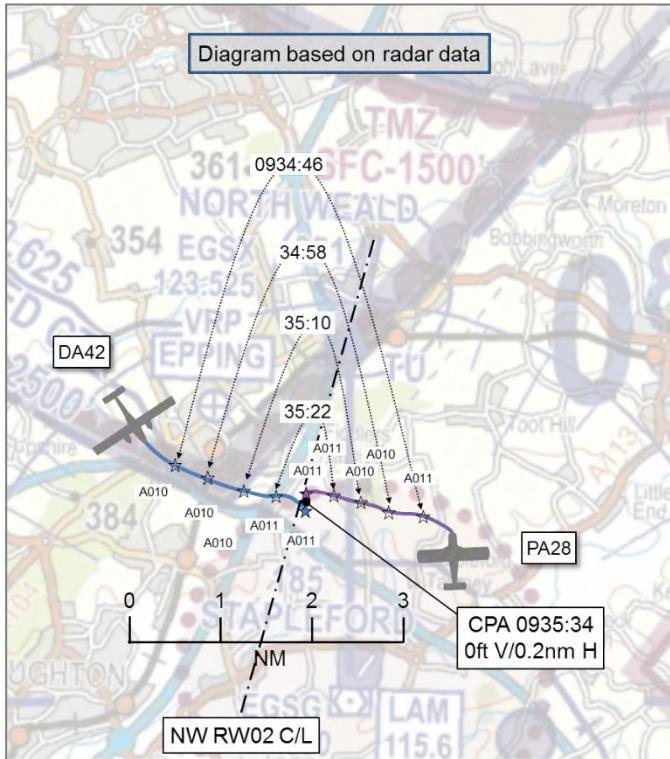


AIRPROX REPORT No 2018090

Date: 18 May 2018 Time: 0936Z Position: 5141N 00008E Location: 2.5nm SW N Weald airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	PA28
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	North Weald	Stapleford
Altitude/FL	1100ft	1100ft
Transponder	A,C,S	A,C,S
Reported		
Colours	White	Not reported
Lighting	Landing, ACL strobes	Strobes
Conditions	VMC	VMC
Visibility	10km	10km
Altitude/FL	1100ft	1200ft
Altimeter	QNH (1026hPa)	(1025hPa)
Heading	110°	210°
Speed	100kt	95kt
ACAS/TAS	TAS	Not fitted
Alert	TA	N/A
Separation		
Reported	50ft V/100m H	0ft V/500m H
Recorded		0ft V/0.2nm H



THE DIAMOND DA42 TWIN STAR PILOT reports that he was carrying out an asymmetric approach to North Weald. On turning base leg to land, he received a TAS TA and then saw a low-wing monoplane in his 12 o'clock at a similar level at a range of 200m. He immediately turned right as the other aircraft turned left towards them and passed behind. There was nothing to suggest that the pilot of other aircraft had seen them. It appeared to be in the left-hand circuit, turning crosswind to downwind, for RW03 at Stapleford.

He assessed the risk of collision as 'High'.

THE PIPER PA28 PILOT reports that he was starting the downwind leg for RW03 left-hand, within the Stapleford ATZ, when he saw the DA42 at a range of 500m, crossing from right to left. He provided a diagram of the incident (orientated north-down) at Figure 1.

He assessed the risk of collision as 'Medium'.

