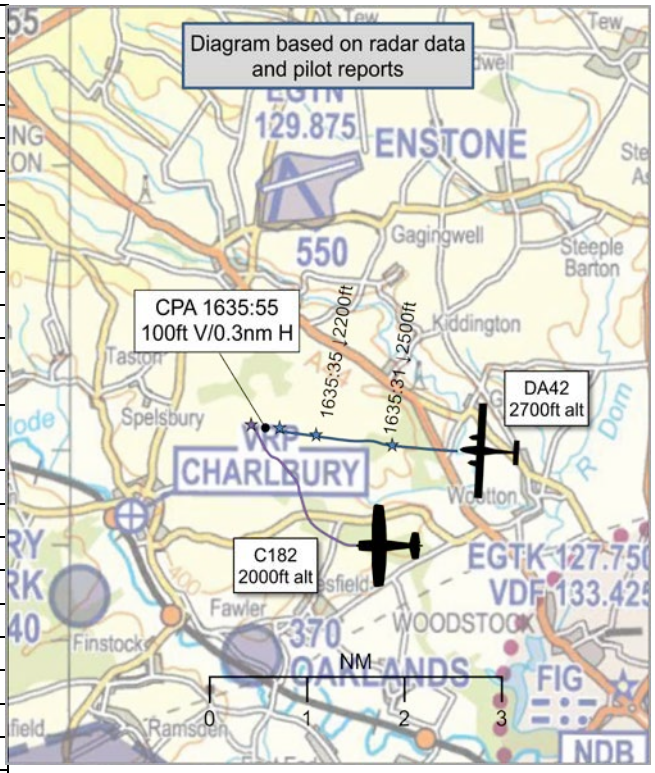
AIRPROX REPORT No 2015170

Date: 22 Sep 2015 Time: 16:35Z Position: 5153N 00126W Location: 6nm WNW of Oxford

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	C182
Operator	Civ Trg	Civ Trg
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Procedural	Basic
Provider	Oxford	Oxford
Altitude/FL	1900ft	2000ft
Transponder	On/S	On/C,S
Reported		
Colours	White/Blue	Red/White
Lighting	Strobe, Landing Light	Strobe, Beacon, Nav Lights
Conditions	VMC	VMC
Visibility	20KM	10KM +
Altitude/FL	1900ft	2000ft
Altimeter	QNH (1003hPa)	NK
Heading	290°	315°
Speed	120kt	120kt
ACAS/TAS	Not fitted	Not fitted
Alert	N/A	N/A
Separation		
Reported	100ft V/0.5nm H	400ft V
Recorded	100ft V/0.3nm H	



THE DA42 PILOT reports that he was conducting an IR training flight. He entered the hold at an altitude of 4500 feet in IMC, descended when instructed to 3500ft (still IMC) and was subsequently cleared for the NDB/DME approach RW01. He became VMC in the descent at approximately 3-4d from the OX. In excellent VMC outside cloud, he sighted an aeroplane apparently on the 099 FAT at approximately 2000ft heading NW. ATC was queried by the instructor as to whether any traffic was known in that position; another aircraft reported 'That might be me' with an Oxford callsign. The other aeroplane was observed to maintain course and altitude whilst the DA42 pilot continued his base turn which saw them pass from above, behind and to the right of the observed aeroplane to beneath, behind and to the left in the turn. Due to their relative positions, and the high-wing configuration of the other aeroplane, he perceived that they would not have had sight of the DA42. Positive visual location of the observed aeroplane was maintained at all times.

He assessed the risk of collision as 'None'.

THE C182 PILOT reports that he was departing Oxford to the NW for a training exercise and was complying with Oxford's local procedures, remaining at 2000ft until 5nm clear. The pilot reports he was clear of the instrument approach path and that the aircraft passed behind them.

He assessed the risk of collision as 'None'.

