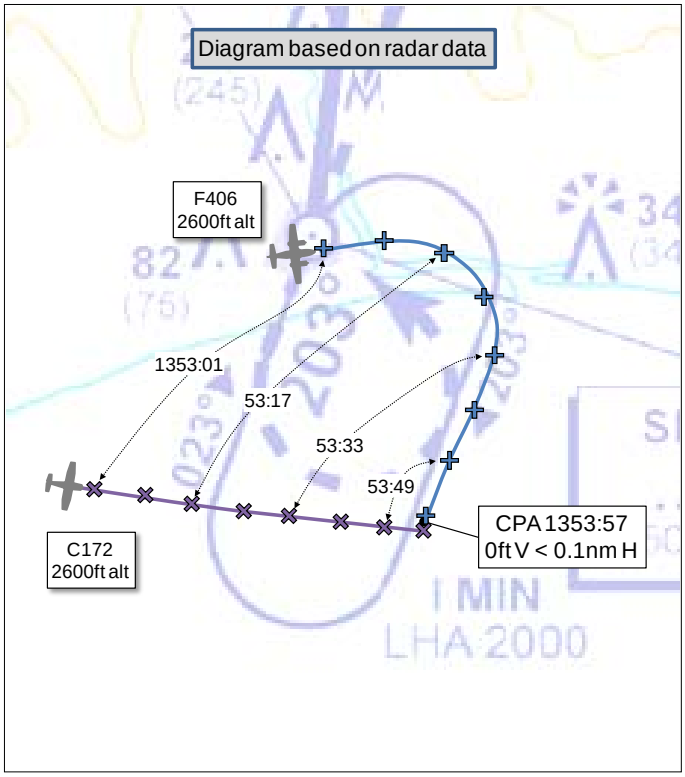
AIRPROX REPORT No 2012131

Date/Time:	23 Aug 2012 1354Z	
Position:	5047N 00016W (Shoreham NDB Hold)	
Airspace:	Lon FIR	(*Class: G*)
	Reporting Ac	*Reporting Ac*
Type:	Cessna F406	Cessna 172
Operator:	Civ Trg	Civ Pte
Alt/FL:	2500ft QNH(1014hPa)	2700ft QNH(1014hPa)
Weather:	VMC CLBC	VMC CAVOK
Visibility:	>10km	>10km
Reported Separation:	50ft V/50m H	100ft V/50m H
Recorded Separation:	0ft V/<0.1nm H	

BOTH PILOTS FILED



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE CESSNA F406 PILOT reports conducting an instrument training sortie, operating in VMC under IFR with a PS from Shoreham ATSU [123.150MHz]. He was sitting in the L seat with an IR Examiner occupying the R seat. Screens were not fitted. The white ac had navigation, beacon and strobe lights selected on, as was the SSR transponder with Modes A, C and S selected. The ac was not fitted with an ACAS. He was starting the NDB(L)/DME RW20 approach to Shoreham A/D and carried out a sector 3 procedure (direct entry) to the hold, turning onto the outbound leg. Approximately 30sec after passing abeam the [SHM] beacon, on the 203° outbound radial, heading 210° at 140kt and altitude 2500ft [QNH 1014hPa], he saw a white, high-wing, Cessna type ac which flew straight across his track from R to L, approximately 50-100ft above him and at a range of no more than 100m. He disengaged the A/P and took 'aggressive avoiding action', descending and turning to the R. He stated that the other ac did not make RT contact with Shoreham ATSU despite flying straight through the IAP. He opined that, where possible, it would be better to utilise A/Ds which had radar coverage and with IAPs inside CAS, particularly on busy, good weather days. He also suggested that 'PPL/VFR users should be re-educated about IAPs', specifically that if they intend to fly adjacent to A/Ds with IAPs they are 'strongly recommended, when flying within 10nm of the aerodrome to contact the aerodrome ATSU' as is clearly marked on the legend of CAA aeronautical charts.

