

AIRPROX REPORT No 2012084

Date/Time: 19 June 2012 0955Z

Position: 5052N 00043W
(RW14 LHC
Chichester/Goodwood -
elev 110ft)

Airspace: ATZ (Class: G)
Reporting Ac Reported Ac

Type: PA28 C177

Operator: Civ Pte Civ Pte

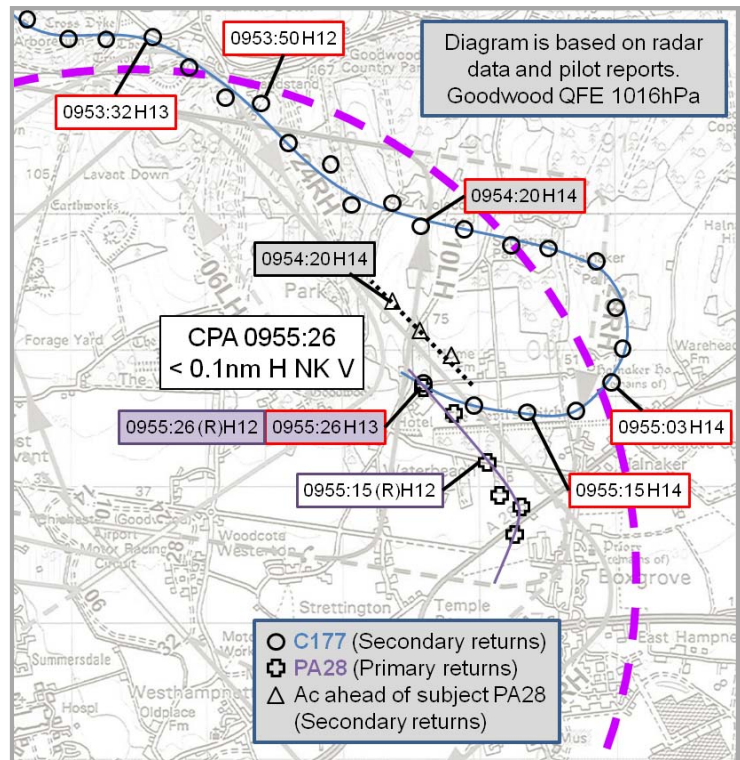
Alt/FL: 1200ft 1200ft
(QFE 1016hPa) (NK)

Weather: VMC OOS VMC OOS

Visibility: >10km 10km

Reported Separation:
25ft V/0m H NR

Recorded Separation:
NK V/<0.1nm H



[UKAB Note (1): Each time annotation is followed with either the radar-derived height (hgt), H, or the pilot reported hgt, (R)H.]

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE PA28 PILOT reports taking-off from Chichester/Goodwood A/D at 0948 with the intention of performing some ccts. Wingtip strobe lights were selected 'on' and the SSR transponder was selected 'off'. RW14 LHC was in use, hgt 1200ft [QFE 1016hPa]. On his 3rd cct he was number 3 to 2 other A/D based ac and was aware from R/T transmissions that 2 further visiting ac were joining. He recalled both these ac being told to join overhead. He was visual with the cct traffic ahead (on base leg) and upon approaching the mid point of the downwind (DW) leg, level at 1200ft, Hdg 320° at 90kts, he carried out his pre-landing checks. His attention was focussed inside the cockpit while he performed the checks. On completion he looked up and saw a Cessna ac crossing at 90° from R to L directly above his ac at an estimated separation of 25ft to 50ft. He estimated an elapsed time of 1 second between his first sighting of the conflicting traffic and it passing over his canopy. He did not report the Airprox over R/T due to other traffic calls and concentrated his attention on flying the remainder of the cct. He stated that the other ac was not at the correct hgt for an overhead join and took no action to avoid him. He noted that in the past he had observed many visitors seemed unaware of the unusual 1200ft cct hgt at Goodwood.

In his opinion there was a very real risk of collision.

THE C177 PILOT reports flying from EIER [Erinagh Aerodrome, 5249N 00817W, 20nm NE Limerick] to Goodwood and that due to the elapsed time of some 20 days between the Airprox and his submission his recall may be subject to error.

[UKAB Note(2): The C177 closely resembles the C172 but without the cantilever wing bracing struts.]

SSR Mode C was selected 'on' [he did not report whether Mode S was fitted or if the external lighting was also selected 'on']. Upon approach to Goodwood at approximately 0955 he changed from Solent Radar frequency to Goodwood Information frequency; he was advised to join L DW for RW14 and that there were a number of ac in the cct. He was joining from the NW and headed SE to keep well

clear of the cct pattern. When abeam the end of RW14 he contacted Goodwood information and advised his location and intention to turn R onto a R DW for RW14. He was advised that he would be number 4 in the cct pattern. At this point he '... only had sight of the other 3 ac in the circuit ahead ...'. He then turned R and as he completed his '... right turn in for the left downwind run' he had a glimpse of an aircraft coming up from behind. At this point he was at 1200ft [pressure setting not reported] heading 320° at 100 kt. He immediately increased power to increase separation from the other ac.

