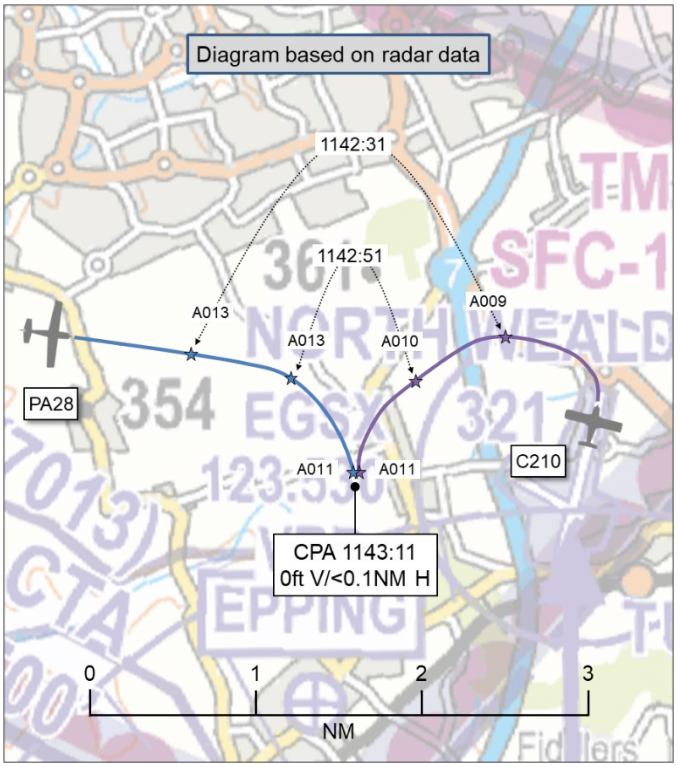
AIRPROX REPORT No 2025008

Date: 30 Jan 2025 Time: 1143Z Position: 5143N 00007E Location: ivo North Weald

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	C210
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	1100ft	1100ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Maroon, white	NR
Lighting	Strobes, landing	Landing, nav, strobes
Conditions	VMC	VMC
Visibility	>10km	NR
Altitude/FL	"*115*"	NR
Altimeter	QNH (1020hPa)	NR
Heading	200°	NR
Speed	100kt	NR
ACAS/TAS	SkyEcho	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	0ft V/20m H	50ft V/100m H
Recorded	0ft V/<0.1NM H	



THE PA28 PILOT reports that they were joining downwind from the west to North Weald. They advised North Weald Radio of their position. The other aircraft was departing North Weald to the south but, after departure, it turned left downwind before setting course. [The pilot of the PA28] is certain that the other pilot did not see them and, if they hadn't seen [the C210], they would have collided.

[The pilot of the PA28 commented that the C210 had been first sighted] on their left side and 50ft away. Their immediate action was to orbit right. The track taken by [the pilot of the C210] was not what they would have expected of a departure to the south from North Weald.

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

THE C210 PILOT declined to submit a full report, however, they commented that they would not consider this to be an Airprox as they had the other aircraft in sight and were ready to take avoiding action should it have been required. They would, however, very much like to learn anything from this incident that could help them to improve their flying.

[The pilot of the C210 recalled that] they had taken-off from RW02, turned left and departed downwind left-hand in accordance with their intentions and radio call before departure. The 'Tower controller' informed the [pilot of the PA28] (who was joining downwind) of all the circuit traffic including the position of the C210. Their fellow pilot was in the right-hand seat and was looking out for the PA28 joining the circuit. They spotted [the PA28] and saw it turn to avoid them.

[The C210 was equipped with a device] which displays ADS-B traffic on screens. They did not notice if the PA28 was being displayed on the screens, as they were looking outside not inside.

THE C210 PILOT'S PASSENGER, as a witness, reports that they are a PPL holder and joined the pilot of the C210 for a flight. They agreed that they would sit in the right-hand seat and would assist by observing the route, headings and altitudes and, in particular, would look out for other traffic. North Weald Radio advised that RW02 was in use with the usual left-hand circuit to the west of the airfield. Given the performance of the C210 with only two on board, and the proximity of the Stansted CTA at 1500ft MSL, they agreed that they would keep a close eye on their altitude after takeoff and would warn [the pilot] if there was any risk of climbing into controlled airspace.

