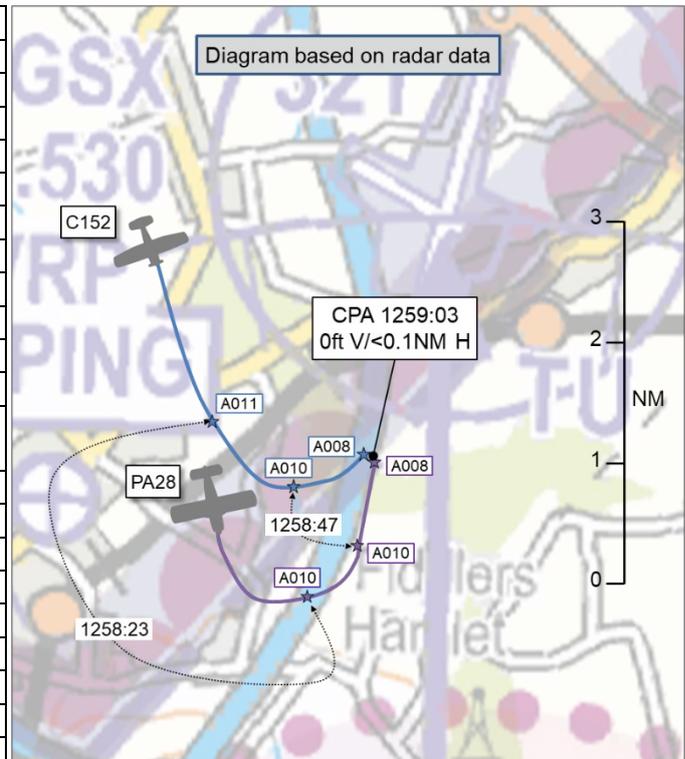


AIRPROX REPORT No 2024297

Date: 11 Dec 2024 Time: 1259Z Position: 5142N 00009E Location: North Weald Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	PA28
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	North Weald Radio	North Weald Radio
Altitude/FL	800ft	800ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White	Grey/blue
Lighting	NR	Ldg, nav, anti-coll, HISL
Conditions	VMC	VMC
Visibility	>10km	NR
Altitude/FL	1100ft	900ft
Altimeter	QNH (1032hPa)	QNH
Heading	030°	NR
Speed	70kt	NR
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	50ft V/0m H	Not seen ¹
Recorded	0ft V/<0.1NM H	



THE C152 PILOT reports they were on an instructional flight with a student and rejoining the [RW02 left-hand] circuit for circuit work. They were advised that the circuit was busy and traffic reported on downwind slightly behind them, which they had visual. They were also visual with other traffic on final and, assuming they were number two to land, they did their pre-landing checks and turned base at the normal turning point. [They had not known] that other traffic, [the PA28], went wide for a long final, as they were not visual with it when on downwind and were not advised by the [Air/Ground Operator]. They only became visual when turning final [and the PA28] zoomed past below them. They performed a go-around to avoid the PA28.

The pilot assessed the risk of collision as ‘High’.

THE PA28 PILOT reports they were a student practising circuits. They were very aware of the other aircraft in the circuit. [The Air/Ground Operator] was adamant that no other aircraft joined for circuit practise and stated they were alone. They noticed as they turned downwind that C152(B) was ahead of them and kept visual. They adopted a slow safe cruise to ensure separation. They were aware that they may need to go-around if the C152(B) did not vacate the runway, and they were fully prepared to do so. They maintained visual with the other aircraft on the runway during their final descent. The aircraft vacated the runway so they proceeded to land as usual.

THE AIR/GROUND RADIO OPERATOR reports they were working 4 aircraft on frequency, a DR400 was in the circuit pattern for RW02 between 1239 and 1315, the PA28 was in the circuit pattern for RW02 between 1220 and 1300 on a training flight with an instructor, the C152(B) with a student callsign

¹ The PA28 student pilot misidentified the aircraft involved in the Airprox as the C152 landing ahead of them, for which they provided a separation of 0ft V/200m H. For clarity, this aircraft is referred to as C152(B) within this report.

which landed at 1258, and the [Airprox] C152 which departed for a local flight and then stayed in the circuit pattern between 1224 and 1314.

From memory, the C152 joined the circuit pattern from the east behind the DR400 which had just climbed away, remaining in the circuit. The C152 joining from the east got close to [the DR400] at the start of the downwind leg and continued to be, what looked like, in 'formation' with [the DR400] the length of the downwind leg. The [PA28] was ahead of this 'formation' and [they thought] had been incorrectly identified as the [Airprox] aircraft. [The PA28] was on long final when this incident happened.

[The pilot of the DR400] looked ahead of [the C152] all the way to final. [The C152] remained very close behind [the DR400], so close that they were performing a series of 'S' turns at slow speed to increase their distance from the [DR400].

They could not remember if they, [themselves], called a go-around for safety reasons.