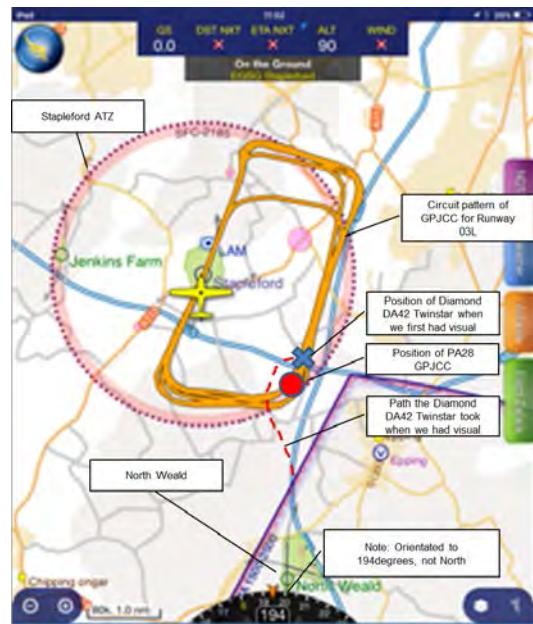


Figure 1 - PA28 pilot diagram.

Factual Background

The weather at Stansted was recorded as follows:

METAR EGSS 180920Z AUTO 34006KT 290V030 999 FEW021 11/06 Q1026=

Analysis and Investigation

CAA ATSI

At 0934:26 (Figure 2) the DA42 pilot reported downwind at North Weald with the intention to go around due to a Cessna being on base leg. At 0934:44 (Figure 3) the PA28 turned to track west.

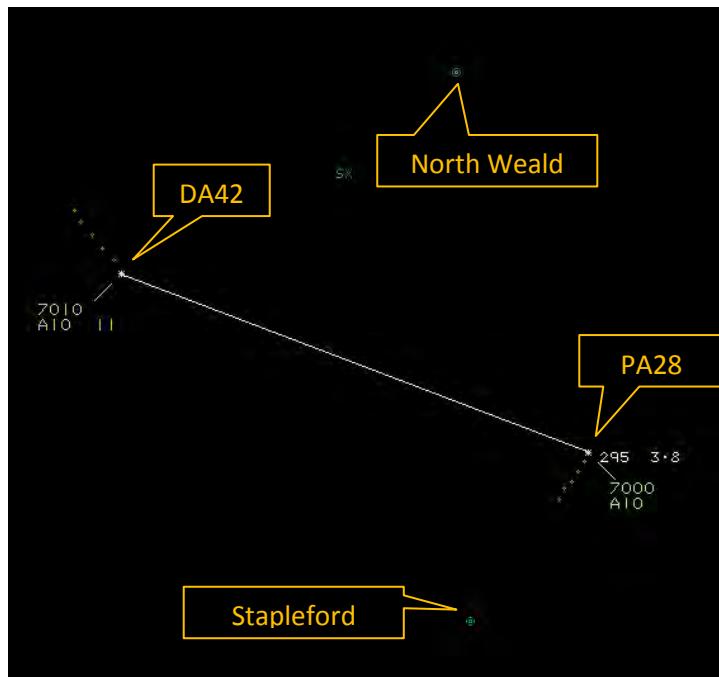


Figure 2 – 0934:26.

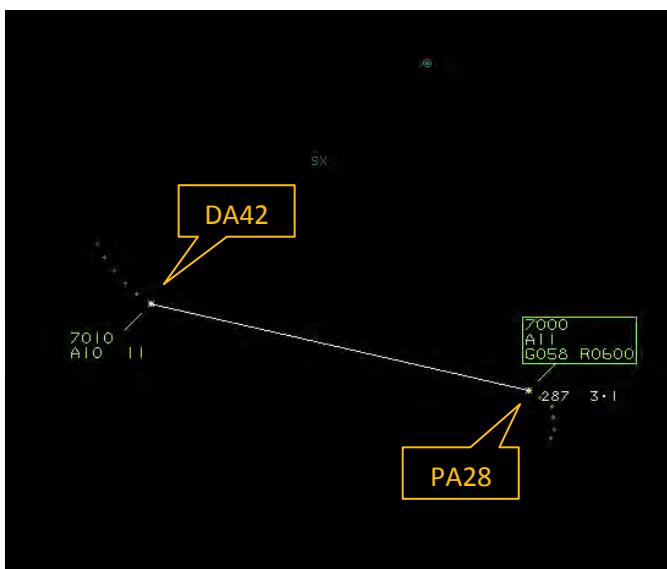


Figure 3 – 0934:44.