Taxy and takeoff were uneventful, however, as they turned downwind, they observed a PA28 about 150m to their right, and they advised [the pilot] with words to the effect of "*we have traffic to our right, PA28, looks like it's joining downwind, slowly converging, looks slightly below us, I'll let you know it if gets critically close*". After about 5sec, the PA28 turned sharply right and took up a heading diverging away from them. They advised [the pilot] who maintained heading until they had departed the circuit to the south and then turned east on course.

[The passenger] estimates that the closest that the PA28 had come to them was about 100m laterally and appeared to be about 50ft below them during the encounter. If the PA28 pilot had continued a converging course then they would have considered the risk of collision had been high and would have suggested immediate avoiding action to [the pilot of the C210] by either turning left or climbing. However, within a few seconds, the PA28 pilot appeared to take avoiding action which removed the risk of collision.

They do not remember all the radio calls exactly but, from memory, they recall that all appropriate calls were made by [the pilots of] both aircraft. The PA28 pilot made a joining call and a call to advise of their avoiding action.

THE NORTH WEALD AGO reports that they were in the 'tower' at the time of this incident. The weather was good and the day started quietly, with RW02 in use, but became busy with traffic as the day progressed. At the time of the incident, there was one aircraft, a C152, in the circuit and several pilots getting ready to depart. [The pilot of the PA28] requested joining from the west and asked about circuit traffic and, they believe, they responded to say there was one in the circuit and several preparing to depart. [The pilot of the C210] called ready for departure and, shortly afterwards, other traffic departed. They proceeded to process this information into the database in the 'tower'. Shortly afterwards, [the pilot of the PA28] said that they had left the circuit and would be rejoining and, additionally, asked about the traffic downwind. At that point, [the North Weald AGO] looked downwind and saw two aircraft, [the C210] travelling very quickly southwards, and [the PA28] turning downwind. [The pilot of the PA28] was told, they believe, that the [C210] was one of the departing aircraft.

The North Weald AGO was not informed that an incident had occurred at the time.

Factual Background

The website for North Weald airfield states that:

> Circuit altitude 1200ft QNH, circuit height 900ft QFE.
> Arrivals: Downwind join when arriving from the west.

The weather at Stansted was recorded as follows:

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METAR EGSS 301150Z AUTO 32008KT 9999 NCD 05/M00 Q1020
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar relay was undertaken and both aircraft could be positively identified from Mode S data (Figure 1). Both aircraft were observed by reference to ADS-B data sources. The diagram was constructed and the separation at CPA determined from the radar data.

