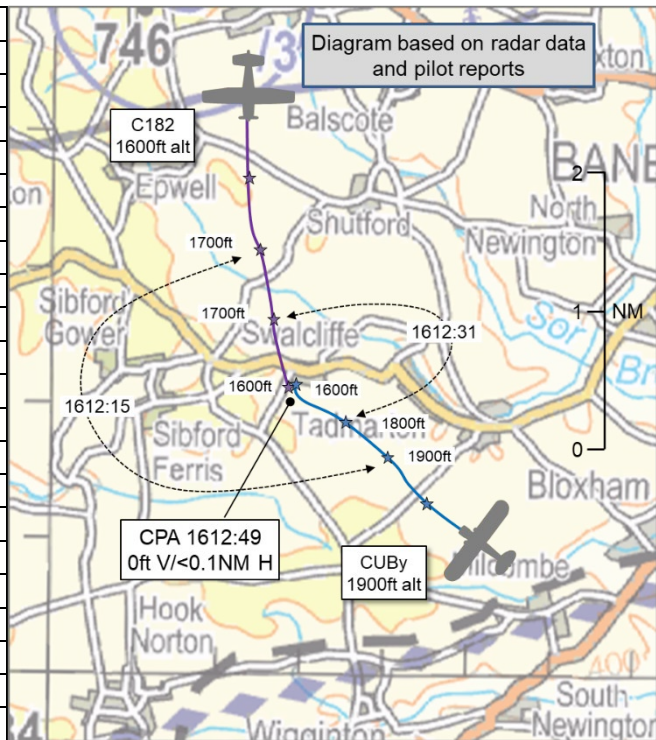


AIRPROX REPORT No 2024008

Date: 16 Jan 2024 Time: 1613Z Position: 5202N 00127W Location: IVO Swalcliffe, Oxfordshire

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|--------------------------|----------------|-----------------|
| Aircraft | Wag-Aero CUBy | C182 |
| Operator | Civ FW | Civ FW |
| Airspace | London FIR | London FIR |
| Class | G | G |
| Rules | VFR | VFR |
| Service | None | Listening Out |
| Provider | N/A | Enstone Radio |
| Altitude/FL | 1600ft↓ | 1600ft |
| Transponder | A, C, S | A, C, S |
| Reported | | |
| Colours | Yellow | White |
| Lighting | Strobe | Strobes, beacon |
| Conditions | VMC | VMC |
| Visibility | >10km | >10km |
| Altitude/FL | ~2000ft | 1800ft |
| Altimeter | QNH (1000hPa) | QNH (1006hPa) |
| Heading | ~350° | 180° |
| Speed | ~85kt | 110kt |
| ACAS/TAS | Not fitted | Not fitted |
| Separation at CPA | | |
| Reported | 50ft V/50m H | 300ft V/500m H |
| Recorded | 0ft V/<0.1NM H | |



THE CUBY PILOT reports that, whilst flying at an altitude of approximately 2000ft on a northerly heading, they had started a descending right turn over the village of Swalcliffe (approximately 4.5NM west of Banbury) and at this point had seen a Cessna 182, slightly lower, coming right at them on a reciprocal heading. The CUBy pilot tightened the turn to the right. The other aircraft turned left in a steep bank and went under the right wing.

The pilot assessed the risk of collision as ‘Medium’.

THE C182 PILOT reports that the approaching aircraft had first been spotted at 3-4NM at their 10 o'clock at a similar level. It had been crossing left-to-right and, although difficult to gauge the closing rate, its approach was monitored as, although the C182 pilot notes they had right of way, they had not seen it alter course and assumed that the pilot had not seen them. As the aircraft converged the C182 pilot took the only available avoiding action by turning to the left and descending and had watched the aircraft pass above and to the right continuing on its course. As it passed, the C182 pilot noticed that it was a yellow Piper Cub [they recall] and, as it had been uncontrolled airspace and they had taken appropriate avoiding action, they did not regard it as a high risk of collision as they had good visual contact the whole time.

The pilot assessed the risk of collision as ‘Low’.

THE ENSTONE AIR GROUND OPERATOR reports that Enstone Radio went off watch at 1400 on the day of the event because of deteriorating weather and as such had no communication with the C182.