Factual Background

The weather at Oxford was recorded as follows:

METAR EGTK 221620Z 01005KT 290V050 9999 VCSH FEW016 SCT022 SCT026CB 15/12 Q1003

Analysis and Investigation

CAA ATSI

The DA42 (SSR code 0221) was operating on an instrument flight training detail and was in receipt of a Procedural Service from Oxford Approach. The DA42 was flying the Oxford NDB/DME 099° alternate procedure (the dotted track at Figure 1) to a missed approach. The runway in use at the time was RWY01. The DA42 pilot had commenced the approach by extending the outbound leg of the 'OX' hold; he reported beacon outbound at 1633:40, and reported the Airprox just before the end of the outbound leg. The procedure is a non-precision approach to the aerodrome, ending with a visual circling manoeuvre to Runway 01.

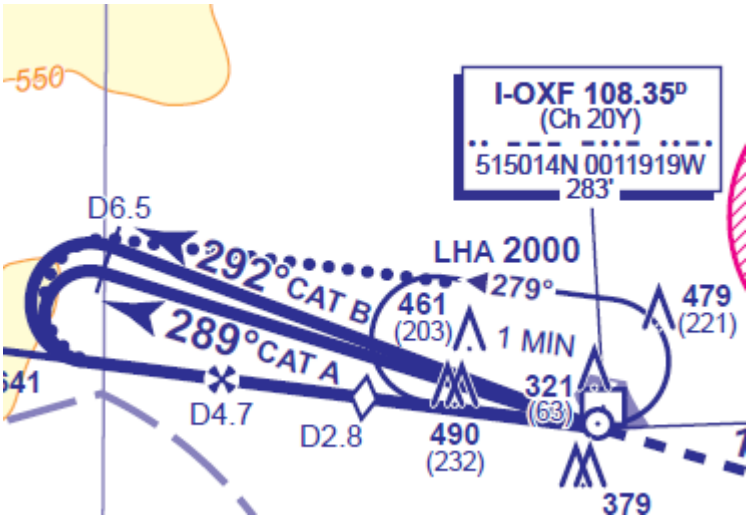


Figure 1: Oxford NDB (L) / DME 099° Procedure to Aerodrome

The C182 (SSR code 4520) was operating on a training flight under VFR (although the student was flying under simulated IMC) and was in receipt of a Basic Service. The C182 pilot stated that he was complying with Oxford's standard VFR departure profile which requires aircraft to squawk 4520, unless otherwise instructed, and to fly not above altitude 2000 feet (QNH) until passing 5 miles (AIP EGTK 2.22 Para 2 refers).

On sighting the C182, the pilot of the DA42 asked Oxford Approach whether they were aware of any traffic on the extended final approach track for the procedure. The Oxford Approach controller replied that there were two aircraft general handling to the West of Oxford but their exact locations were not specifically known. On hearing the pilot of the DA42 requesting information from Oxford Approach about traffic operating on the final approach track for the procedure, the C182 transmitted to Oxford that he thought that the reported traffic was him, but that in his opinion he was clear to the north of the final approach track. The recorded surveillance data indicates that that this was indeed the case; however the C182's track was in proximity to the outbound leg of the DA42's instrument approach.

The C182 had been tracking to the west (Figure 2), but tracked northbound (Figure 3) until just prior to CPA, which occurred at 1635:55 (Figure 4) when the DA42 passed astern of the C182 as this aircraft tracked away to the northwest.

