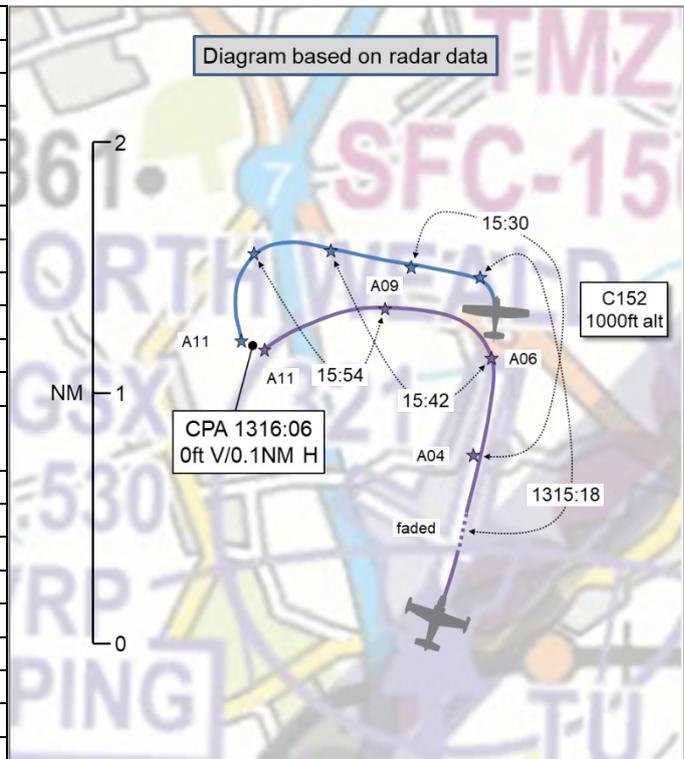


AIRPROX REPORT No 2021165

Date: 31 Aug 2021 Time: 1316Z Position: 5144N 00008E Location: North Weald aerodrome

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Cessna 152	Jet Provost
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Weald Radio	Weald Radio
Altitude/FL	1100ft	1100ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, red, blue	Red, blue
Lighting	Beacon, landing, nav	Nav, taxi
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	1200ft	1000ft
Altimeter	QNH (1030hPa)	QNH (NKhPa)
Heading	180°	NK
Speed	90kt	115kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	0ft V/50m H	Not seen
Recorded	0ft V/0.1NM H	



THE C152 INSTRUCTOR reports undertaking an instructional flight in the left-hand circuit for RW02. They had previously demonstrated one circuit to the student, who had not flown in the circuit before. During the final approach of this first circuit they heard the Jet Provost (JP) pilot announce their intention to join from the west [they believed]. They did not copy all of the transmission due to the high workload teaching environment inside the cockpit. After the touch-and-go, the student was given control on the upwind leg. The rest of the upwind and crosswind legs then continued without event. The student turned left to enter the downwind leg and rolled out on a heading of approximately 180° (the downwind leg converges with the runway in order to satisfy noise abatement concerns). Immediately after rolling out from the turn, the instructor looked out of the left side window in order to check for aircraft joining crosswind and saw the JP slightly below and in the 8 o'clock position at a range of about 100-200m. The JP was in a left wing low, nose high attitude, indicative of a climbing left turn. Though time was limited, the instructor assessed that their relative trajectories were on a collision course, took control of the aircraft without delay and initiated a right turn to avoid conflict, during which they lost sight of the JP as they went 'belly up' to it. The instructor was not visual with the JP at the point of estimated minimum separation due to the attitude of the aircraft. Having rolled out of the avoiding turn they saw the JP again, which was now well ahead and to the right on a wider downwind leg than themselves. The instructor did not hear any radio transmissions from the JP pilot after their joining call, although it was entirely probable these were made without being assimilated due to the high workload teaching environment mentioned previously. The instructor was, however, surprised by the short time frame in which the JP pilot had joined the circuit from the west [they believed] and presumably performed a touch-and-go, go-around or run-and-break to enter the circuit. No R/T calls were made at the time of the event, and the rest of the flight continued routinely. The instructor made a phone call to North Weald operations shortly after landing and spoke to the A/G Operator on duty at the time of the incident. They had not seen the event, although they did believe that the JP pilot had flown round them and overtaken on the right hand side rather than in fact overtaking from below and left as they had seen from the air. The instructor did not believe the JP crew made visual contact with the C152 during the event.

