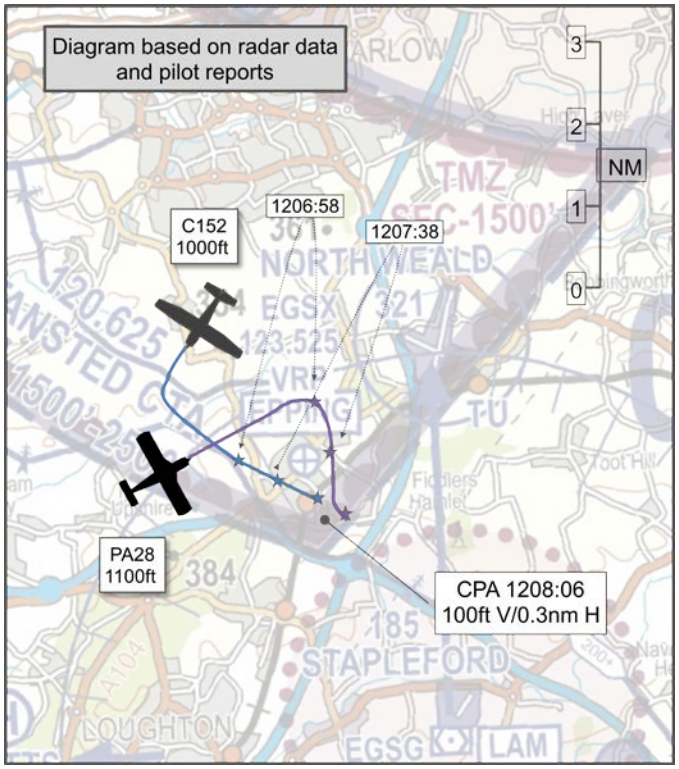
AIRPROX REPORT No 2017046

Date: 26 Mar 2017 Time: 1208Z Position: 5141N 00006E Location: North Weald

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	PA28
Operator	Civ Trg	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	North Weald	North Weald
Altitude/FL	1000ft	1100ft
Transponder	Mode A, C	A, C
Reported		
Colours	Maroon, White	White, Blue
Lighting	Nav	NR
Conditions	VMC	VMC
Visibility	10km	'Good'
Altitude/FL	1100ft	700ft
Altimeter	QNH (1024hPa)	NK
Heading	230°	020°
Speed	100kt	80kt
ACAS/TAS	Not fitted	Unknown
Separation		
Reported	0ft V/0.25nm H	400ft V/0.5nm H
Recorded	100ft V/0.3nm H	



THE C152 PILOT reports that he was early downwind in the North Weald circuit when he noticed an aircraft coming from the west, moving right to left, slightly above, about 2nm away and heading for the airfield. It passed by and he now considered it was no longer a factor, then when late downwind he saw that the other aircraft had turned around and was heading back towards them; it turned onto a base leg ahead of them, cutting in front then descending through their level and onto finals. He turned right to try to increase the spacing by going further downwind, but, on turning finals, realised that he would not get his approach in and so went around.

He assessed the risk of collision as 'Medium'.

THE PA28 PILOT reports that he called North Weald on the radio requesting joining instructions. He was told RW02 was in use and the pressure setting. On the second call he requested a left base join, was informed about other traffic downwind, and he noted that it was safe to join base leg. The traffic downwind said that it would extend downwind. Once stabilised on final approach he saw the other traffic turn in front of him from base, crossing his flight path before climbing away to the dead-side. The other pilot made some sarcastic remarks over the RT.

He assessed the risk of collision as 'None'.

Factual Background

The weather at Stansted was recorded as follows:

```
EGSS 261220Z AUTO 08016KT 9999 FEW029 14/07 Q1025
```

Analysis and Investigation

CAA ATSI

(Note: there is currently no requirement for an air/ground unit to record R/T, but North Weald have elected to do so. However at the time of this incident the system was voice activated and the time code was unverified. ATSI have attempted to align the R/T with the area radar recording. All references to time in this report are therefore estimated).