Factual Background

The weather at Stansted Airport was recorded as follows:

METAR EGSS 111250Z AUTO 05010KT 9999 OVC018 06/03 Q1032

The Area of Operation for North Weald Aerodrome is inside the Stansted Transponder Mandatory Zone (Figure 1).

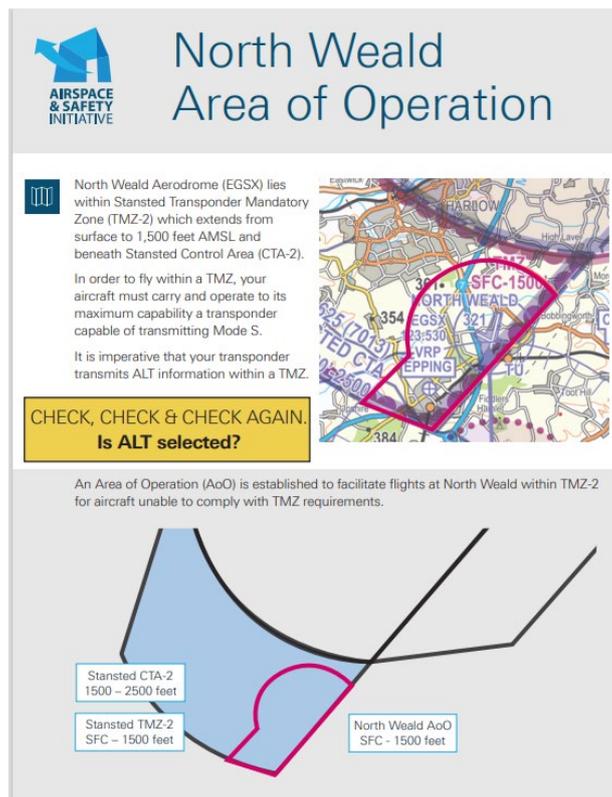


Figure 1 North Weald Area of Operation lies within the Stansted TMZ

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft were positively identified using Mode S data. There were 4 aircraft operating in the left-hand circuit for RW02 at North Weald. The C152 was seen joining the circuit from the east at 1256, followed closely by a DR400 which

remained to the right of the C152. The PA28 was downwind and C152(B) was shortly to turn onto the final approach. Their circuit positions at 1257:39 are depicted below (Figure 2).

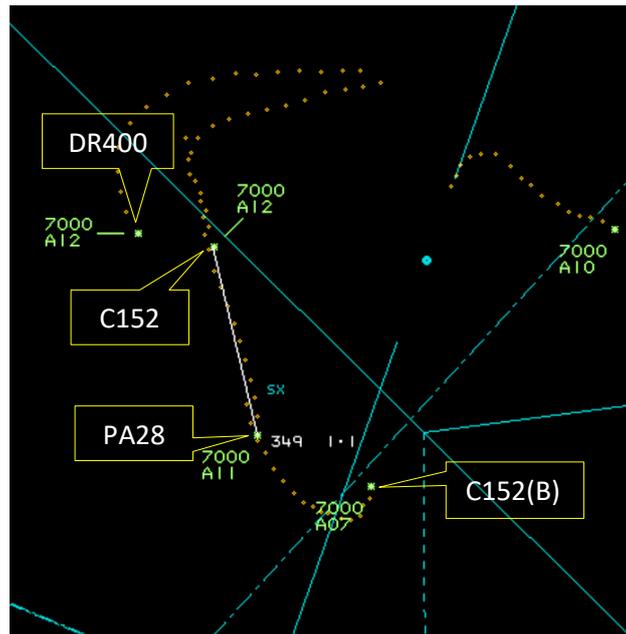


Figure 2 Time 1257:39 circuit positions of each aircraft. Separation between the C152 and PA28 1.1NM.

At 1258:15 the PA28 was seen on an extended downwind/base-leg position and turned onto final at 1258:27 as the C152 appeared to be positioning onto a base-leg and the DR400 extended their downwind leg. CPA was assessed to have been at 1259:03 when the C152 pilot initiated their final approach marginally ahead of the PA28 already established on a final approach. Separation was 0ft vertically and less than 0.1NM laterally (Figure 3).

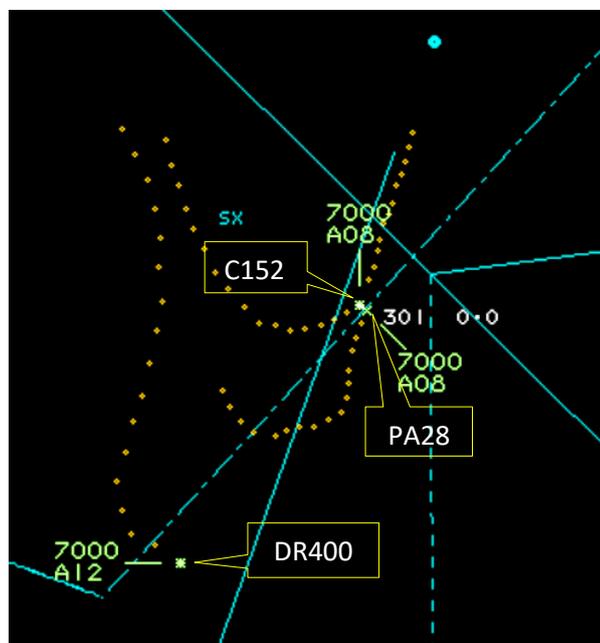


Figure 3 Time 1259:03 CPA separation 0ft vertically and less than 0.1NM laterally.

