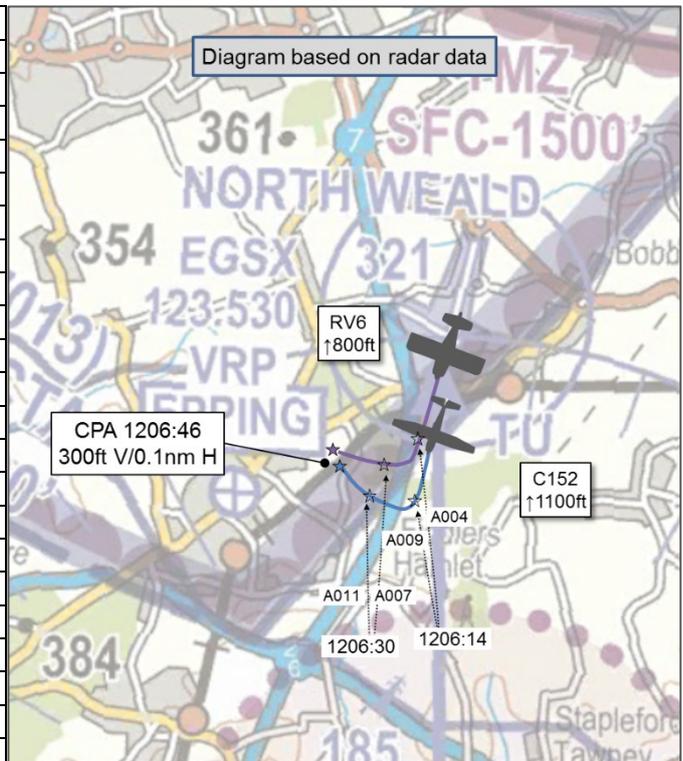


**AIRPROX REPORT No 2019255**

Date: 29 Aug 2019 Time: 1206Z Position: 5142N 00008E Location: North Weald

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	RV6
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	North Weald	North Weald
Altitude/FL	1100ft	800ft
Transponder	A, C, S	A, C, S
<b>Reported</b>		
Colours	Red, White, Blue	
Lighting	NR	
Conditions	VMC	VMC
Visibility	>10km	10km
Altitude/FL	1200ft	1000ft
Altimeter	QNH (1020hPa)	QNH
Heading	'Turning to' 020°	325°
Speed	85kt	120kt
ACAS/TAS	Not fitted	Not fitted
<b>Separation</b>		
Reported	0ft V/20m H	Not Seen
Recorded	300ft V/0.1nm H	



**THE C152 PILOT** reports that he was conducting an instructional sortie in the North Weald circuit. He was monitoring the student as he turned downwind for RW20RH when he saw an aircraft crossing right to left, about 60ft ahead of them and at the same level. He didn't see it until the last minute because it had been in a blind spot, hidden by the right wing, but, once seen, he turned right to go behind. He believed the other aircraft was not on the North Weald frequency.

The pilot assessed the risk of collision as 'Medium'.

**THE RV6 PILOT** reports that he took off from North Weald at around 1205z and did not see anything that he considered to be an Airprox.

**THE NORTH WEALD A/GO** reports that he did not specifically remember the incident, but a review of the flight strips confirmed that the RV6 got airborne from North Weald at 1205z.

**Factual Background**

The weather at Stansted was recorded as follows:

METAR EGSS 291150Z AUTO 24008KT 210V310 9999 NCD 21/10 Q1020=

## Analysis and Investigation

### UKAB Secretariat

At 1205:59 (Figure 1) the RV6 can be seen on the NATS radar, passing 200ft in the climb out from North Weald. At 1206:34 (Figure 2) the C152 can be seen turning downwind and the RV6 is turning onto a southwesterly heading. CPA occurs at 1206:46 with the two aircraft 300ft vertically and 0.1nm apart.