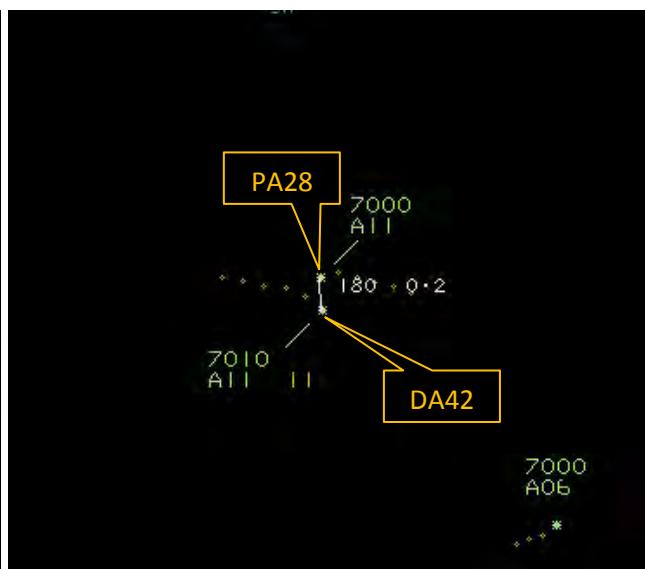


Figure 4 – 0935:34.

CPA occurred at 0935:34 (Figure 4) with the aircraft indicating at the same level and 0.2 nm between them.

CAP 452 (Aeronautical Radio Station Operator's Guide)¹ states:

"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."

The AIRPROX took place in Class G airspace therefore separation between aircraft was ultimately the responsibility of the pilots.

UKAB Secretariat

The DA42 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 hazard². If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right³. 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 operation⁴.

The North Weald Users Group notice, published on the internet, states:

'Circuit height is 800' QFE / approx. 1200' QNH.'

IMPORTANT: Avoid Stansted's Class D airspace directly above North Weald, which begins at 1500' QNH, and also Stapleford Airfield's ATZ approx. 3 miles to the south. Over-flying North Weald Bassett village should be avoided whenever possible. Please also avoid over-flying St. Margaret's Hospital, at the eastern end of Epping Town.'

The promulgated Stapleford circuit patterns are as shown at Figure 5. The Stapleford ATZ is a circle of 2nm radius centred on the longest notified runway (03R/21L); upper limit 2000ft. Figure 6 indicates 2nm range from Stapleford on the radar replay at CPA; at this point the PA28 appears to be at just greater than 2nm range from Stapleford and the DA42 is about to enter the 2nm ATZ having turned right to avoid the PA28.

