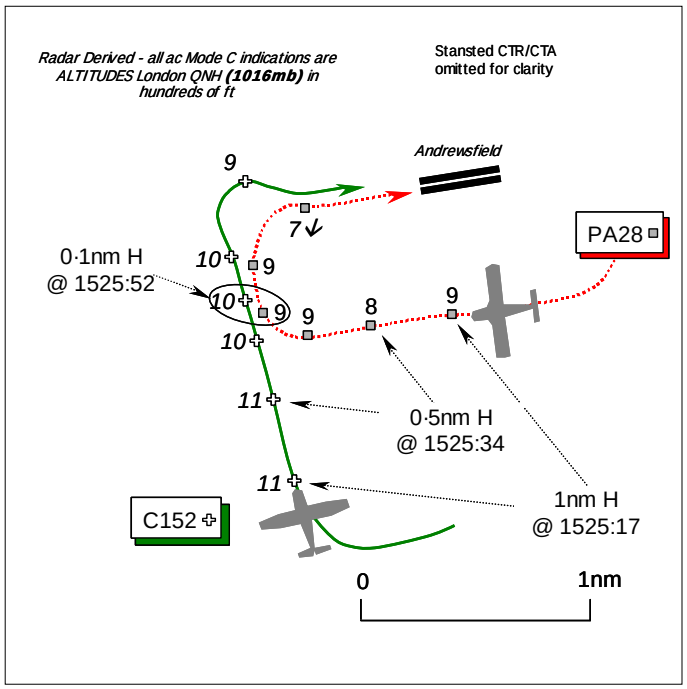
AIRPROX REPORT No 2010091

Date/Time: 10 Jul 2010 (Saturday) 1525Z

Position: 5153N 00026E (Andrewsfield A/D – base leg RW09RHC – elev: 286ft.)

Airspace: Andrewsfield ATZ (*Class:* G)

	Reporting Ac	*Reported Ac*
Type:	Cessna 152	PA28B
Operator:	Civ Trg	Civ Pte
Alt/FL:	600ft QFE (1006mb)	600ft QFE (1005mb)
Weather:	VMC	VMC Sky Clear
Visibility:	>20nm	>20km
Reported Separation:	Nil V/150m H	Not seen
Recorded Separation:	100ft V/0·1nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE CESSNA 152 PILOT reports that he was instructing a student flying in the cct at Andrewsfield and in communication with Andrewsfield RADIO A/G Station. He occupied the RH seat as the instructor, with his student the PF in the LH seat. The visibility was excellent, but there was significant thermal and mechanical turbulence from a strong southerly wind and, especially on base leg, there were noticeable updrafts.

After take-off and one cct on RW27, the runway-in-use was changed to RW09. Ccts at Andrewsfield are RH and are unusually wide for noise-abatement reasons. The downwind leg of the RH cct for RW09 (RW09RHC) takes ac S of the A120 dual-carriageway. The pilot of a PA28 called for joining instructions and stated that his was the first of 7 ac arriving from Peterborough. 'Joining instructions' [aerodrome information] for RW09RHC were given to the PA28 pilot by Andrewsfield RADIO and subsequently repeated. After his student called downwind for RW09RHC, the PA28 pilot called joining overhead but despite scanning opposite runway ends and beyond he was unable to see the ac. The PA28 pilot called downwind and again he could not locate the ac, which concerned him as visibility was excellent. On base leg, about to turn final at 70kt descending through 600ft QFE (1005mb) with 20º of flap, he spotted the PA28 in his immediate R 3 o'clock at the same height, [a telephone call with UKAB Staff suggested this was at a range of about 200m] on what would have been the downwind leg of a close-in cct to RW09RHC. Initially he thought the PA28 would position behind his C152 and he started to make a call on the RT requesting the PA28 pilot's intentions. He noted in hindsight that he got the registration wrong and the actual phraseology he used was very ambiguous, so all in all it was a rather pointless call. As he called he realised that the PA28 pilot had not seen his C152 as the PA28 had started to turn onto final. If he had continued his approach the two ac would have been at the same place at the same time, so he took control from his student increased power and turned L away from base leg. As he had lost visual contact with the PA28 he then turned R, back onto final. At this point the PA28 was now on short final about to land. Once they were re-established on final, he commenced a go-around for another cct and reported the Airprox on the RT. During this cct two more ac of the visiting group called at various positions in the cct, but he was unable to locate them at the stated points. So he made a rather unprofessional radio call '[C152 C/S] downwind and NOT visual with any other traffic'.