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

THE JP PILOT reports they had conducted a short local sortie to the east and returned into the circuit joining RW02L via a run-and-break, aligned overhead the runway's eastern edge, breaking from 800ft on the QNH to climb and join downwind at 1000ft. They conducted 2 touch-and-go's. On the third circuit the JP pilot observed a high wing light aircraft ahead on the runway near the threshold as they approached on final. The aircraft ahead was rolling so the JP pilot called a go-around, made a fourth circuit and landed full stop after a fifth. Throughout this circuit activity, no conflicts were either seen, or heard on R/T.

THE NORTH WEALD A/G OPERATOR reports that the JP returned to the circuit at 1310 from a local sortie to the east, carried out a run-and-break, and entered the circuit. A police helicopter had just departed and the C152 was in the circuit. The JP pilot was on final at 13:13, after the run-and-break. The C152 pilot was turning downwind, but hadn't called their position. The JP pilot called downwind at 13:15 and the C152 pilot at 13:16. On that circuit, the JP pilot overtook the C152.

Factual Background

The weather at Stansted was recorded as follows:

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METAR EGSS 311320Z AUTO 01010KT 9999 SCT017 BKN022 BKN028 18/13 Q1030=
METAR EGSS 311250Z AUTO 36009KT 330V030 9999 BKN020 OVC031 17/13 Q1030=
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Analysis and Investigation

UKAB Secretariat

The Cessna 152 and JP 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 (amongst other conditions) observe other aerodrome traffic for the purpose of avoiding collision and 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 JP flew into proximity in the North Weald visual circuit at 1316Z on Tuesday 31st August 2021. Both pilots were operating under VFR in VMC, both 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, reports from the air traffic controllers involved and reports from the appropriate operating authorities. 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

Members first recalled the fatal collision between a C150 and a Yak 50 in the circuit at North Weald in 2000³. In that instance, caused because the pilots of both aircraft did not see the other aircraft in sufficient time to take effective avoiding action. Thankfully, in this case, the C152 instructor did see the

¹ (UK) SERA.3205 Proximity.

² (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

³ https://assets.publishing.service.gov.uk/media/5422f404ed915d13710004cb/dft_avsafety_pdf_500463.pdf

Jet Provost (JP) in time to take effective avoiding action, albeit at a late stage (CF7). Members agreed that with 'mixed traffic' of light/slow propeller engine aircraft and fast/heavy jet aircraft in the circuit pattern it was imperative that all pilots maintained a high degree of situational awareness on the other aircrafts' positions and their pilots' intentions. Members also felt that it fell to the faster aircraft pilot to be extra vigilant because they would inevitably be catching up with slower traffic and that if situational awareness could not be maintained the option was to land. With the C152 ahead in the traffic pattern, members thought that it was for the JP pilot to ensure their integration. Unfortunately, the JP pilot lost situational awareness on the C152's position (CF4) and subsequently did not integrate effectively (CF1, CF2). Members agreed that the C152 instructor had also lost situational awareness on the JP's position (CF4) and it was indeed fortunate that they observed the closing JP and were able to take avoiding action. Members discussed why the pilots might have lost situational awareness. It was presumed that the required radio calls were made by both pilots, and the A/G Operator did not report to the contrary, so members surmised that the C152 instructor may have been devoting their full attention to airborne instruction (CF3, CF6) and had not assimilated the JP pilot's calls (CF5). The JP pilot did not assimilate the C152 pilot's calls (CF3), was not aware that they were turning into the C152's flight-path as they turned downwind and did not see the C152 in proximity at all (CF8). Members agreed that it is imperative that the flight path is visually cleared before committing to a turn in the circuit and agreed that although the C152 instructor had taken effective avoiding action, safety had been much reduced below the norm (CF9).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021165			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Regulations, Processes, Procedures and Compliance				
1	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with
• Tactical Planning and Execution				
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	Human Factors	• Monitoring of Communications	Events involving flight crew that did not appropriately monitor communications	
4	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
5	Human Factors	• Understanding/Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information
• See and Avoid				
6	Human Factors	• Distraction - Job Related	Events where flight crew are distracted for job related reasons	
7	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
8	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				
9	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.