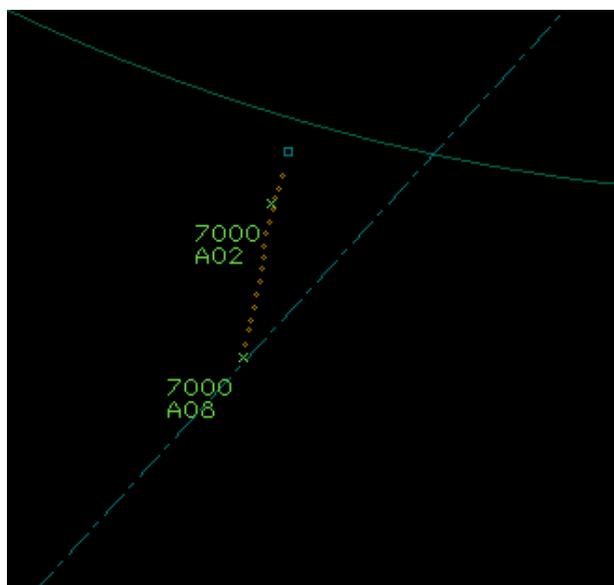


Figure 1: 1205:59

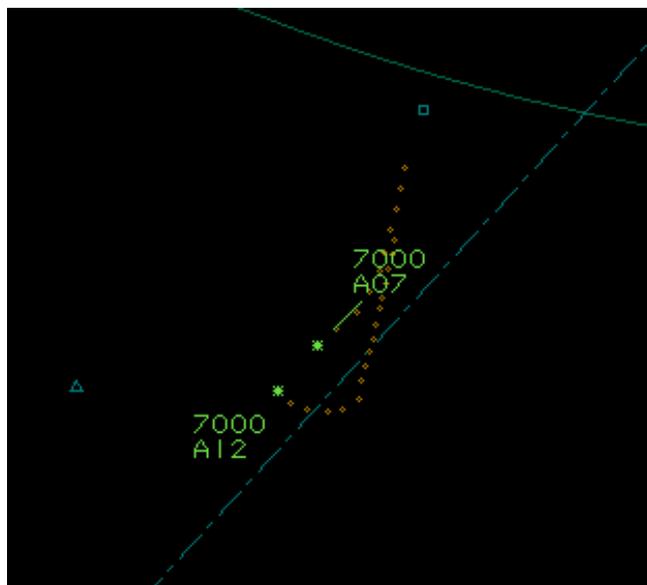


Figure 2: 1206:34

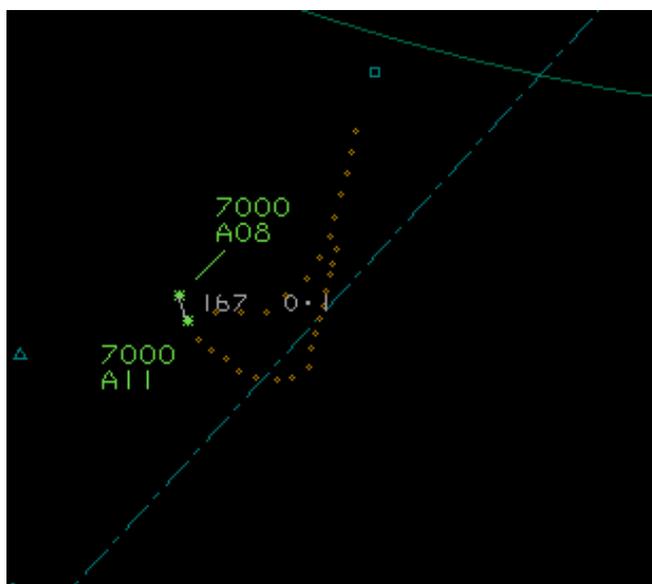


Figure 3: 1206:46

The C152 and RV6 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. 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<sup>2</sup>.

<sup>1</sup> SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

<sup>2</sup> SERA.3225 Operation on and in the Vicinity of an Aerodrome.

## Summary

An Airprox was reported when a C152 and an RV6 flew into proximity in the North Weald circuit at 1206hrs on Thursday 29<sup>th</sup> August 2019. Both pilots were operating under VFR in VMC, and both were in receipt of a AGCS from North Weald.