Further analysis of aircraft tracking software also positively identified both aircraft using multilateration (no ADS-B for either) and recorded the lateral separation as less than 0.25NM, co-altitude.

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.² 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.³

Summary

An Airprox was reported when a C152 and a PA28 flew into proximity on final for RW02 at North Weald at 1259Z on Wednesday 11th December. Both pilots were operating under VFR in VMC and in receipt of an AGCS from North Weald Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, and a report from the AGCS operator involved. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first considered the actions of the student pilot in the PA28 and noted that they had been on a solo circuit consolidation exercise. Members felt that the student pilot had done well to monitor the C152(B) ahead of them and enter a slow-safe cruise to remain clear. However, some members felt that the practise of elongating the circuit pattern contained other risks, such as entering the Stapleford ATZ nearby, and that the pilot may have been better served to have initiated a go-around instead. The Board agreed that the student pilot had likely been fixated on the C152(B) ahead of them and had become unaware of other traffic entering the circuit pattern. Members agreed that the student pilot had not, therefore, gained awareness of the C152 through the various circuit calls made on the frequency (**CF2**) which had led to a lack of situational awareness of the presence or position of the C152 (**CF3**), or indeed other circuit traffic joining from the east. Having assessed the student pilot's statement, members were satisfied that the student pilot had misidentified the event and had remained unsighted on the conflicting C152 (**CF4**), positioned marginally above them on the final approach.

Turning their attention to the actions of pilot of the C152, members wondered why the pilot had not assimilated the positions of other circuit traffic and if they had been time-constrained to land. The Board noted that the pilot had thought that they had been number two to land after C152(B), and members speculated that the pilot's expectations may have led to them being less than optimally observant of their surroundings. Members mentioned that, regardless of expectations, the pilot is responsible for checking that the final approach is clear prior to turning their aircraft into position on final and that, had there been any uncertainty, clarification could have been sought from the AGCS operator at North Weald. Members agreed that the C152 pilot had also not gained awareness of the PA28 through its pilot's circuit calls on the frequency (**CF2**) and, therefore, had not had situational awareness of the presence or position of the PA28 on final (**CF3**). Members further agreed that the C152 pilot had not followed the pattern of traffic already established in the circuit (**CF1**) and had not sighted the PA28 until CPA, effectively a non-sighting (**CF4**).

On discussing the input from the North Weald AGCS operator, the Board noted that the operator was neither required to sequence the circuit traffic nor monitor it. Members noted that the North Weald circuit had become busy and that the operator had not sighted the Airprox event between the C152 and the PA28, instead describing the actions of other aircraft in the circuit at the time.

On concluding their discussions, the Board agreed that neither the C152 pilot nor the PA28 student pilot had been aware of the other aircraft and that the event had stopped short of an actual collision largely through fortune(**CF5**) because the C152 pilot had been unable to make any inputs in time to materially improve the situation when the PA28 passed beneath them. The Board agreed that there

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome. MAA RA 2307 paragraph 17.

had been a serious risk of collision and that providence had played a major part in events and, as such, assigned a Risk Category A to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024297			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
	• Situational Awareness of the Conflicting Aircraft and Action			
2	Human Factors	• Monitoring of Communications	Events involving flight crew that did not appropriately monitor communications	
3	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
	• See and Avoid			
4	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
	• Outcome Events			
5	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: A.

Safety Barrier Assessment⁴

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

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **not used** because the North Weald Radio AGCS operator was neither required to sequence nor monitor the circuit traffic.

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because the C152 pilot did not conform with the pattern of traffic already formed by the PA28.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither the C152 pilot nor the PA28 pilot had situational awareness of the presence or position of the other pilot's aircraft.

See and Avoid were assessed as **ineffective** because the PA28 pilot had not sighted the C152 and the C152 pilot had not seen the PA28 until CPA.

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

Airprox Barrier Assessment: 2024297		Outside Controlled Airspace					
Barrier	Provision	Application	Effectiveness				
			Barrier Weighting				
			0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓				
	Manning & Equipment	✓	✓				
	Situational Awareness of the Confliction & Action	✓	○				
	Electronic Warning System Operation and Compliance	●	●				
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓				
	Tactical Planning and Execution	✓	✗				
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓				
	Electronic Warning System Operation and Compliance	●	●				
	See & Avoid	✗	✗				
Key:		Full	Partial	None	Not Present/Not Assessable	Not Used	
Provision	✓	!	✗	●			
Application	✓	!	✗	●	○		
Effectiveness	■	■	■	■	■	■	