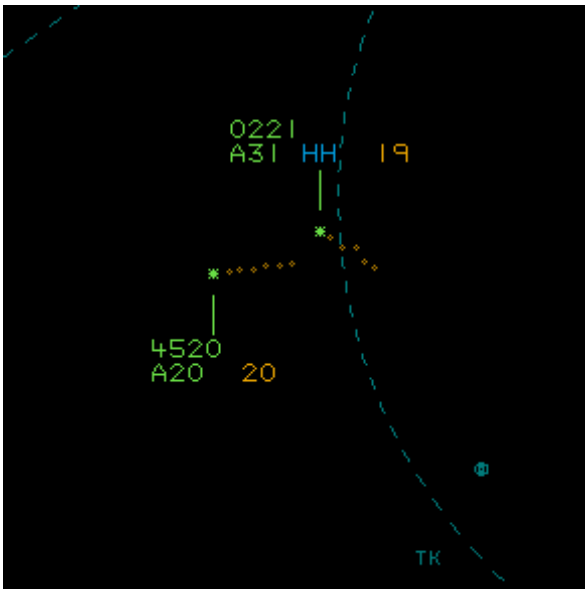


Figure 2: Swanwick MRT at 1634:19

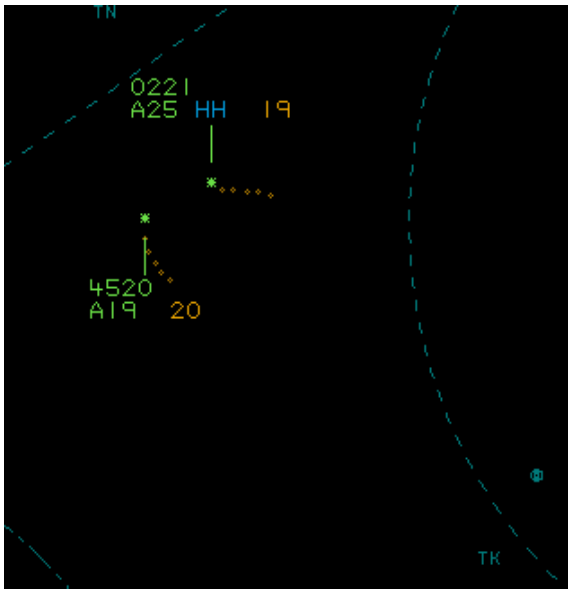


Figure 3: Swanwick MRT at 1635:23

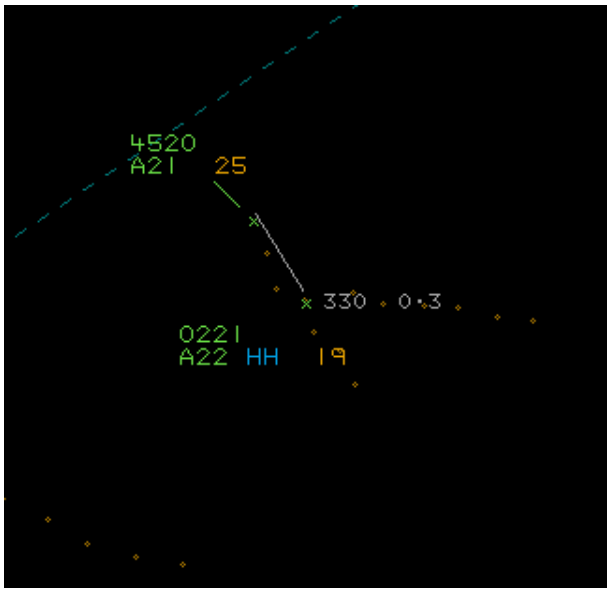


Figure 4: Swanwick MRT at 1635:55 (CPA)

The Oxford Approach controller was providing a combined aerodrome and approach procedural service without reference to surveillance information within Class G (uncontrolled) airspace. The Manual of Air Traffic Services Part 1 (Section 1, Chapter 3, Page 1) states, "In Class G airspace, separation between aircraft is ultimately the responsibility of the pilot; however, in providing a Deconfliction Service or a Procedural Service, controllers will provide information and advice aimed at achieving a defined deconfliction minima". Under a Basic Service "the avoidance of other traffic is solely the pilot's responsibility" (Section 1, Chapter 12, Page 3).

UKAB Secretariat

The DA42 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 converging then the C182 pilot was required to give way to the DA42[2].

Summary

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

An Airprox was reported when a DA42 and a C182 flew into proximity at 16:35 on Tuesday 22nd September 2015. The DA42 was operating under IFR in VMC, and the C182 under VFR in VMC. The DA42 pilot was in receipt of a Procedural Service[3] from Oxford and the C182 pilot in receipt of a Basic Service[4] from Oxford.

