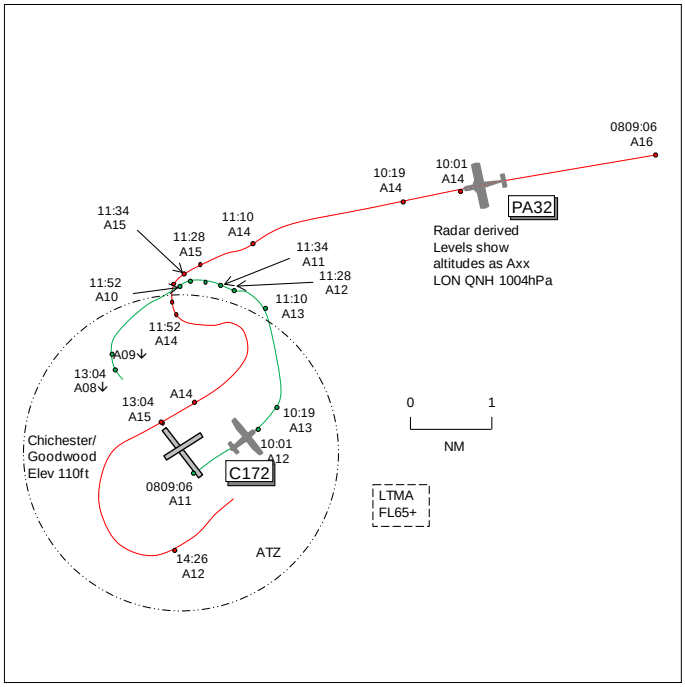
AIRPROX REPORT No 2012088

Date/Time:	28 Jun 2012 0812Z	
Position:	5054N 00045W (2·1 nm N Chichester/Goodwood - elev 110ft)	
Airspace:	LFIR/ATZ	(*Class: G*)
	Reporting Ac	*Reported Ac*
Type:	C172	PA32
Operator:	Civ Pte	Civ Pte
Alt/FL:	1100ft↓ QFE (1002hPa)	NR QNH (1002hPa)
Weather:	VMC CLBC	VMC NR
Visibility:	10km	
Reported Separation:	100ftV/500m H	Not seen
Recorded Separation:	400ft V/0·4nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE C172 PILOT reports en-route to Chichester/Goodwood, VFR and in communication with Goodwood Information on 122·45MHz, squawking 7000 with Mode C. The visibility was 10km flying 1400ft below cloud in VMC and the ac was coloured white/blue with strobe, nav and anti-collision lights all switched on. He had joined the cct to RW14 LH and had just established on base leg. Heading 230° at 80kt and descending through 1100ft QFE 1002hPa he saw a low-wing retractable-undercarriage ac appear in his 1-2 o'clock range 600m, slightly above at about 1200ft, and crossing from R to L. He turned R to manoeuvre behind it to increase separation, estimating it passed 100ft above and 500m ahead with a low risk of collision. He immediately reported his sighting of the ac to the FISO on RT and the FISO tried to identify the other ac. He continued to watch the ac out to his port side on a track of 120° assessing there was no further risk of collision so he continued the cct to land. After landing and while taxying in he saw the other ac make an approach to RW24, the RW he was about to cross. At the time of the Airprox the RT was busy with 3 fixed-wing ac and 1 helicopter on the frequency. He assessed the risk as low.

THE PA32 PILOT reports inbound to Chichester/Goodwood, VFR and was unaware of being involved in an Airprox. He arrived at Goodwood and thought he was told to call downwind and final for RW24. When he called final for RW24 he was told to overshoot and make a LH cct for RW14. When he called final RW14 he was told to land at his discretion. He saw a number of ac but did not recall seeing the reporting C172. After landing he heard the FISO say that there were 5 ac about to join O/H.

THE GOODWOOD FISO reports the PA32 pilot called inbound from the N and requested airfield information. RW14 LH cct was in use with multiple event traffic inbound and joining. The PA32 pilot read back the details, in particular RW14 in use, and confirmed he would report O/H. The C172 was already in the cct at the time and reported downwind. When late downwind the C172 pilot reported a 'retractable ac' at around 1100ft (below O/H join height of 2000ft) in his 12 o'clock and he commenced an abrupt turn away from the cct. The ac, at the time, was unidentified and visual sight of it was lost momentarily from the VCR. The flight was asked to identify itself on frequency but no reply was received. The PA32 pilot then reported O/H and shortly after this an ac was observed to be turning tight R base, he thought, for RW24 opposite direction to the RW14 cct. This ac was

identified as the PA32 and he immediately informed the pilot of his error and conflict with the RW14 cct traffic. The PA32 pilot commenced a go-around on RW24 with hesitation and while in the climbout the pilot was asked if he was visual with RW14 as the ac was now tracking parallel to RW14 to the SE; the pilot replied "negative". Assistance was provided and the ac positioned crosswind and continued the cct without further incident. Shortly afterwards the pilot of the C172 telephoned the Tower to comment on what had happened and that he was unhappy with the actions and airmanship of the PA32 pilot.