Factual Background

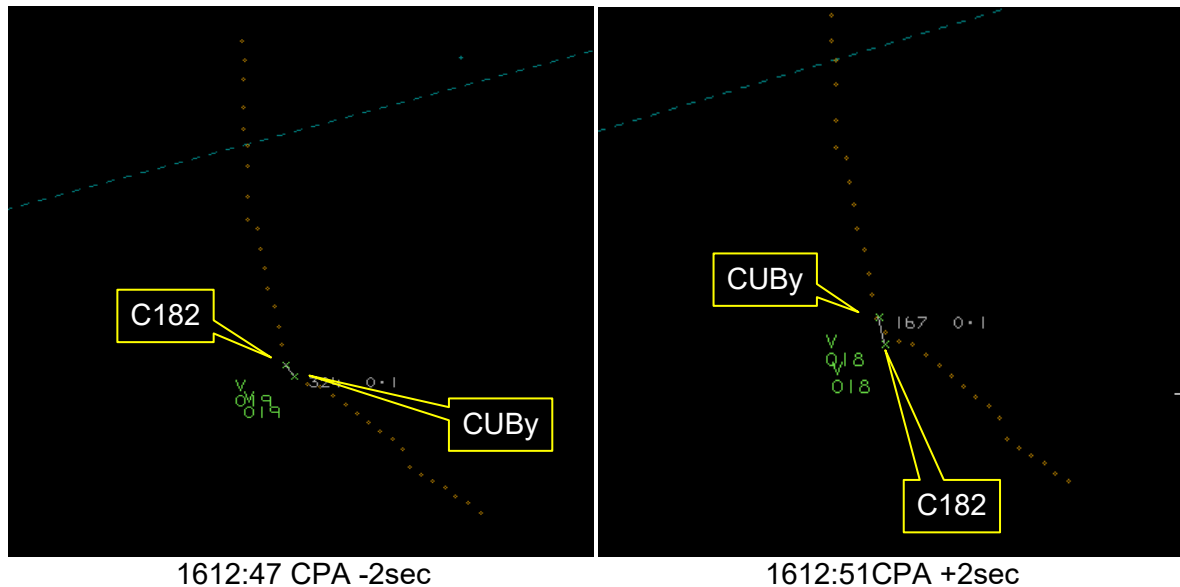
The weather at Oxford/Kidlington was recorded as follows:

METAR EGTK 161550Z 23005KT 9999 FEW042 02/M03 Q1004=

Analysis and Investigation

UKAB Secretariat

Figure 1 (below) shows the relative positions of the CUBy and the C182 approximately 2sec before CPA; figure 2 shows the relative positions of the CUBy and the C182 at the next radar sweep (4sec after the previous sweep).



Both aircraft were tracked via Mode S transponder. With 1min to CPA, the C182 pilot had remained relatively constant in their operational altitude with only minor variations towards CPA. The CUBy pilot had maintained a relatively shallow descent to CPA. The radar showed that the CUBy pilot had then increased their rate of descent and turned hard right before reversing back towards their previous track. The C182 passed below the C182 whilst in a left-hand turn through CPA.

The CUBy and C182 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 head-on or nearly so then both pilots were required to turn to the right.² If the incident geometry is considered as converging then the CUBy pilot was required to give way to the C182.³

Summary

An Airprox was reported when a CUBy and a C182 flew into proximity in the vicinity of Swalcliffe at 1613Z on Tuesday 16th January 2024. Both pilots were operating under VFR in VMC and neither pilot in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and radar photographs/video recordings. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

Members firstly discussed the actions of the CUBy pilot, noting that they had been operating without an Air Traffic Service and without electronic conspicuity equipment, leading to a lack of situational awareness of the oncoming C182 (**CF3**). Members felt that it had been fortunate that they had achieved a late sighting of the C182 as they had initiated their descending right-hand turn (**CF4**) and had been able to tighten that manoeuvre to increase separation. It was stressed again that within the panoply of

¹ (UK) SERA.3205 Proximity.

² (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

³ (UK) SERA.3210 Right-of-way (c)(2) Converging.

Air Traffic Services available in the UK, there were options available in most areas to suit most situations and pilots should be encouraged to request appropriate services whenever able to do so (**CF1**).