He noted ATC was under immense pressure as there were a large number of ac in the area. He also noted that ATC commented to the same effect, that it was extremely busy.

He assessed the risk of collision as 'Medium'.

ATSI reports that the Airprox occurred at 0955:32 [UKAB Note (3): CPA occurs just before 0955:26], 1.5nm NE of Chichester/Goodwood A/D, within Class G airspace and inside the A/D ATZ. The ATZ comprises a circle radius 2nm, centred on the midpoint of Runway 14R/32L and extends to 2000ft aal (elevation 110ft).

[UKAB Note(4): Chichester/Goodwood A/D operates adjacent NW/SE RWYs, 14L/32R (726m x 30m) and 14R/32L (1300m x 46m). The promulgated cct direction for RWYs 14L/14R is LH.]

The PA28 was on a local VFR flight and operating in the RW14 LH visual cct. The C177 was inbound, under VFR, from EIER. A/D ATSU was providing a FISO service, C/S 'Goodwood Information'. CAA ATSI assessed the workload as medium.

UK AIP, EGHR AD 2.22 – FLIGHT PROCEDURES, states:

- a. Fixed-wing circuit height 1200ft or as directed by ATS.
...
- b. Fixed-wing standard join is overhead at 2000ft. 'Straight-in' and 'base' joins are strongly discouraged when the circuit is active. ATS can advise on circuit status. Outside ATS hours or after sunset, overhead join is mandatory.
...

CAA ATSI had access to R/T and NATS area radar recordings together with written reports from both pilots. The A/D ATSU were not advised about the Airprox until 8 days after the event and consequently there was no written report from the FISO, although the incident was discussed with him subsequently by telephone.

In the absence of recorded weather for Chichester/Goodwood A/D, the Shoreham METAR was reported as follows:

METAR EGKA 190920Z 19007KT 9999 SCT020 16/12 Q1020=

[UKAB Note(5): METAR EGKA 190950Z 18006KT 9999 FEW020 16/12 Q1020]

When questioned, the FISO indicated that the C177 pilot had previously telephoned in accordance with the requirement for PPR and was advised of the A/D conditions, RW in use and cct direction. The C177 pilot first contacted Goodwood Information at 0950:25, reporting 5 miles NW of Goodwood inbound for landing with a squawk of 7000 and requesting A/D information. The FISO informed the C177 pilot that RW14 was in use with 3 ac in the cct and QFE 1016hPa. The C177 pilot acknowledged the QFE and RW and added LHC in use.

At 0951:43, the radar recording showed the C177 4.3nm NW of the A/D indicating alt 2100ft [London QNH (1020hPa) and therefore A/D hgt 2000ft]. At 0952:40 the C177 was shown 2.6nm NW at alt 1300ft [hgt 1200ft] on the centreline for RW14 where a L turn onto an E track was made. At 0953:32,

the C177 was shown 2.3nm N where a R turn was made. The ac tracked SE and entered the ATZ against the flow of the DW cct traffic.

At 0953:50, the C177 was shown passing the LHS of a DW C172 [radar derived 0.4nm laterally and 100ft higher] on a reciprocal track. The C172 pilot asked the FISO if traffic was joining DW from the N at 1300ft. This was confirmed by the C177 pilot, who then requested to join L DW. The FISO advised the C177 pilot of opposite direction cct traffic and suggested he position E, outside the cct pattern, to rejoin with 4 ac in the cct. The C177 pilot acknowledged 4 ac in the cct and advised he would route to the E and join DW. The FISO asked the pilot to report DW and again reminded him to keep wide, out of the way of the opposite direction cct traffic, with 4 ac in the cct.

At 0954:20, the C177 was shown passing just to the N of a 2nd DW ac [radar derived 0.3nm laterally and co-alt] where the C177 pilot commenced a L turn onto an E track, leaving the ATZ. The C177 pilot then made a 180° R turn onto a W track, re-entering the ATZ at 0955:03, and converged with a primary contact, believed to be the subject PA28 on the DW leg.

At 0955:09, the C177 was shown at alt 1500ft [hgt 1400ft] in the PA28's half past one position at a range of 0.5nm, on a R to L crossing track. The PA28 pilot reported DW for a touch and go and was informed of 3 ac ahead in the cct. The FISO advised the PA28 pilot that he was unsure how the C177 planned to join the cct. At 0955:15 the C177 was shown in the PA28's 1 o'clock position, at a range of 0.2nm, crossing from R to L. The FISO advised the PA28 pilot that the C177 may join in the cct ahead. At 0955:26, radar recording showed the tracks of the 2 ac to have just crossed with the C177 at alt 1400ft [Hgt 1300ft], < 0.1nm W of the PA28. At 0955:32, the PA28 pilot reported that the C177 had just passed over him. The FISO advised the C177 pilot that the PA28 was now behind him, with 3 ac ahead in the cct. At 0955:55, the C177 was shown late DW at alt 1300ft [hgt 1200ft] with the distance between the 2 subject ac increasing to 0.4nm as the tracks diverged.