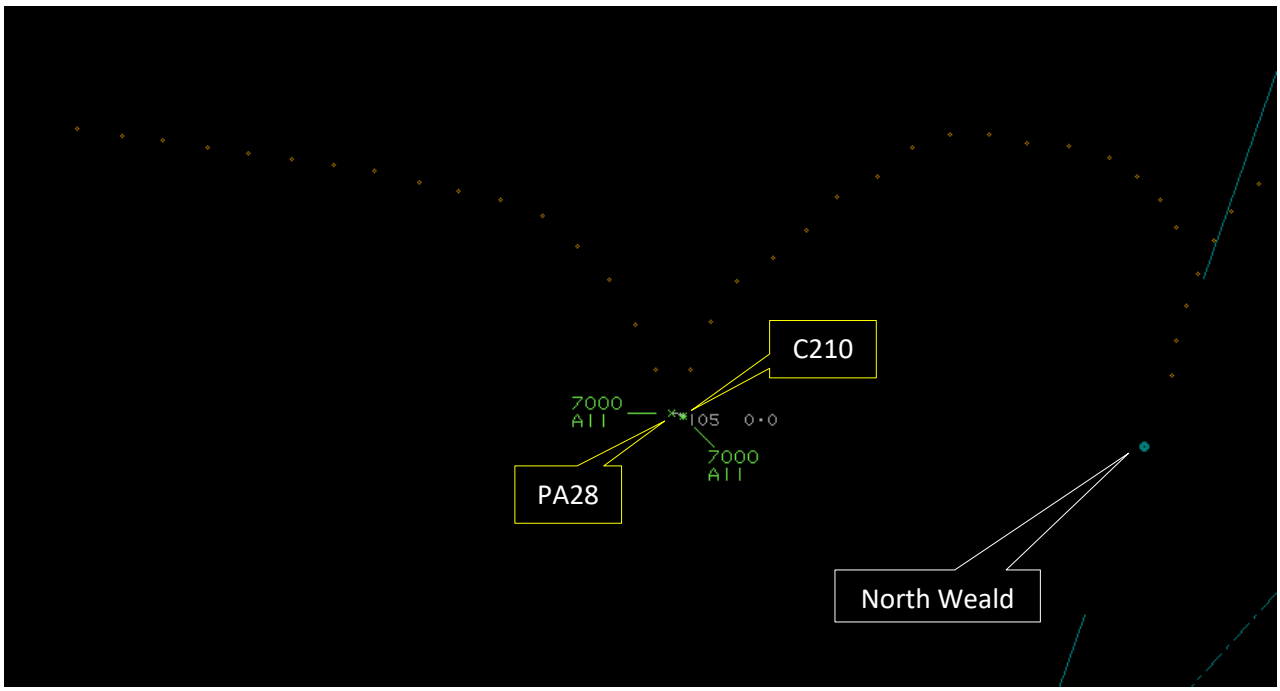

Figure 1 – CPA at 1143:11

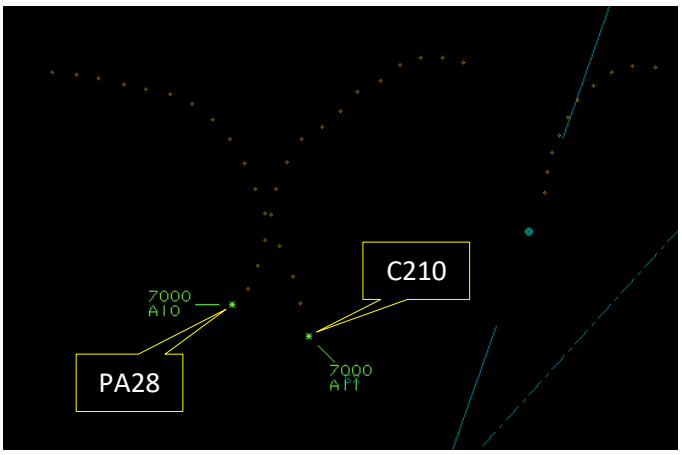

Figure 2 - 1143:27 (16sec after CPA)

The PA28 and C210 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 PA28 and a C210 flew into proximity in the vicinity of North Weald at 1143Z on Thursday 30th January 2025. Both pilots were operating under VFR in VMC in receipt of an AGCS from North Weald Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the passenger aboard the C210, reports from both pilots, radar photographs/video recordings and a report from the AGO involved. Relevant contributory