Turning to the actions of the C182 pilot, members noted that they had also been unequipped with electronic conspicuity and, although listening out on an airfield frequency, it had not been ideal for their current position or need and suggested that other services may have been better placed to build situational awareness where they had had none at the point of CPA (**CF1, CF3**). Members opined that, although the C182 pilot had seen the CUBy at a range of 3-4NM in their 10 o'clock, with a closing speed above 3NM/min, they had tracked the CUBy, perhaps expecting them to yield in accordance with the appropriate rules, but recognised at a later stage that they may not have achieved visual contact and took later-than-ideal avoiding action themselves, (**CF2**) ultimately flying close enough to have caused concern to the CUBy pilot (**CF5**).

When determining the risk of the Airprox, the Board considered the reports from both pilots; they noted the lack of an active Air Traffic Service for both pilots and the lack of carriage of electronic conspicuity equipment, highlighting that this had denied 2 critical barriers in the VFR environment. They noted that the C182 pilot had visually acquired the CUBy but, potentially, been unsure of the conflict potential due to the crossing, turning and descending profile. Ultimately, both pilots had performed avoidance manoeuvres that led members to accept that although safety had been degraded, there had been no risk of collision and members awarded a Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

| 2024008 | | | |
|---|--|--|--|
| Factor | Description | ECCAIRS Amplification | UKAB Amplification |
| Flight Elements | | | |
| • Tactical Planning and Execution | | | |
| Human Factors | • Communications by Flight Crew with ANS | An event related to the communications between the flight crew and the air navigation service. | Pilot did not request appropriate ATS service or communicate with appropriate provider |
| Human Factors | • Late Decision/Plan | Events involving flight crew making a decision too late to meet the needs of the situation | |
| • Situational Awareness of the Conflicting Aircraft and Action | | | |
| Contextual | • Situational Awareness and Sensory Events | Events involving a flight crew's awareness and perception of situations | Pilot had no, late, inaccurate or only generic, Situational Awareness |
| • See and Avoid | | | |
| Human Factors | • Identification/Recognition | Events involving flight crew not fully identifying or recognising the reality of a situation | Late sighting by one or both pilots |
| Human Factors | • Incorrect Action Selection | Events involving flight crew performing or choosing the wrong course of action | Pilot flew close enough to cause concern |

Degree of Risk: C.

Safety Barrier Assessment⁴

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

⁴ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because, although the C182 pilot had seen CUBy early, they had made a late decision in taking avoiding action.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither the CUBy nor the C182 pilots had any situational awareness of the other aircraft.

See and Avoid were assessed as **partially effective** because the CUBy pilot had achieved only a late sighting of the C182 and the C182 pilot had flown close enough to the CUBy to cause its pilot concern.

| Airprox Barrier Assessment: 2024008 | | Outside Controlled Airspace | | | | | | |
|--|--|-----------------------------|--------------------|---|-----------------------------------|-----------------|-----|-----|
| Barrier | | Provision | Application | Effectiveness Barrier Weighting | | | | |
| | | | | 0% | 5% | 10% | 15% | 20% |
| Ground Element | Regulations, Processes, Procedures and Compliance | ○ | ○ | | | | | |
| | Manning & Equipment | ○ | ○ | | | | | |
| | Situational Awareness of the Conflicting Aircraft & Action | ○ | ○ | | | | | |
| | Electronic Warning System Operation and Compliance | ○ | ○ | | | | | |
| Flight Element | Regulations, Processes, Procedures and Compliance | ✔ | ✔ | | | | | |
| | Tactical Planning and Execution | ✔ | ⚠ | | | | | |
| | Situational Awareness of the Conflicting Aircraft & Action | ✘ | ✔ | | | | | |
| | Electronic Warning System Operation and Compliance | ○ | ○ | | | | | |
| | See & Avoid | ✔ | ⚠ | | | | | |
| Key: | | <u>Full</u> | <u>Partial</u> | <u>None</u> | <u>Not Present/Not Assessable</u> | <u>Not Used</u> | | |
| Provision | ✔ | ⚠ | ✘ | ○ | | | | |
| Application | ✔ | ⚠ | ✘ | ○ | ○ | | | |
| Effectiveness | ■ | ■ | ■ | ■ | □ | | | |