He assessed the risk of collision as 'High'.

THE CESSNA 172 PILOT reports transiting from Chichester/Goodwood A/D to an A/D in Germany, operating under VFR in VMC. He was in receipt of a BS from 'Farnborough Radar' on 125.250MHz, he thought. The red and grey ac had navigation, beacon, strobe and landing lights selected on, as was the SSR transponder. The ac was not fitted with an ACAS. After passing the Littlehampton VRP, he set course for the SFD VOR, following the 280° radial, and maintaining lookout for other traffic due to the vicinity of Shoreham A/D. He was heading 100° at 120kt, level at altitude 2700ft [QNH 1014hPa] over the sea, when his passenger warned him of an ac rapidly approaching from the L. He saw a twin-engine, low-wing ac at a range of about 1000m, about 100m below, in a climb, which seemed to be on a collision course. He considered avoiding action for 1 or 2sec but decided

to maintain height and heading as 'anything else did not appear to be appropriate'. He stated that it was the other pilot's responsibility to avoid a collision. Shortly thereafter, the other ac abruptly made a R turn and crossed behind his ac, at the same level and at a distance of 50-100m. He reported the incident on the radio.

He assessed the risk of collision as 'High'.

[UKAB Note(1): RoA, Rule 9 (Converging) states:

…
(3) …, when two aircraft are converging in the air at approximately the same altitude, the aircraft which has the other on its right shall give way.

The RoA, Rule 8 (Avoiding aerial collisions) states:

'(1) … it shall remain the duty of the commander of an aircraft to take all possible measures to ensure that his aircraft does not collide with any other aircraft.']

THE FARNBOROUGH LARS(E) CONTROLLER reports that he was the LARS(N) and (E) controller when [the C172 pilot] was handed over to him from Farnborough LARS(W). The frequency was very busy and [the C172 pilot] took a long time to call. When he did, the controller issued a squawk code, passed the QNH and agreed a BS. Five minutes later, between Shoreham and Seaford, [the C172 pilot] reported that an ac had flown quite close to him. The controller asked him if he was filing, to which he replied, 'No, I just thought I should tell you'. The controller then confirmed with him that he was under a BS and that TI is not provided.

THE FARNBOROUGH LARS(W) CONTROLLER reports that he was informed of the Airprox on 6th September and that the only recollection he had of the event was that the sector was very busy and he had to ask another ac to relay a message to [the C172 pilot] to change frequency to Farnborough LARS(E) [123.225MHz].

ATSI reports that an Airprox was reported 2.8nm SSE of Shoreham A/D at altitude 2400ft in Class G airspace when a Reims Cessna F406 (F406) came into conflict with a Cessna 172S Skyhawk 2 (C172).

Background

The F406 was operating under IFR, conducting the NDB approach to RW20 at Shoreham and was in receipt of a PS from Shoreham APP [123.150MHz].

The C172 was operating under VFR on a flight from Goodwood to an A/D in Germany and was in receipt of a BS from Farnborough LARS(W) [125.250MHz]. At the time of the Airprox, Farnborough LARS(W) had lost communications with the C172 pilot.

CAA ATSI had access to written reports from the pilots of both ac and the Farnborough LARS(W) and LARS(E) controllers, together with area radar recordings and RTF recordings.

The Shoreham METARs are provided for 1320 and 1350 UTC:

METAR EGKA 231320Z 21011KT 9999 FEW016 19/14 Q1014=
METAR EGKA 231350Z 22010KT 9999 FEW016 19/14 Q1014=

Factual History

At 1331:20 the F406 pilot contacted Shoreham approach at 3400ft at Selsey for a hold and NDB/DME approach to RW20. He was given a delay of approximately 10min for joining clearance.

The pilot replied that he would operate in the vicinity of Selsey up to 5000ft until he received an onward clearance.