[UKAB Note (6): The radar recording showed the C177 tracked 305° from the CPA, crossing the RW14 LHC base leg halfway between the end of the DW leg and the start of final at 0956:38, before commencing a L turn on to final.]

The Manual of Flight Information Services, CAP410 Part B, Chapter 1, Page 1, Paragraph 2.1, states:

'The FISO has the following specific responsibilities:

- a) issuing information to aircraft flying in the aerodrome traffic zone to assist the pilots in preventing collisions.'

...

Additionally, Chapter 1, Page 4, Paragraph 7.4 'Joining circuit', states:

'Landing direction and traffic information on known traffic flying within the ATZ and the immediate surrounding local area is normally passed when the aircraft is still some distance away from the ATZ. This enables the pilot to determine if it is safe to proceed with the flight as planned and to intelligently position the aircraft in relation to other aircraft in the circuit pattern. FISOs are not to instruct pilots to join the circuit at a particular position. Furthermore, FISOs may not allocate a landing order, e.g. 'Report final number 3'. The pilot must be told that there are two aircraft ahead in the circuit and it is up to the pilot to position himself accordingly. Although there is a legal requirement for pilots to report entering and leaving the ATZ (Rule 45 of the Rules of the Air Regulations), this is not the case for other reports in the circuit. Any requests for position reports downwind, final etc., for the purposes of passing traffic information, only have the status of a request although it is expected that most pilots will comply.'

Both aircraft were operating within the ATZ, in receipt of a service from the FISO. CAP774, UK Flight Information Services, Chapter 1, Page 1, Paragraph 2 'Flight Outside Controlled Airspace', states:

'Within Class F and G airspace, regardless of the service being provided, pilots are ultimately responsible for collision avoidance and terrain clearance, and they should consider service provision to be constrained by the unpredictable nature of this environment. ...'

The FISO passed sufficient information to the C177 pilot to enable him to intelligently position his ac in relation to other ac in the cct. Rather than making the standard join overhead, the C177 pilot initially positioned NW of the airfield at 1500ft against the flow of the cct pattern. He then turned E and completed a 180° RH turn to join DW, converging with the PA28 already DW. The Airprox occurred when the C177 joined the cct in a manner that caused the pilot of the PA28 to be concerned about the proximity of the C177 to his own ac.

[UKAB Note (7): The Rules of the Air Regulations 2007 (incorporating The Rules of the Air (Amendment) Regulations 2009), Schedule 1, Section 4, Paragraph 12 state:

12 (1) Subject to paragraph (2), a flying machine, glider or airship flying in the vicinity of what the commander of the aircraft knows, or ought reasonably to know, to be an aerodrome shall:

(a) conform to the pattern of traffic formed by other aircraft intending to land at that aerodrome or keep clear of the airspace in which the pattern is formed; and

(b) make all turns to the left unless ground signals otherwise indicate.

(2) Paragraph (1) shall not apply if the air traffic control unit at that aerodrome otherwise authorises.

This extract is also published in CAP393, Air Navigation: The Order and the Regulations, section 2, section 4, para 12.]

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, radar video recordings, a verbal report from the air traffic controller involved and reports from the appropriate ATC and operating authorities.

Members agreed unanimously that the C177 pilot did not integrate with the cct traffic in his attempt to join the A/D and consequently did not conform to the pattern of traffic, as required by Rule 12 of the RoA. The members opined that the C177 pilot did not expedite his recovery by attempting to join DW and that had he flown a standard O/H join, as recommended in the UK AIP, he would not have conflicted with 3 ac DW in the cct pattern, missing the PA28 by the narrowest of margins.

A controller member observed that the PA28 pilot could usefully have turned his SSR transponder on, squawking a VFR conspicuity code, with Mode C selected. While the use of SSR would not have had any bearing on this Airprox, had the ac joining the cct been fitted with some type of conflict avoidance system the use of SSR may have provided critical situational awareness. Members agreed that, as a general rule, SSR with Mode C should be selected on unless there is a positive and specific reason to do otherwise.

The CAA ATSI Advisor commented that had the PA28 pilot reported an Airprox on RT at the time of the incident, or advised the FISO of his intention to do so after landing, then the Board would have had better quality information available to them. He also made the general point that the sooner an ATS is advised of the intention to file an Airprox, the better the quality of information that can be captured.

On the question of risk, The Board were of the opinion that there was sufficient evidence from the radar replay and pilot reports to support the contention that an actual risk of collision existed. The

PA28 pilot saw the C177 too late to take avoiding action; effectively this was a non-sighting. The C177 pilot reports seeing the PA28 behind him and increasing speed to increase the separation; however, this was at, or shortly after, the CPA where his change of speed was too late to affect the separation at the CPA. Therefore this was also effectively a non-sighting. Since no avoiding action was taken by either pilot before the CPA, the separation was entirely fortuitous, meriting the Board's unanimous assessment of Risk Category A.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The C177 pilot did not conform to the traffic pattern, iaw Rule 12 of the RoA, and flew into conflict with the PA28 downwind, which he had not seen.

Degree of Risk: A.