ATSI reports that the Airprox occurred at 0811:38 UTC, 2·1nm N of Goodwood Airfield, within Class G airspace and just outside the Goodwood ATZ. The Goodwood ATZ comprises a circle radius 2nm, centred on the midpoint of RW14R/32L and extending to a height of 2000ft above aerodrome level (elevation 110ft).

The C172 was inbound VFR from Haverford West, with an approved slot time and had joined the visual cct for RW14 LH. The PA32R was inbound VFR from Stapleford Airfield, with an approved slot time and was joining the cct.

The Goodwood ATSU was providing a FISO service, callsign Goodwood Information. The special event 'Festival of Speed' was promulgated by NOTAM L2657/12, from 0600 UTC on 28th June 2012 until 1830 UTC on 1st July 2012. The event arrangements and pilot instructions were accessible via the internet. Slot numbers and times were issued to arriving ac in accordance with the PPR requirements. The special event arrangements included instructions for arriving fixed-wing pilots and states:-

> '**All runways**
> Arriving fixed-wing aircraft should join overhead Goodwood Aerodrome not below 2000ft Goodwood QFE…
> Pilots should descend on the circuit 'deadside' to join crosswind not below 1200ft Goodwood QFE…
> **Warning-Helicopter Arrivals/Departures**
> Pilots are warned that multiple helicopter arrivals 'not above 900ft Goodwood QFE' will take place simultaneously via the 'Trundle Gate' Goodwood Racecourse Heliport…'

The AIP entry for Goodwood EGHR AD 2.22 – Flight Procedures, states:

> 'Fixed-wing circuit height 1200 ft or as directed by ATS.
> 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.'

ATSI had access to RT recording and NATS area radar recordings together with written reports from both pilots and the Goodwood FISO. CAA ATSI considered the FISO's workload was high with additional ground movement instructions and advice due to the special event. The RT recording at Goodwood was not continuous and consequently was adjusted by a few seconds to match the radar data. Radar altitude indications were based on the London QNH 1005. Goodwood QNH 1005, QFE 1002.

In the absence of Goodwood weather, the METAR for Shoreham is provided:-
METAR EGKA 280750Z 12012KT CAVOK 22/19 Q1005=

The ATSU reported that both pilots had booked in by telephone in accordance with the requirement for PPR. The 2 pilots were allocated slot times and advised about aerodrome conditions, RW in use and cct direction. Wx and pressure information is provided if requested by the pilot as an unofficial observation.

Arriving fixed-wing ac were positioning O/H at 2000ft for the standard O/H join for RW14 LH traffic pattern. Helicopter arrivals were routing E of the Trundle Gate not above 900ft and then via the RW24 designator numbers to the helicopter parking areas.

The C172 was inbound to Goodwood and at 0805:50, reported O/H.

At 0806:08, the PA32 pilot contacted Goodwood Information. Radar shows the PA32, 14nm NE of Goodwood. The FISO replied that RW14, LH cct was in use, with QFE 1002. The pilot was asked to report O/H. The PA32 pilot acknowledged with: "14, LH cct 10022, report overhead". The PA32 pilot's written report indicated that he was using a QNH (rather than QFE) setting of 1002 but no level was specified.

(It was noted that the 2 in 10022 was repeated twice. It was considered a remote possibility, that the pilot may have set 1022 on his altimeter, which would then have indicated to the pilot a level of approximately 2000ft, being 540ft higher than that reported by Mode C and indicated on the radar. However there is no evidence to confirm that this was the case.)

At 0809:06, radar shows the C172 crosswind at altitude 1100ft, with the PA32 6·9nm NE of the airfield tracking towards the N of the airfield and indicating an altitude of 1600ft.

At 0811:10, as the C172 reached the end of the downwind leg indicating 1300ft, the PA32 is shown 0·9nm ahead of the C172 at 1400ft crossing from R to L. The C172 then turned onto base leg.

At 0811:28, the C172 shows on base leg at 1200ft and 2·1nm N of the airfield, just outside the ATZ. The PA32 is shown 0·5nm NW of the C172, on a wide L base at 1500ft. At this point the C172 pilot reported sighting a retractable ac just ahead, turning onto final at an estimated height of 1100ft.

[UKAB Note (2): The next sweep at 0811:34, the CPA, shows the C172 having turned slightly R to pass behind the PA32 the ac separated by 400ft vertically and 0·4nm horizontally. This separation remains over the course of the next 3 radar sweeps with the PA32 in a L turn as the C172 tracks approximately WNW'ly.]

The FISO attempted to ascertain the identity of the retractable ac by asking the PA32 for a position check. The PA32 pilot reported having just passed O/H but unable to make a call because the radio was busy.

At 0811:52, radar shows the PA32 had entered the ATZ at 1400ft, in a L turn 1·7nm N of the airfield. The PA32 continued E and then turned onto a SW'ly track towards the airfield.

At 0813:04, the PA32 is shown crossing the RW14 threshold at 1500ft and the PA32 pilot again reported O/H. (standard join is at 2000ft)

At 0814:26, an inbound EC120 helicopter is shown approaching the RW24 numbers and the PA32 is shown turning downwind for a LH pattern RW24. At this point the PA32 pilot reported "downwind 24" (the incorrect RW). However this was not detected by the FISO who asked the PA32 pilot to report final.