At 1204:20, the PA28 pilot requested joining instructions and had been advised by the Air/Ground (A/G) operator that it was RW02 left-hand and the QFE was passed. The PA28 pilot requested to route direct to left-base, but the A/G operator advised that there was another aircraft in the circuit, and so he elected to join downwind left-hand for RW02. The A/G operator then gave joining information to another aircraft.

At 1205:55 the C152 already in the circuit called downwind, which was acknowledged by the A/G operator who then went on to pass joining information to a further aircraft (Figure 1).

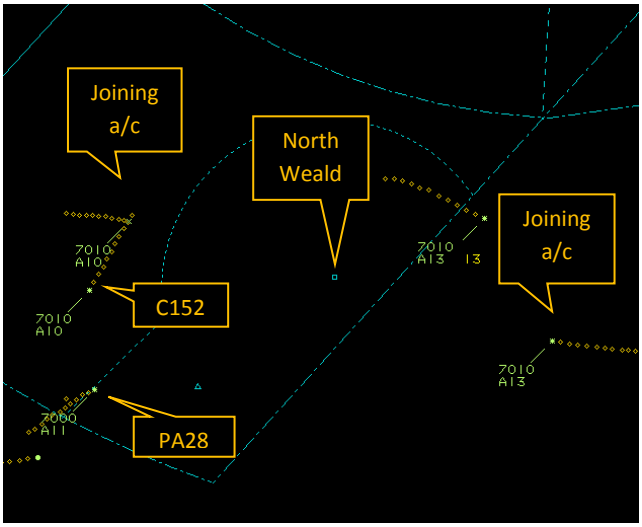


Figure 1 – 1205:55

At 1207:40 the PA28 pilot called downwind which was acknowledged by the A/G operator, but no traffic information was passed on the C152 ahead (Figure 2).

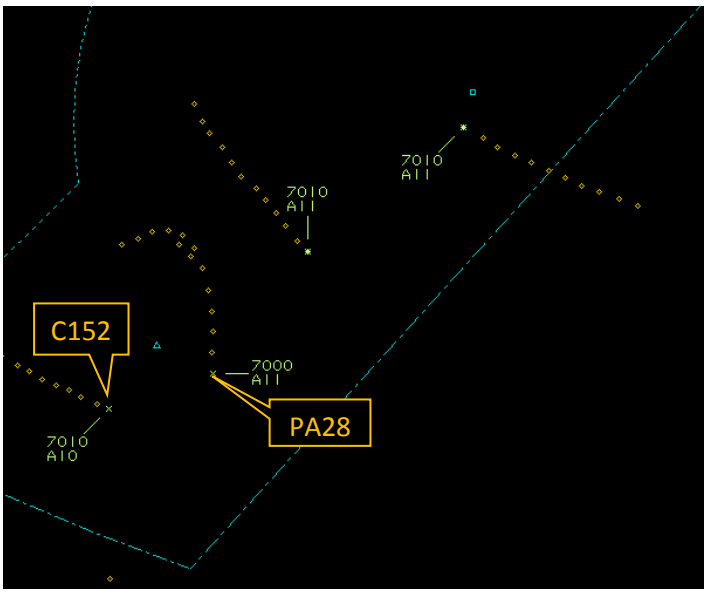


Figure 2 – 1207:40

At 1207:55 another aircraft called downwind, but again no traffic information on the C152 or the PA28 ahead was passed by the A/G operator. *(ATSI noted that the aircraft that had turned downwind, subsequently climbed back out of the circuit and repositioned for another join. It is ATSI opinion that although the pilot did not report doing so, it avoided increasing the complexity of the situation developing ahead).*

CPA was believed to take place at 1207:56 with the aircraft separated by 0.3nm laterally and 100ft vertically (Figure 3).

