have provided the service requested, although ideally could have offered an increased level of TI had there been sufficient capacity. Of note, neither pilot assessed that a collision was likely.

Summary

The incident occurred at 1525 on 22nd September 2013, when a Vigilant T1 and a C172 flew into conflict. Both pilots were operating under VFR in VMC in Class G airspace, the C172 pilot in receipt of a Basic Service from Brize LARS and the Vigilant pilot not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar video recordings and a report from the appropriate ATC authority.

The Board quickly agreed that this Airprox hinged on the non-sighting of the Vigilant by the C172 pilot and the delayed action of the Vigilant pilot who, despite having seen the C172 at 500m (albeit late), continued into conflict until eventually resorting to a descending right turn (at considerably closer range than his estimate) in order to effect deconfliction. Members emphasised that, although the pilot of an aircraft on the left of a converging pair was required to give way under Rule 9, there was no 'right of way' for the pilot on the right; both pilots had an equal responsibility to ensure they did not collide with another aircraft. Additionally, it is a requirement that aircraft shall not be flown in such proximity to other aircraft as to create a danger of collision.

The C172 pilot stated that he wasn't alerted by ATC to the presence of the other aircraft: however, members noted that he was in receipt of only a Basic Service; that passing of traffic information was not required under such a service; and that he may not have had a complete understanding of the service with which he was being provided. In the event, he saw the Vigilant, probably just after CPA, and did not perceive a risk of collision.

Because the Vigilant pilot was visual with the C172 and had eventually taken avoiding action sufficient to prevent the aircraft colliding, the Board unanimously assessed that the degree of risk was C.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	A late sighting by the Vigilant pilot and effectively a non-sighting by the C172 pilot.
<u>Degree of Risk:</u>	C.
<u>ERC Score¹:</u>	4

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.