After landing he met with the pilot of the PA28, who was very apologetic. It was his first visit to Andrewsfield and had relied on his co-pilot/front-passenger, a licensed pilot, who had previously visited Andrewsfield on several occasions. The PA28 pilot agreed that as P-I-C he should have checked the cct details. The PA28 pilot said he had consulted his flight manual before flight, but, unfortunately, the page for Andrewsfield does not detail the cct location. The PA28 pilot had not seen his C152 at all whilst concentrating on the runway, or noticed their RT calls, even though the calls had been answered by Andrewsfield RADIO.

Subsequently, he checked both the UK AIP and a popular chart manufacturers VFR manual; neither publication provide much detail on the cct location, but both state that Andrewsfield is strictly PPR by telephone only.

THE PA28B PILOT reports that he contacted Andrewsfield RADIO about 10nm out to obtain aerodrome information and was told the RW in use was RW09R [two 18m wide parallel runways are used by day], RH cct, with the QFE 1005mb. He reconfirmed the RW in use and then announced his intention to join crosswind from the N. He approached Andrewsfield from the N, taking care to remain clear below the 1500ft base of the Stansted CTA and shortly before reaching the aerodrome called that he was approaching crosswind for RW09, which the A/G operator acknowledged. Completing the pre-landing checks and selecting the first stage of flap, he adjusted the power to maintain cct height of 700ft and a speed of 100kt. Upon reaching crosswind he announced on the RT, '[PA28B C/S] crosswind for 0-9 right hand', which again was acknowledged by Andrewsfield RADIO. His passenger, an experienced pilot who had obtained the PPR briefing from Andrewsfield earlier, assisted him with positioning advice. Turning downwind A/G acknowledged his '..downwind 0-9 right hand' RT call and, as advised by his passenger, he continued downwind aiming for a lake to the SW of the aerodrome that he said would be the correct place to turn base leg. He took a good look around but the only other ac he saw was a distant airliner. Repeating his pre-landing checks and approaching the lakes, he selected the second stage of flap adjusting power to maintain 100kt at 700ft and turned base leg calling on RT '[PA28B C/S] base 0-9'. The wind was from the S necessitating a short base leg and almost immediate turn onto final. During the turn onto final, another pilot [the C152 instructor] announced his ac registration, called going around and reported an Airprox. Since he could not see the C152, he decided the safest course of action would simply be to continue his approach to land and did so. During the approach from the N and during the whole of the cct he did not hear any transmissions from any other ac.

After the C152 landed he sought out the pilot and discussed the event with him. The C152 pilot identified himself as an instructor based at Andrewsfield whose student had been the PF. The C152 pilot informed him that the correct cct at Andrewsfield has the downwind leg to the S of the A120 whereas his PA28 was N of that line; this had confused the C152 instructor about his PA28's position – he said that in spite of looking for the PA28 the C152 instructor could not see it. It seemed the C152 instructor had heard all the RT calls but stated that he had only seen the PA28 at the very last moment while on his base leg and had to take avoiding action. He also said that pilots new to Andrewsfield often fly too close in and that PPR conversations often do not cover this point.

He opined that there are some interesting contributory factors to this Airprox:

> His passenger reported that the PPR request discussion had not included any information that ccts should be S of the A120 dual carriageway.
>
> He has an up-to-date plate for Andrewsfield from a major purveyor of aeronautical information, dated 25 Feb 98. It does not show the preferred cct pattern or the A120 dual carriageway.
>
> His passenger also has a plate, from a different supplier, that specifies PPR is only required for non-radio fitted ac and makes no mention of a preferred cct pattern.