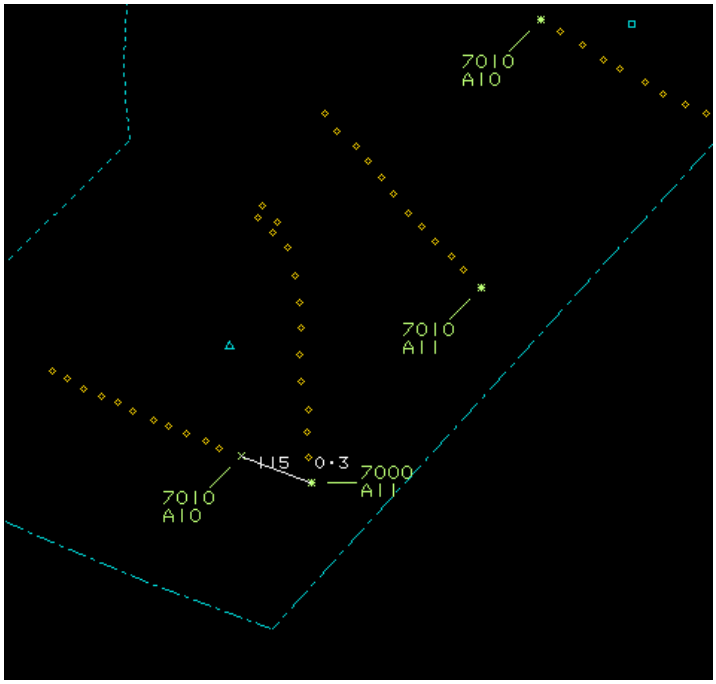


Figure 3 – 1207:56

At 1208:05 the C152 pilot reported on base-leg which was acknowledged by the A/G operator.

At 1208:23 the PA28 pilot reported on base-leg adding that they were Number 2 (for the approach), although effectively they were already physically ahead of the C152.

At 1208:40 the C152 pilot asked if (c/s) was a PA28 which was confirmed by the pilot of the PA28 themselves. The C152 acknowledged this and stated that they would make themselves Number 2 to that PA28. At this time both aircraft were again within 0.3nm laterally and 100ft vertically of each other.

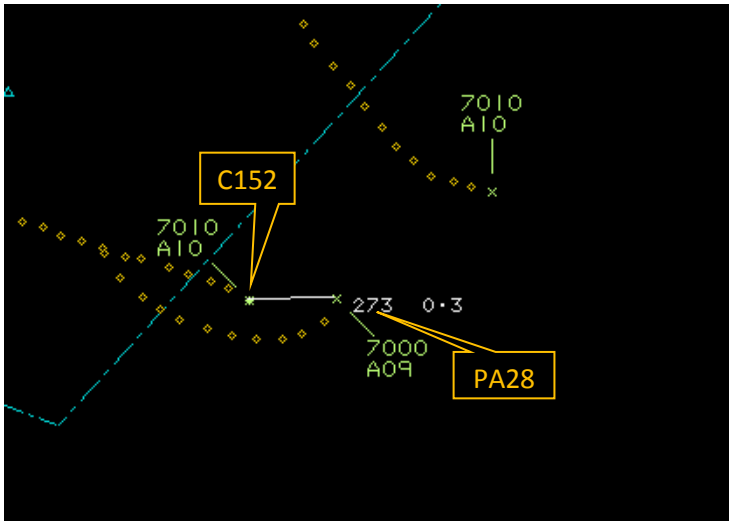


Figure 4 – 1208:40

At 1209:02 the PA28 pilot reported on finals, advising the A/G operator that they were Number 1. The A/G operator passed them the surface wind. Another aircraft then called downwind which was acknowledged by the A/G operator but no other traffic information was passed.

At 1209:46 the PA28 pilot reported final for the second time, and again was passed the surface wind. At 1210:32 the C152 pilot, who had not yet called finals, reported going around.

ATSI visited the airfield and the incident was reviewed with A/G operators on duty at the time of the visit, together with their supervisor. A short telephone interview was then conducted with the A/G operator who had been on duty on the day, but who had been unable to attend ATSI's visit to the airfield.