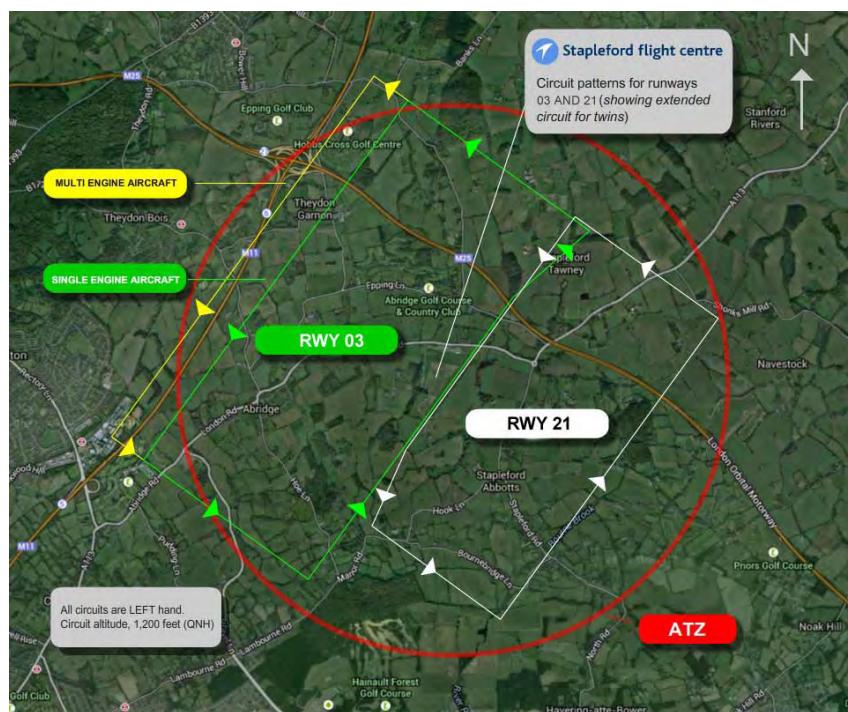


Figure 5 Stapleford circuit pattern RW03/21.

¹ Chapter 4.

² SERA.3205 Proximity.

³ SERA.3210 Right-of-way (c)(1) Approaching head-on.

⁴ SERA.3225 Operation on and in the Vicinity of an Aerodrome.

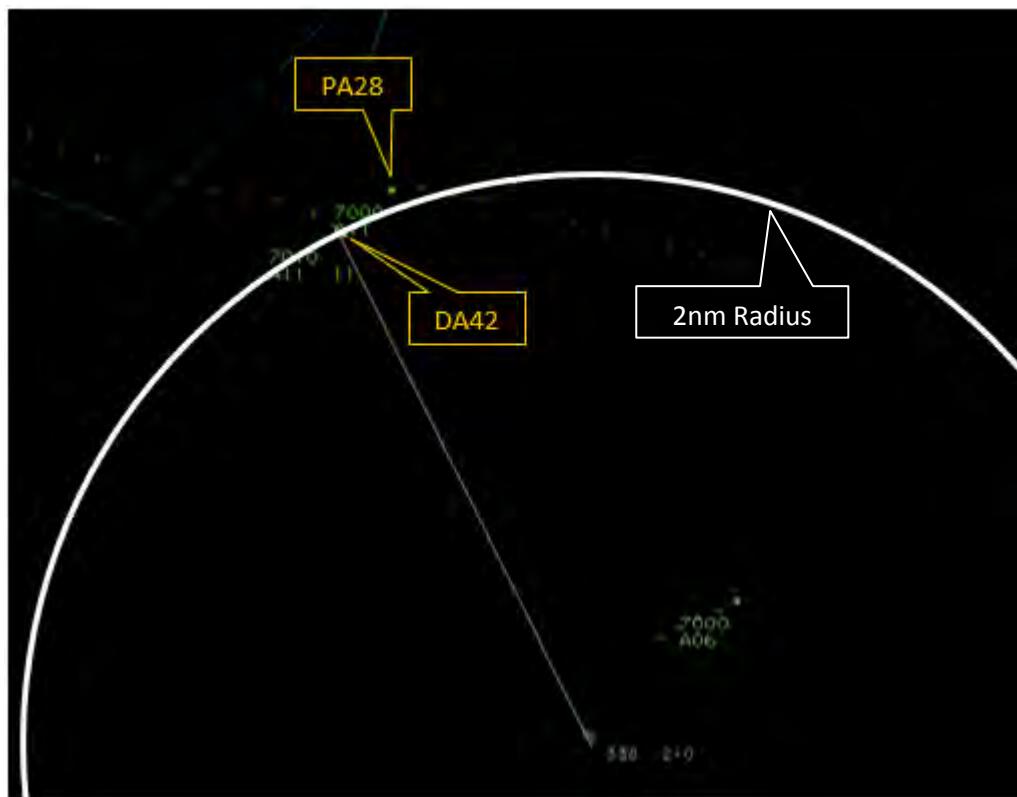


Figure 6 (2nm from Stapleford).