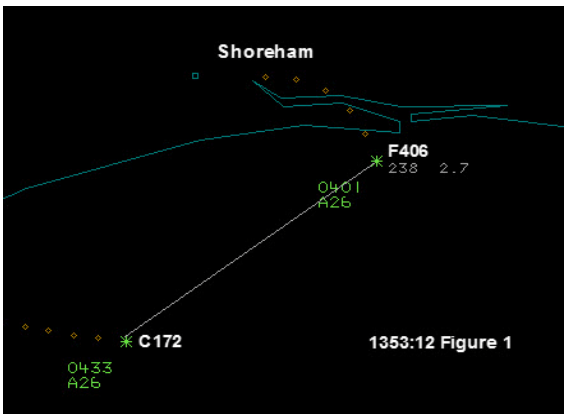
At 1345:00 the C172 pilot contacted Farnborough LARS(W) when S of Chichester at 2400ft. A BS was agreed and the pilot was given a squawk of 0433.

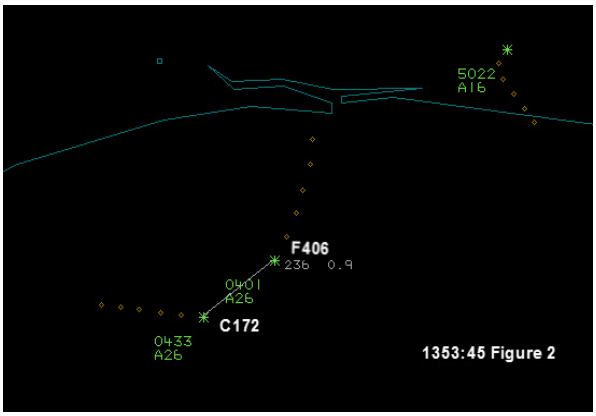
At 1349:00 the F406 pilot was cleared to proceed to the Shoreham NDB at 2500ft and given no delay for the NDB/DME approach for RW20, together with the Shoreham IFR squawk of 0401. At 1350:00 the F406 was 6.0nm WSW of Shoreham, tracking towards the NDB at 2600ft. The C172 was 1.3nm behind the F406, tracking E.

At 1350:00 the C172 pilot was instructed to report his squawk to LARS(E) [123.225MHz]. There was no response from the pilot. Between 1350:00 and 1353:00 the Farnborough LARS(W) controller made several attempts to re-establish contact with the C172 pilot without success.

At 1353:12 the F406 pilot had crossed over the SHM NDB and was in a R turn, tracking S at 2600ft. The C172 was 2.5nm SSW of Shoreham tracking E, also at 2600ft (see Figure 1 below).

At 1353:45 the F406 was tracking SSW, joining for the NDB procedure while the C172 was tracking E, 0.9nm WSW of the F406 (see Figure 2 below).





The 2 ac continued to converge and at 1353:57 were both at 2600ft, 0.1nm apart (CPA). At 1354:01 the F406 was at 2400ft and had crossed 0.2nm behind the C172.

At 1354:00 the Farnborough LARS(W) controller asked another ac to relay the change of frequency to the pilot of the C172. At 1354:30 the relay was completed and at 1354:40 the pilot of the C172 read back the frequency change.

The report from the Farnborough LARS(W) controller stated that the sector was very busy and his only recollection of the incident was of having to ask another ac to relay the frequency change to Farnborough LARS(E) to the pilot of the C172.

The F406 pilot's report stated that, whilst 5nm SSE of Shoreham, a high winged ac flew straight across his track from R to L, at approximately 50-100ft above, at a range of no more than 100m. The crew of the F406 were in VMC and the pilot took 'aggressive avoiding action'.

The C172 pilot's report stated that he first saw the F406 at approximately 1000m, to the L and 100m below, climbing. The C172 pilot considered avoiding action but decided to maintain height and heading as 'anything else did not appear to be appropriate. It was up to the other pilot to avoid a collision'. The C172 pilot observed that the F406 abruptly made a R turn and crossed behind him at a distance of 100m or less.