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

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 pilot of the PA28 and members noted that they had intended to join the circuit at North Weald from a position midway along the downwind leg. Acknowledging that the website for North Weald specifies that arrivals from the west are to join 'downwind' (without being more specific), some members suggested that it may have been preferrable to have entered the circuit nearer the start of the downwind leg, thus affording more time, and a better viewpoint, to have visually acquired any existing circuit traffic. Nevertheless, members noted that the pilot of the PA28 had been aware of the presence of the C210 and had understood that the C210 pilot had intended to depart to the south. However, members surmised that an inaccurate mental model had been constructed as they had not expected the C210 pilot to have turned left after takeoff. It occurred to members that a plan to have entered the left-hand circuit, then to leave the circuit at the end of the downwind leg to subsequently route southwards, had been entirely reasonable. Members were keen to emphasise that it had been of paramount importance for the pilot of the PA28 to have been certain of the position of all aircraft in the circuit, and to have visually acquired them, before entering the circuit and not to have proceeded on the basis of an assumption. Members concluded that the pilot of the PA28 had not visually acquired the C210 until they had converged with it along the downwind leg. Therefore, members agreed that the pilot of the PA28 had had inaccurate situational awareness of the C210 (**CF3**) and had subsequently sighted it late (**CF5**). Additionally, members agreed that the EC device fitted to the PA28 would have been expected to have detected the ADS-B output from the transponder of the C210, which may have provided some information with which to correct their mental model, but no alert was reported (**CF4**). Some members suggested that, if the pilot of the PA28 had been unsure as to the position of the C210, it would have been prudent to have made a call on the North Weald frequency to obtain that information before entering the circuit. Members noted that the pilot of the PA28 had taken avoiding action at the last minute and that they reported that the separation had reduced to 20m. Members agreed that the pilot of the PA28 had not conformed with, nor had avoided, the pattern of traffic in the circuit (**CF2**).

Members next considered the actions of the pilot of the C210 and noted from their narrative report that they had not considered that this encounter had been an Airprox. Members agreed that they had gleaned generic situational awareness of the presence of the PA28 from the messages passed on the radio between the PA28 pilot and the North Weald AGO (**CF3**). Additionally, it was noted that the C210 pilot's passenger had relayed information regarding the reducing separation and that they would "*let [them] know it if becomes critically close*". Whilst acknowledging that a pilot's sense of concern for the safety of their aircraft is somewhat subjective, members noted that the separation between the aircraft had reduced significantly. Members were surprised that the pilot of the C210 had considered that it had been safest to have let the situation unfold without taking any action. Members suggested that, in the interests of flight safety, it would have been prudent to have adjusted their position, altered their speed or called on the radio to alert the PA28 pilot to their position in the circuit, for example. Members therefore agreed that the C210 pilot's dynamic plan had been inadequate and had not met the needs of the situation (**CF1**). In consideration of the reported separation, and that the C210 pilot's passenger had, apparently, first notified the C210 pilot of the PA28 when it had been 150m to their right, members agreed that the PA28 had been sighted late (**CF5**). Members noted that the C210 had not been fitted with an additional EC device (capable of transmitting and receiving GPS positions) and suggested that such a device may have provided a more timely alert to the approaching PA28.

Members next turned their attention to the actions of the North Weald AGO and agreed that they had not been required to have sequenced the aircraft. It was also noted that they had been busy and had attended to an administrative task in the moments leading to CPA. Members acknowledged that there had been little that they could have done to have assisted matters.

Concluding their discussion, a vote was conducted to determine the risk of collision. Members noted that the pilot of the PA28 had attempted to join the circuit without accurate situational awareness of the position of the C210 and had subsequently sighted it late. It was also noted that the pilot of the C210 had sighted the PA28 late and had not reacted to information pertaining to reducing separation between the aircraft. Some members suggested that there had been sufficient time for both pilots to have taken

appropriate avoiding action. However, other members suggested that safety margins had reduced much below the norm. The latter view prevailed and members agreed that there had been a risk of collision (**CF6**) and that it had been the last minute avoiding action taken by the pilot of the PA28 that may have averted a far more serious outcome. The Board assigned Risk Category B to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025008			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
2	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			
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
	• Electronic Warning System Operation and Compliance			
4	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
	• See and Avoid			
5	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
	• Outcome Events			
6	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: B.

Safety Barrier Assessment[3]

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 AGO had not been required to sequence the traffic.

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because the pilot of the PA28 had not conformed with, nor effectively avoided, the pattern of traffic at North Weald.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the pilot of the PA28 had inaccurate situational awareness of the intentions of the C210 pilot.

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

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC device fitted to the PA28 would have been expected to have detected the presence of the C210 but no alert was reported.

See and Avoid were assessed as **partially effective** because both pilots had visually acquired the other aircraft late.