Accepting that he was distracted whilst positioning to avoid causing a noise nuisance to the surrounding villages, this led to less effective lookout. The southerly wind made the turns onto base

leg and final tighter than normal and this caused him to crane his neck to see the RW position, again hindering his lookout.

Following this Airprox he considers:

He will be much more cognisant of the danger of other ac being present in the cct who are not transmitting and will not permit other pressures to distract him from his lookout again. Moreover, when ac commander, he will take responsibility for dealing with PPR next time.

He would also like to point out that the plate for Andrewsfield from the major purveyor of aeronautical information should be updated to show the preferred cct and the current position of the dual carriageway. If this had been shown, he would have followed it. Similarly, the plate from the other supplier needs to be updated.

PPR discussions should emphasise this preferred cct. To be more than a mile away from the aerodrome at a height of only 700ft does not feel like a safe procedure and he did not believe any pilot would choose this in favour of a closer cct given the required cct height - an engine failure at 700ft downwind would result in an emergency landing with little prospect of being able to turn into wind.

The C152 instructor was aware that pilots new to Andrewsfield often make the mistake of flying their downwind leg N of the A120. In these circumstances, he would have expected any experienced pilot who was at all concerned to have made a radio call to confirm his position. In fact any call from him would have alerted him to the presence of another ac in the cct and thereby avoided this Airprox.

His aeroplane has a white, grey and red livery; the red fin strobe and white wingtip HISLs were on.

UKAB Note (1): The UK AIP at AD 2-EGSL-1 – 3 notifies the Andrewsfield Aerodrome Traffic Zone (ATZ) as a circle radius 2nm centred on the midpoint of RW09/27, extending from the surface to 2000ft above the aerodrome elevation of 286ft. An A/G Station - C/S Andrewsfield RADIO - operates on 130·550MHz.

UKAB Note (2): The UK AIP at AD 2-EGSL AD 2.22 — FLIGHT PROCEDURES, specifies:

a. Circuit height 700ft QFE, normal direction: Runway 09/27 - RH. Microlight circuits at 500ft QFE inside the normal circuit pattern.

b. i. Andrewsfield Local Flying Area (LFA) and Procedures: Part of the Andrewsfield ATZ (to the northwest of the Aerodrome) lies within the London Stansted CTR and the remainder lies partly within and partly beneath the London Stansted CTA. Subject to any listed restrictions, flights without reference to Stansted ATC may be made within the confines of the LFA [which exists within the same lateral limits as the ATZ with a vertical limit of 1500 ft QNH.]

UKAB Note (3): The Stansted 10cm Radar recording illustrates this Airprox clearly. The C152 is shown steadying on a base leg for RW09RHC at 1100ft London QNH (1016mb) – equating to a cct height of 700ft – with the PA28 downwind indicating 900ft London QNH (1016mb) 1nm away but inside the pattern established by the C152. The ac close to a horizontal separation of 0·2nm, where the PA28 turns R onto a parallel base leg to the C152 and at 1525:52, is in the latter's 4 o'clock at the CPA of 0·1nm/100ft. Thereafter, the PA28 turns inbound onto final as the C152 pilot executes the reported delaying manoeuvre before following the PA28 onto final and then executing a go-around.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac and radar video recordings.

The Board recognised that A/G Stations are not required to record their RT frequencies and it was not possible to determine independently what actual RT transmissions were made during the period of this Airprox, or by whom. There was no indication that the C152 might have been mentioned by the A/G Operator at some stage, moreover, the PA28 pilot reported that he heard no other transmissions that indicated to him that there was another ac in the cct, until he had overtaken the C152 and had turned onto final. Nevertheless, the PA28 pilot had called at a range of 10nm and he should have been able to hear several RT calls from the C152 pilots, who could potentially have executed two ccts in that period. The C152 instructor had emphasised that his student had made a downwind call before the PA28 pilot called joining. Therefore, it was not clear why the PA28 pilot had not heard that transmission, but there was no reason to suppose that the C152 instructor would not have been ensuring that his Student was making the requisite transmissions correctly during their cct. Pilot members emphasised that it was the responsibility of the pilot joining the circuit at uncontrolled aerodromes to look out and listen for other ac already circuiting to ensure their safe integration into the cct.