At 0815:58, a second helicopter is shown 2nm NE of the airfield tracking towards the 24 numbers. The PA32 is also shown on L base for RW24 turning towards final.

At 0816:12, the PA32 is shown at 800ft, on the final approach for RW24, with the helicopter 0·2nm behind the PA32 at 600ft. The PA32 pilot reported final RW24 and this was initially missed by the FISO who asked the ac to standby. Shortly afterwards the FISO advised the PA32 flight to land RW14 at discretion with wind 140° at 18kt. The PA32 pilot indicated that he was lined up on RW24. The PA32 flight was instructed to go-around and then to reposition LH for RW14. At 0818:40 the PA32 pilot reported final and landed without further incident.

The ATSU has indicated that after reviewing the ATS workload associated with such events, the approved act movement rate of 7 ac per 15min has been reduced to 5 ac per 15min.

The PA32 approached the airfield and into conflict with the C172 which was on L base for RW14. The PA32 should have made a standard O/H join at 2000ft for whichever RW was notified in use as specified in the AIP and special event arrangements:

> 'Arriving fixed-wing aircraft should join overhead Goodwood Aerodrome not below 2000ft Goodwood QFE….'

The FISO passed a QFE of 1002 and the PA32 pilot's read back of the pressure setting was incomplete, repeated as 10022. In a busy operational environment the read back most likely sounded correct to the FISO and it was only with the benefit of replay that this was highlighted. Had the pilot used a setting of 1022, his altimeter would have indicated approximately 2000ft. The pilot's written report indicated 1002 was being used as a QNH value and in the absence of any other information the possibility of 1022 being used was considered remote.

It was not clear why the pilot, having acknowledged, 14 LH cct, subsequently considered that RW24 was in use. The 2 helicopters inbound at the time were advised to report crossing the 24 numbers but it was considered unlikely, due to the timing of the calls, that these references to 24, could have misled the pilot.

After passing the C172, 2·1nm N of the airfield, the PA32 pilot then reported O/H the airfield. It is considered likely that the PA32 pilot may have been or became disorientated. After the Airprox occurrence, the PA32 then entered the ATZ at an altitude of 1400ft in the vicinity of the L base and final approach for RW14. The PA32 turned E and then SW to cross the RW14 threshold and then positioned LH for RW24. The PA32 pilot incorrectly positioned and reported downwind for RW24. The FISO did not detect the incorrect position report and responded by asking the PA32 pilot to report final. This will have served to reinforce the PA32 pilot's mistaken belief that RW24 was in use. The FISO was not aware of the PA32's position at any stage of the ac's approach, until it became apparent that the PA32 was on short final for RW24.

The considerable workload of the FISO associated with the busy special event, together with the added complexities of parking and managing ground movements was a significant factor in the FISO's late detection of the PA32 pilot's QFE read-back error and the incorrect call downwind. 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.'

Page 4, Paragraph 7.4, 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 39 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 ac were operating just outside the ATZ, in receipt of a service from the FISO. CAP774, Chapter 1, Page1, Paragraph 2, 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 Airprox occurred when the PA32 pilot did not follow the guidance to make a standard join O/H at 2000ft but joined the cct in a position that caused the pilot of the C172 to be concerned about the relative position and proximity of the PA32.

ATSI Recommendation:

CAA ATSI are content with the action taken by the ATSU to reduce workload during the period of special events by reducing the planned movement rate from 7 movements to 5 movements each 15min.

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 video recordings, reports from the FISO involved and reports from the appropriate ATC authorities.

Members initially discussed the role of a FISO, who is permitted to control ac on the ground but limited to passing information to airborne flights. The special events instructions and UK AIP both recommend flights execute a standard O/H join to enable safe integration into the cct pattern; however, the FISO was not allowed to enforce this on the RT. Members again reiterated the advantage of carrying out the O/H procedure particularly when a pilot is unfamiliar with the airfield or if the cct is active. That said, it was clear that the PA32 pilot was intending to join O/H but he had routed into the ATZ too low at about 1400-1500ft (vice a minimum of 2000ft on Goodwood QFE) and manoeuvred through the live side of the RW14 cct whilst erroneously joining for RW24 having previously read back RW14. In doing so he did not conform to the established traffic pattern and flew into conflict with the C172 which he did not see which had caused the Airprox. It was unclear why the PA32 pilot had reported O/H when the FISO asked for his position post Airprox as radar showed the ac 1·7nm N of the airfield but he had then correctly called O/H just over 1min later.

The C172 pilot was concerned when established on base leg to see the PA32 appear in his 1-2 o'clock about 600m ahead and about 100ft above crossing from R to L; he turned R to increase separation estimating the PA32 passed 500m ahead and 100ft above. Although the C172 passed unsighted to the PA32 pilot, the Board were content that the visual sighting by the C172 pilot and his prompt action taken had been enough to ensure that any risk of collision had been quickly and effectively removed.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA32 pilot did not conform to the established traffic pattern and flew into conflict with the C172, which he did not see.

Degree of Risk: C.