Recommendation: Nil.

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 A/G Operator was not required to monitor the traffic in the circuit.

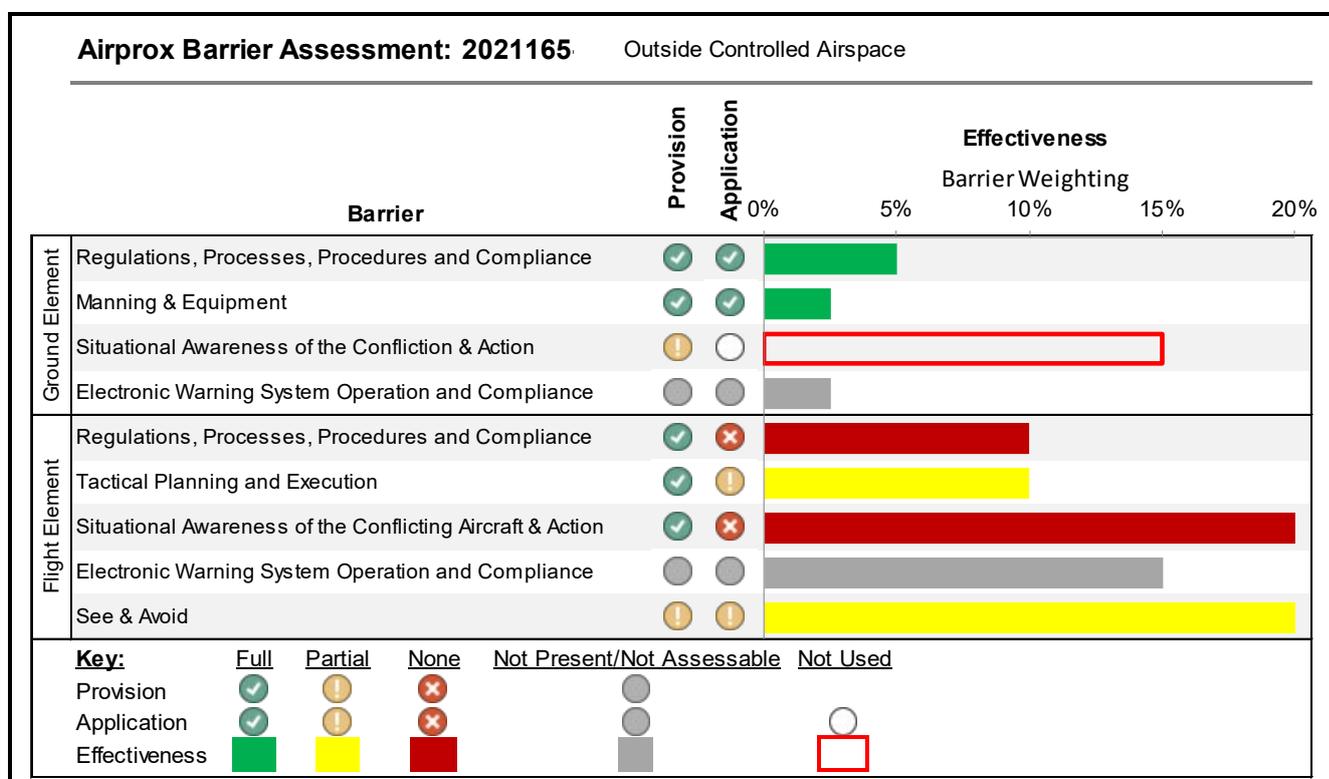
Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the JP pilot did not integrate with the C152, ahead in the visual circuit.

Tactical Planning and Execution was assessed as **partially effective** because the JP pilot did not clear their flight path before turning into conflict with the C152.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the JP pilot had no SA on the position of the C152 and hence could not take appropriate action.

See and Avoid were assessed as **partially effective** because the C152 pilot saw the JP but at a late stage and had to take emergency avoiding action.



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