Summary

An Airprox was reported when a DA42 and a PA28 flew into proximity near Stapleford at 0936hrs on Friday 18th May 2018. Both pilots were operating under VFR in VMC in receipt of Air/Ground Services, the DA42 pilot from North Weald and the PA28 pilot from Stapleford.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from both pilots, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

The Board first noted that both pilots were in receipt of an Air Ground Service from their respective aerodromes; the DA42 from North Weald and the PA28 from Stapleford. It was also noted that Stapleford's ATZ is situated 3nm south of North Weald and, on this occasion both pilots were operating close to the Stapleford ATZ boundary. The DA42 pilot was carrying out an asymmetric approach to RW02 from a left-hand circuit at North Weald. In order to satisfy noise-abatement procedures for this type of approach this resulted in the pilot turning onto long-final close to the Stapleford ATZ boundary. For his part, the PA28 pilot was carrying out a left-hand circuit to RW03 at Stapleford, for which noise-abatement procedures also required him to follow a ground track close to the Stapleford ATZ boundary. Both aircraft were at their respective circuit altitudes of 1200ft.

The DA42 pilot reported that he received a TAS TA on turning onto base leg and then saw the PA28 at a similar level ahead at a range of 200m; he immediately turned right to avoid a collision. The PA28 pilot reported seeing the DA42 at a range of 500m, crossing from right to left. He believed that the DA42 had at that point already entered the ATZ. The Board noted that the radar recordings show that, at CPA, the DA42 was outside the ATZ. However, the avoiding action taken by its pilot resulted in it entering the ATZ. The Board considered that, although the DA42 had entered the ATZ without contacting Stapleford, the emergency action taken was appropriate to prevent the risk of a collision.

The Board commented that both pilots were complying with their separate procedures but that there was an in-built conflict between them in respect of aircraft making long-finals approaches to North Weald RW02 whilst aircraft were commencing the downwind track whilst conducting LH circuits to RW03 at Stapleford. Apart from the warning in the North Weald local instructions about the proximity of the Stapleford ATZ boundary, there did not appear to be any specific warnings about potential conflicts in this respect from either airfield. Members wondered whether there was scope to review the airfields' circuit directions in order remove this in-built conflict. In this respect, Stapleford confirmed that there was no specific reason for a left-hand circuit for their RW03 other than to present a standard left-hand pattern for trainee pilots to assist in their execution of the circuit. Whilst the value of such was understood, the potential conflict between North Weald RW02 long finals traffic and Stapleford RW03 downwind traffic was considered by some members to merit such a review. A Civil GA Pilot member suggested that, to enhance situational awareness, each Air/Ground operator should contact the other airfield to advise them of their respective circuit directions in order to aid awareness. Armed with such knowledge, members thought that it would be advantageous if the North Weald operator were then to inform pilots who were intending to conduct asymmetric approaches to their RW02 of the potential for conflict with the Stapleford pattern when they called their intentions downwind. With this in mind, and notwithstanding the value that might be gained from Stapleford considering adopting a RH circuit for RW03, the Board resolved to recommend that North Weald introduce procedures for their AGCS operators to advise to pilots conducting long-finals approaches to RW02 about the potential for conflict with the Stapleford visual circuit.

Turning to the cause and risk, after much debate and scrutiny of radar recordings it seemed to the Board that CPA had actually occurred in Class G airspace, just outside the Stapleford ATZ, and after the DA42 pilot's avoiding right turn. As such, and with the PA28 outside the protection afforded by the Stapleford ATZ, the normal rules of the air pertained before CPA in as much as both aircraft had unwittingly turned left towards each other to create a head-on conflict, and both aircraft were required to avoid each other's pattern of traffic formed at their respective airfields. The debate about who should avoid who ebbed and flowed, until, in the end, the Board decided that the incident was probably best described as a conflict in Class G airspace resolved by the DA42 pilot. That he had then turned right into the Stapleford ATZ was not considered germane to the cause in itself. As to the risk, the DA42 pilot had taken avoiding action as soon as he had seen the PA28 and, although safety had been degraded, it was agreed that this action had thereby removed the risk of a collision. Accordingly, the Board assessed the incident as risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: Conflict in Class G airspace resolved by the DA42 pilot.