The DA42 was carrying out an alternate instrument approach procedure at Oxford for RW01. When he cleared cloud in the descent he saw a C182 in the vicinity of the final approach track for the instrument approach the DA42 was carrying out. As the DA42 turned onto base the C182 turned north which put both aircraft onto converging headings, at this time the C182 had the DA42 on the right 2 O'clock and 600ft above. The DA42, who had the C182 in sight at all times, continued his descent on the instrument approach and passed behind the C182. The C182 departed Oxford on a standard VFR departure[5]. He did not report seeing the DA42 but states he was clear of the instrument approach.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board first looked at the Oxford procedure for departing VFR traffic and the separation this affords aircraft on the IFR instrument approach procedures; they thought that the very generic 'not above 2000ft within 5nm of Oxford' for VFR departures risked not ensuring adequate separation between VFR departures and the instrument approach procedure which allowed aircraft to descend to 1900ft. Although the VFR traffic was clearly required to operate to see-and-avoid principles, Board members highlighted the fact that the 2 procedures had a designed-in potential confliction that had been realised in this incident. They recommended that Oxford review their procedures to ensure they fully deconflict Instrument Approach Procedures with VFR departures. The Board were mindful of the status of the Class G airspace and not over controlling VFR traffic but felt that, although this gave a level of protection to the OX hold, it had the potential for VFR departures to inadvertently infringe the instrument approach procedure, especially with inexperienced or unfamiliar pilots.

The Board then highlighted that the DA42 pilot had not been given Traffic Information. Although they acknowledged that a controller is not mandated to pass Traffic Information on aircraft not participating in the Procedural Service, and that the controller was working without the aid of surveillance equipment, the Board opined that the controller knew that there was traffic to the West and that it would have been pertinent to provide such generic Traffic Information to the DA42 pilot; especially considering that he was IMC and carrying out an instrument approach.[6] They believed this would have improved the DA42 pilots' situational awareness and increased the opportunity for him to avoid the conflicting traffic. As it happened, when he broke cloud and became VMC, the DA42 pilot's

[3] Procedural Service is an Air Traffic Service where, in addition to the provisions of Basic Service, the controller provides restrictions, instructions, and approach clearances, which if complied with, will achieve deconfliction minima against other aircraft participating in the Procedural Service. Neither traffic information nor deconfliction advice can be passed with respect to unknown traffic. CAP493 Section 1: Chapter 12: UK Flight Information Services, Page 11

[4] Basic Service is a type of UK FIS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility. CAP493 Section 1: Chapter 12: UK Flight Information Services, Page 3

[5] The UKAIP entry for standard VFR departures is: 'Oxford traffic operates a standard VFR departure profile for aircraft whilst within 5nm of the aerodrome. Departing VFR traffic shall squawk 4520 unless otherwise instructed, and should fly not above altitude 2000ft (QNH) until passing 5 miles.'

[6] The controller shall provide traffic information, if it is considered that a confliction may exist, on other known traffic; however, there is no requirement for deconfliction advice to be passed, and the pilot remains responsible for collision avoidance. However, where a controller has information that indicates that there is aerial activity in a particular location that may affect a flight, they should provide information in general terms to assist with the pilot's situational awareness. This will not normally be updated by the controller unless the situation has changed markedly, or requested by the pilot. CAP493 Section 1: Chapter 12: UK Flight Information Services, Page 12

robust lookout meant that, thankfully, he saw the C182 in plenty of time and was able to keep the aircraft in sight at all times.

The Board felt that an Airprox report from the Air Traffic Controller would have greatly assisted their deliberations in this situation by providing the Controller's perspective. Not only would it have provided more background but it might also have highlighted other issues and context that may not otherwise have been identified. The ATSI representative informed the Board that Oxford had not been informed of the Airprox on the radio and had therefore not been aware at the time.

In the end, the Board determined that although this incident had met the criteria for the reporting of an Airprox, the circumstances were such that normal safety parameters had pertained throughout given that the DA42 pilot had visually acquired the C182 at an early stage and had maintained it in sight at all times. They classified this incident as a sighting report and agreed that the risk was category E.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A sighting report.

Contributory Factor(s): No traffic information from the Air Traffic Controller.

Degree of Risk: E.

Recommendation(s): Oxford review their procedures to ensure they fully deconflict the Instrument Approach Procedures and VFR departures.