Analysis

Both ac were operating in class G airspace and the pilots were equally responsible for collision avoidance. The C172 pilot had right of way.

The C172 pilot was in receipt of a BS from Farnborough LARS(W). Under a BS there is no requirement to monitor the flight, although TI may be passed if a definite risk of collision exists. At the time of the Airprox the controller had lost contact with the C172 pilot.

The F406 crew were in receipt of a PS from Shoreham APP. It is published on the United Kingdom 1:250,000 and the 1:500,000 Aeronautical Charts that Shoreham has an Instrument Approach Procedure (IAP). Also published on both charts is the advice that 'pilots who intend to fly to or route adjacent to aerodromes with IAPs are strongly recommended when flying within 10nm of the aerodrome to contact the aerodrome ATSU'. The C172 pilot did not contact Shoreham, therefore Shoreham were unaware of his presence and were unable to pass TI to the F406 pilot.

Conclusion

An Airprox occurred in Class G uncontrolled airspace, 2.8nm S of Shoreham A/D when a C172 and a F406 flew into close proximity with each other.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, 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 considered the actions of each pilot. Members opined that the nature of the F406 pilot's sortie along with the provision of a PS may have lulled him into a false sense of security with regard to deconfliction from other airspace users. It was felt that the provision of 'a service' could sometimes result in an assumption of separation. Members noted that, unlike CAS, the responsibility for collision avoidance in class G airspace ultimately rested with the pilots, whether in receipt of ATSOCAS or not. The Board agreed with the F406 pilot's conclusion about the advantages of radar-based ATSs and/or the protection of CAS for instrument training, especially on good weather days; Members noted that whilst VFR charts indicated A/Ds with IAPs, information regarding the position of IA holds was not included and realistically could not be, due to map clutter constraints. The Board also considered the practicality of pilots contacting A/Ds with IAPs. ATC Members pointed out that this practice would greatly increase controller workload, should a hand-over be required, but that free-calling would help to alleviate the problem; pilot Members also pointed out the increase in cockpit workload in either case. Members were unanimous in their opinion that the issue was essentially one of planning and that pilots would be well advised, in the first instance, to route further than 10nm from A/Ds with IAPs. In parts of the country where this was not practical, it was felt that pilots should request appropriate service provision and where that was not available to be ready to establish timely contact with the A/D. In this case the C172 pilot was not in contact with any ATSU at the time of the Airprox and so could not have received TI. The NATS Ltd Advisor noted that the F406 was displaying the Shoreham IA conspicuity code and that Farnborough controllers had been reminded that this information can be used to good effect. The CAA SRG Advisor noted that the Farnborough LARS(W) controller was task-centred on transferring the C172 pilot to LARS(E), rather than providing TI on the F406 or suggesting a handover or free-call to Shoreham.

The C172 pilot saw the F406 in good time and assessed that there was a collision risk. He also correctly assessed that he had right of way and decided to maintain course and height, which he did throughout the Airprox. In considering this, Members were at a loss to understand why he apparently took no avoiding action. Whilst Rule 9 afforded him right of way, both pilots were equally responsible for collision avoidance and he was well-placed to increase his conspicuity by wing-rocking or to break the collision geometry by climbing or descending. His lack of action significantly increased the risk to both ac involved and prompted the Board to consider whether there was a common misunderstanding of the VFR regulations. Some pilot Members opined that the VFR regulations

were written in an age when ac possessed significantly lower performance and greater commonality of speed and that they were not well framed for today's aviation environment. Members agreed that it would be wise always to assume that the other pilot had not seen one's own ac until positive actions prove otherwise.

The pilots shared equal responsibility to see and avoid and although the C172 pilot appeared to take no action, it was the late sighting by the F406 crew which caused the Airprox. The Board considered that the F406 pilot saw the C172 at about the last available opportunity and as a result had to manoeuvre aggressively to avoid it. Consequently, safety margins were reduced much below normal.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Late sighting by the F406 crew.

Degree of Risk: B.