### **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings and a report from the A/GO. 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 looked at the actions of the C152 pilot. He was instructing in the visual circuit and, noting that he had not assimilated that the RV6 was getting airborne and would be departing from the circuit, members wondered whether he had become somewhat task-focused whilst teaching his student. Both pilots were on the same frequency and the RV6 pilot's calls should have been readily heard as the RV6 pilot called for departure clearance (**CF5**). The Board noted that the instructor had reported that the wing of the C152 had likely restricted his view of the RV6 as it climbed up beneath and behind them as they turned onto downwind. As a result, neither the instructor nor the student saw the RV6 until the last minute (**CF6**). Members noted that the C152 instructor had estimated that the RV6 was much closer than the radar separation indicated, and some members wondered if this was in part due to the surprise of seeing an aircraft cut in ahead at that stage in the visual circuit.

Turning to the RV6 pilot, members noted that he took-off from North Weald immediately after the C152 and so the RV6 pilot should have been aware of it whilst holding ready for departure. He had clearly not assimilated that the C152 was remaining in the visual circuit and had turned into conflict with it as he departed to the west. Members thought that he had cut the corner as he departed, and this had exacerbated the conflict as he turned ahead of the C152 (**CF3**). Ultimately, the Board agreed that it was for the RV6 pilot to integrate with traffic that was ahead in the circuit (**CF2, CF4**) and, having reported that he did not recall being in close proximity to any traffic, members thought that, on the balance of probability, he had not seen the C152 (**CF6**).

The Board briefly discussed the actions of the A/G Operator and noted that, in providing an AGCS, he was not required to integrate the traffic and could not issue control instructions to aircraft (**CF1**).

When assessing the risk, members noted that although on radar there had been 300ft separation between the two aircraft, the RV6 was probably climbing fairly rapidly. Neither pilot had seen to other in time to take any action, leading some members to argue that this meant that safety had been much reduced (Category B). However, others argued that 300ft was still a reasonable margin of separation, even if neither had seen the other. In the end, although it was agreed that this incident was close to a Category B, the latter view prevailed and the Airprox was assessed as risk Category C, safety degraded, but no risk of collision.

**PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**Contributory Factors:

	2019255		
CF	Factor	Description	Amplification
	<b>Ground Elements</b>		
	• Situational Awareness and Action		
1	Contextual	• Situational Awareness and Sensory Events	Not required to monitor the aircraft under the agreed service
	<b>Flight Elements</b>		
	• Regulations, Processes, Procedures and Compliance		
2	Human Factors	• Flight Crew ATM Procedure Deviation	Regulations/procedures not complied with
	• Tactical Planning and Execution		
3	Human Factors	• Action Performed Incorrectly	Incorrect or ineffective execution
4	Human Factors	• Aircraft Navigation	Did not avoid/conform with the pattern of traffic already formed
	• Situational Awareness of the Conflicting Aircraft and Action		
5	Human Factors	• Understanding/Comprehension	Pilot did not assimilate conflict information
	• See and Avoid		
6	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots

Degree of Risk: C.

Safety Barrier Assessment<sup>3</sup>

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

**Flight Elements:**

**Regulations, Processes, Procedures and Compliance** were assessed as **ineffective** because the RV6 pilot cut ahead of the C152 in the circuit.

**Tactical Planning and Execution** was assessed as **partially effective** because the RV6 pilot departed without fully taking into consideration the circuit traffic.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because although there was generic information available to both pilots (both were on the same frequency), neither assimilated the other's presence.

**See and Avoid** were assessed as **ineffective** because the RV6 pilot did not see the C152 and the C152 pilot did not see the RV6 in time to take any avoiding action.

<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

<b>Airprox Barrier Assessment: 2019255</b>		Outside Controlled Airspace		<b>Effectiveness</b>				
<b>Barrier</b>		<b>Provision</b>	<b>Application</b>	<b>Barrier Weighting</b>				
				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	✗	✗					
<b>Key:</b>		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	✓	!	✗	●				
Application	✓	!	✗	●	○			
Effectiveness								