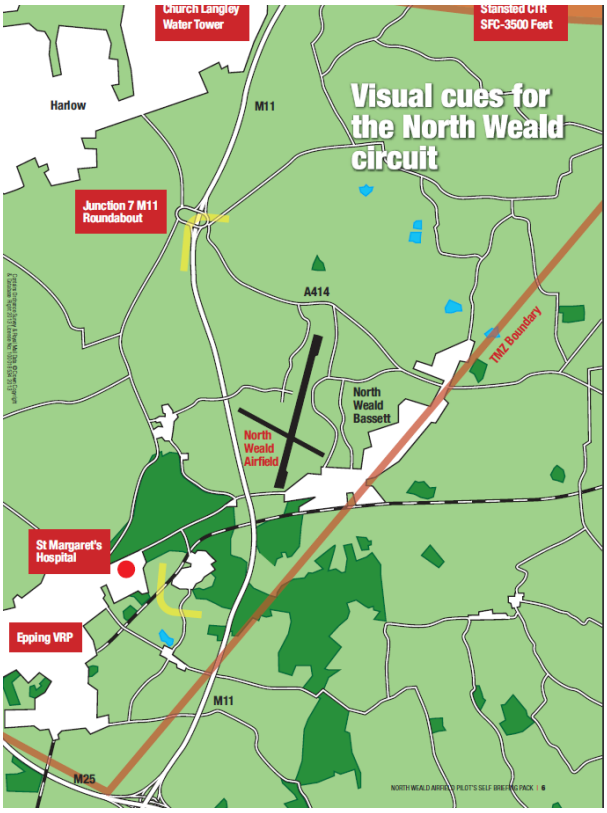


Figure 5
(from North Weald Pilot Information Pack)

On the area radar replay the C152 was observed to be flying a circuit which, compared with other aircraft, and in the opinion of A/G staff interviewed on the day, was considered to be outside the standard circuit, with its downwind leg being nearly 3nm from the airfield, as opposed to the recommended 1nm (Figures 5 & 6).

Figure 6
Comparative position of C152

When the PA28 pilot called downwind, the C152 was already on base-leg but had not yet reported in that position. The PA28 pilot reported on the RT that they were Number 2 when turning base-leg, but it is not clear which aircraft they were following (if any).

The lack of traffic information being passed by the A/G operator to the aircraft joining and within the circuit was discussed, and the A/G operator agreed that more information could have been passed. The size of the circuits being flown by the C152 meant that it would not have been where other pilots would have expected it to be, when position reports were being made. Both of these points would have reduced other pilots' situational awareness and impacted on their ability to integrate effectively within the circuit. The report from the pilot of the C152 suggests that they were visual with the PA28 from the point it had crossed through their downwind track, turning back towards them, before cutting in front of them on base-leg.

CAP452 – Aeronautical Radio Station Operator's Guide states:

Air Ground Communications Service (AGCS) is a service provided to pilots at specific UK at aerodromes. However, it is not viewed by the UK as an Air Traffic Service because it does not include an alerting service as part of its content.

AGCS radio station operators provide traffic and weather information to pilots operating on and in the vicinity of the aerodrome. Such traffic information is based primarily on reports made by other pilots. Information provided by an AGCS radio station operator may be used to assist a pilot in making a decision; however, the safe conduct of the flight remains the pilot's responsibility.

UKAB Secretariat

The C152 and PA28 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]. An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation[2].

Summary

An Airprox was reported when a C152 and a PA28 flew into proximity at 1208 on Sunday 26th March 2017. Both pilots were operating under VFR in VMC in the North Weald visual circuit and receiving an AGCS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

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

The Board first looked at the actions of the PA28 pilot and wondered how familiar he was with North Weald. Having called to join for left base leg and been told he couldn't do that, his modified join to position downwind was somewhat unusual and members felt that he may not have known where, geographically, to intercept the downwind track. That being said, he had been told that there was one already in the circuit, and was probably also trying to see where that aircraft was as he manoeuvred. Given the size of the C152 pilot's circuit, he probably didn't expect the 'one downwind' to be flying so far out, and the Board thought he had likely mis-identified the other joining traffic as the one downwind. This would explain why he called 'finals, number two', thinking he had positioned behind the one ahead, when in fact this was joining traffic that had chosen to re-position. Not realising that the C152 was actually ahead in its extended circuit, the PA28 pilot then inadvertently turned inside it. Nevertheless, despite the confusion about where the C152 was in the circuit, it was for the PA28 pilot to integrate correctly into the visual circuit and, if he was not sure about the position of the other aircraft, he should have asked over the RT.