Degree of Risk: C

Recommendation: North Weald introduce advice to pilots concerning the potential for conflict with the Stapleford visual circuit.

Safety Barrier Assessment⁵

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

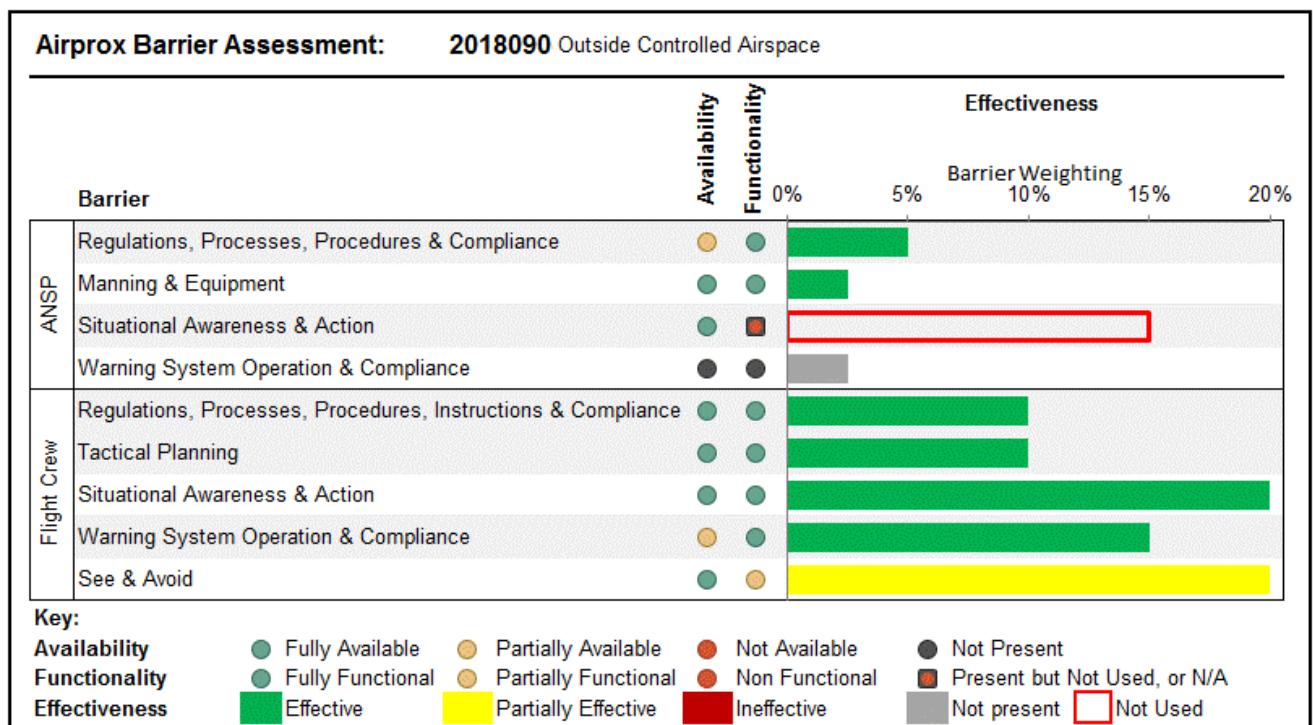
ANSP:

Regulations, Processes, Procedures and Compliance were assessed as **partially available** because there were no specific procedures existing between Stapleford and North Weald regarding traffic in the Stapleford left-hand circuit to RW03 and traffic inbound to RW02 at North Weald routing south of Epping.

Flight Crew:

Warning System Operation and Compliance were assessed as **partially available** because only the DA42 was equipped with an electronic warning system.

See and Avoid were assessed as **partially effective** because the DA42 pilot only obtained visual contact with the PA28 when it was at an estimated range of 200m.



⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).