Conversely, the C152 instructor pilot was aware of the PA28 joining the cct from the latter pilot's transmissions and had been endeavouring to spot the ac, but it might have been quite difficult to see the PA28 astern, whilst flying the downwind leg and would only have been clearly in the C152 instructor's field of view when they turned onto base-leg. The PA28 pilot should have been looking out for other ac in the cct and the C152 should have been visible to him in the clear sky. Whilst pilot Members recognised that the PA28 pilot was unfamiliar with Andrewsfield and his focus would have been on the RW to his R, the radar recording clearly illustrated the geometry of this encounter and that the C152 was in the PA28 pilot's field of view. Regardless of any RT calls, as there may well have been ac joining non-RT, the C152 was already established in the aerodrome cct and was there to be seen by the PA28 pilot who did not conform to the pattern of traffic formed by the ac ahead of him. The Members agreed unanimously that part of the Cause was that the PA28 pilot did not integrate into the circuit pattern established by the C152.

The C152 pilot had mentioned that he had not seen the PA28 earlier because the visiting pilot had not flown the recommended cct pattern. Consequently, the C152 instructor had been looking in the wrong place for the other ac. The Board was briefed that the locally based C152 pilot had stressed his concern that the preferred cct pattern was not well promulgated and the foreshortened cct flown by the PA28 with the downwind leg N of the A120 dual-carriageway is often flown by visitors who are unfamiliar with the preferred cct pattern. Moreover it was suggested that the PPR brief was not always as detailed as it might be. Certainly the PA28 pilot reported that when his passenger had 'booked in' their ac with Andrewsfield before the flight and obtained the PPR, nothing was mentioned about the location of the cct pattern. Whilst the Andrewsfield website clearly showed the preferred pattern, the Board was briefed that the PA28 pilot was correct in stating that this cct was not replicated in either of the popular commercially available aeronautical guides and more importantly it was not detailed in the Andrewsfield entry within the UK AIP. Visiting pilots were expected to read the website prior to visiting it seemed, because of the LoA detailing the arrangements for the LFA within the Stansted CTR. The Board was briefed on the aerodrome details contained on the website entry which stated that:

> '…..we have developed a circuit pattern which is in agreement with everyone and we ask visitors wherever possible to fly these patterns.'

Although the PA28 pilot had not flown the non-standard pattern specified, it appeared to be optional. Nevertheless pilot Members stressed that this information on the non-standard cct should be promulgated in the AIP, which commercial aeronautical information suppliers would then extract from this authoritative source and include in their own publications as a matter of course. This Airprox illustrated clearly what can ensue when important procedural details are omitted from National aeronautical publications. If such details of the non-standard cct had been available in the UK AIP to the PA28 pilot there was no reason to suppose that he would not have followed it, but clearly he could not do so if it is not incorporated. The Board concluded therefore, that the other part of the Cause was that the non-standard Andrewsfield circuit pattern is not published in the UK AIP. Moreover, Members agreed unanimously that a Safety Recommendation was warranted; thus the

Board recommended that the aerodrome operator review the Andrewsfield AIP entry, with a view to including details of the stipulated non-standard cct pattern.

Turning to the inherent Risk, it was plain that the PA28 pilot was unaware of his proximity to the C152 less than 200m to port of his aeroplane as he flew his base-leg and then turned onto final ahead of it. It was only when the C152 instructor made his RT call that the PA28 pilot was aware of the other ac now astern. The C152 instructor had little time to react when the PA28 was first spotted in his 3 o'clock, about 200m away. However, his robust avoidance manoeuvre, confirmed on the radar recording, effectively giving way to the PA28 at close quarters was a wise decision, which the Members agreed unanimously had removed the Risk of collision.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: i. The PA28 pilot did not integrate into the circuit pattern established by the C152.

ii. The non-standard Andrewsfield circuit pattern is not published in the UK AIP.

Degree of Risk: C.

Safety Recommendation: The Aerodrome Operator is recommended to review the Andrewsfield AIP entry.