Turning to the C152 pilot, members noted that there are very few guidelines available to pilots regarding the size of visual circuits. The pilot's self-briefing pack on the North Weald web-site gives suggestions for visual cues to help with positioning within the visual circuit, and the Board noted that the C152 pilot was well outside these references. The dangers of extending the downwind track were that following pilots end up extending further behind making the circuit ever increasing in size, or, as in this case, joining pilots can't see aircraft flying an extended circuit and therefore turn in ahead with the potential for conflict. This is particularly problematic at A/G airfields where pilots rely on others to fly standard procedures and make calls in the correct places. The GA member noted that the FAA had produced guidelines for the size of visual circuits, stating that a pilot should be able to land back at the airfield should he have an engine failure in the visual circuit. In contrast, he noted that the CAA did not produce such guidelines. Nevertheless, once established in the circuit, the C152 pilot could

[1] SERA.3205 Proximity.
[2] SERA.3225 Operation on and in the Vicinity of an Aerodrome.

have expected that any joining traffic would fit in around him, and would not have expected the PA28 pilot to turn in ahead of him.

The Board had a brief discussion about the AGOs at North Weald. In both this and another recent Airprox[3] they noted that the AGOs at North Weald were giving clearances and radio calls that could give pilots the impression that they were FISOs or controllers. An AGO is not able to issue instructions or clearances about what join to conduct, only to provide weather and traffic information; the responsibility for the safe conduct of flight in accordance with local procedures remains with the pilot. In this instance, traffic information from the AGO on aircraft in the visual circuit was lacking.

In determining the cause of the Airprox, the Board quickly agreed that it was that the PA28 had not integrated with the C152 already in the visual circuit. Notwithstanding, they thought that a major contributory factor was that the C152 pilot had flown a downwind track that was significantly wider than that published in the North Weald Pilots' Self Briefing Pack. Turning to the risk, because the C152 pilot was visual with the PA28 as it turned in front, the risk was assessed as Category C; safety had been degraded, but there was no risk of collision.

The Board were dismayed to read the report of sarcastic comments being made on the RT. This had been a common issue with another Airprox at North Wield, which indicated a degree of ill discipline by local pilots in making non-essential comments and gripes over the RT, a practice that could be off-putting to other pilots, and could block essential transmissions.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The PA28 pilot did not integrate with the C152.

Contributory Factor: The C152 pilot flew a downwind track which was significantly wider than that published in the North Weald 'Pilots' Self Briefing Pack'.

Degree of Risk: C.

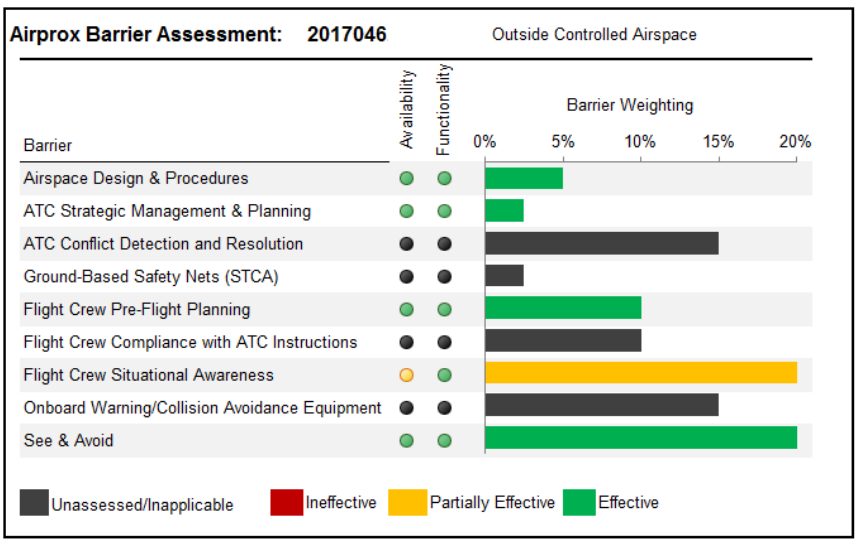
Safety Barrier Assessment[4]

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Crew Situational Awareness was assessed as **partially effective** because neither pilot seemed fully aware of where the other was.

Onboard Warning/Collision Avoidance System was assessed as **inapplicable** because neither aircraft was fitted with a CWS.

See and Avoid was assessed as **effective**.



[3] Airprox 2017020

[4] The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the UKAB Website.