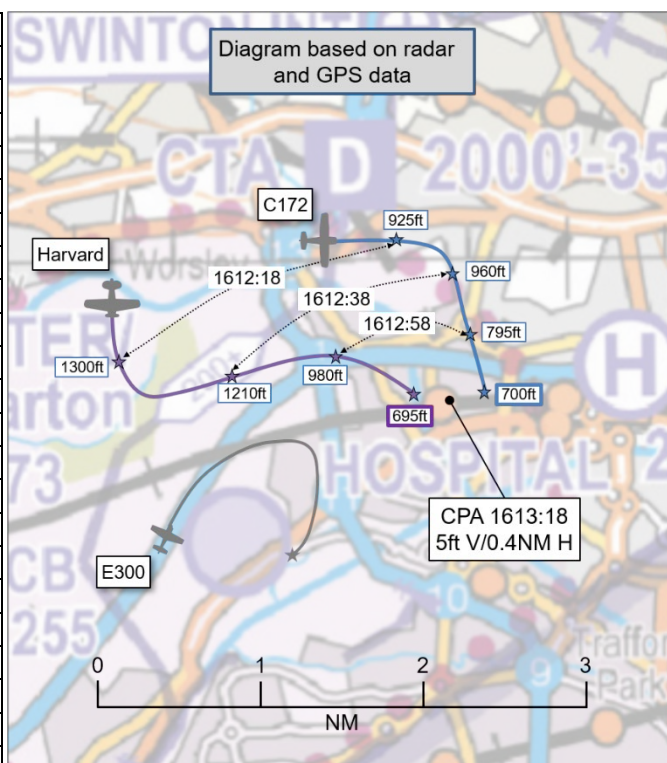


AIRPROX REPORT No 2026100

Date: 05 Jun 2026 Time: 1613Z Position: 5329N 00221W Location: Manchester Barton Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C172	Harvard
Operator	Civ FW	Civ FW
Airspace	Manch/Barton ATZ	Manch/Barton ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Barton Information	Barton Information
Altitude/FL	700ft	695ft
Transponder	A, C ¹	A, C, S
ADS-B Out	Observed	Not observed
Reported		
Colours	Blue/white	Desert camouflage
Lighting	Nav, beacon, ldg	N/A
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	800ft AGL	1000ft AGL
Altimeter	QFE (1008hPa)	QFE
Heading	170°	080°
Speed	70kt	110kt
ACAS/TAS	SkyEcho	Not fitted
Alert	Alert ²	N/A
Separation at CPA		
Reported	0ft V/800ft H	0ft V/>0.5NM H
Recorded	5ft V/0.4NM H	



THE C172 PILOT reports that they were in the circuit at Manchester Barton and reported downwind for RW26R and were informed that there was no traffic ahead of them in the circuit. [The other aircraft] was a Harvard providing flight experiences and was returning to the circuit to land. [The pilot of the Harvard] called to request ATZ join just after [the C172 pilot's] downwind report and stated that they would join downwind and were advised *"one ahead downwind"*. [The C172 pilot] had turned onto base and, not long after, heard a call from the Harvard [pilot] asking where the base traffic was. They looked out to their right (it is a right-hand circuit) and saw the [other aircraft] at the same height mid-turn onto base, closing at a much higher speed than their aircraft. [They estimated that the Harvard was] around 135kt when downwind compared to their 90kt downwind leg. They did not wait for the AFISO call, as they were very concerned at the proximity, and not being seen, and responded that they were in [the Harvard's] 10 o'clock position and they turned left (away from the base-leg heading) and then proceeded to go around on the aerodrome deadside. They advised the AFISO that they were doing this. [The pilot of the Harvard] continued to proceed from a very short base onto immediate final and landed.

The pilot further noted that they received an audible alert from their electronic conspicuity device, although, when in the circuit, there are many alerts.

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

THE HARVARD PILOT reports that they were operating [the Harvard] inbound to Barton. Prior to entering the ATZ, they established communication with ATC and were aware of the traffic situation

¹ The transponder of the C172 was reported as operating on Mode S, however, Mode S was not detected.

² The C172 pilot reported receiving an alert but, after analysis by the UKAB Secretariat, this was assessed to not have been generated by their proximity to the Harvard.

within the circuit. Whilst approaching the aerodrome, they identified a C172, [registration], operating within the circuit. They maintained visual contact with the aircraft throughout the period relevant to this report and were aware of its position relative to their aircraft at all times. Having assessed the traffic situation and being mindful of the performance differences between the aircraft, they requested a non-standard join for the downwind leg. Their intention was to position efficiently for landing and vacate the runway promptly. ATC was advised of their intentions. The C172 was flying a wider circuit pattern than they would normally expect, however they remained visual with the aircraft throughout. At all times the C172 remained to their left and they remained to its right. They did not observe the aircraft on a collision course, nor did they perceive any significant reduction in separation that would have created a risk of collision. No avoiding action was taken by them, as they considered the situation to be safe and under continual visual observation. They continued their approach and landing whilst maintaining situational awareness of the C172's position. They subsequently heard the pilot of [the C172] announce a go-around. Whilst [the pilot of the Harvard] acknowledged that the [C172] pilot elected to carry out a go-around, they did not consider this to be a response to any imminent collision risk and did not perceive the situation as hazardous. At no stage did they believe an Airprox had occurred. They maintained visual contact with the other aircraft throughout, did not consider there to be a risk of collision, and therefore did not make an Airprox report over the radio at the time. In their assessment, the risk of collision was none. Throughout the event they maintained visual contact with [the C172], were aware of its position relative to their aircraft at all times and did not perceive any loss of separation that would have required avoiding action.

The pilot assessed the risk of collision as 'None'.

THE MANCHESTER BARTON AFISO reports that the [pilot of the C172] was established in the fixed wing circuit carrying out touch and goes, [and the pilot of the Harvard] was routeing from the north and had elected to join downwind. There was also a third aircraft overhead, deadside and descending. [The pilot of the C172] reported downwind, at the time no reported traffic was ahead, and they were told '*no reported traffic ahead*' and asked to '*report final*'. [The pilot of the Harvard] reported joining downwind, and the AFISO passed specific Traffic Information in regard to the two aircraft established in the circuit. The third (uninvolved aircraft) elected to climb back into the overhead. [The pilot of the Harvard] joined downwind and on base leg they asked for the position of [the C172], to which both the AFISO and [pilot of the C172] replied. [The pilot of the C172] stated '*In your left 10 o'clock position*'. The Harvard landed and [the pilot of the C172] carried on with the circuit pattern.

Factual Background

The weather at Manchester Airport was recorded as follows:

METAR EGCC 051620Z AUTO 21006KT 170V240 9999 FEW043 16/06 Q1009

The circuit procedures at Manchester Barton Airport are as follows:

Circuit Procedures

Standard join is overhead at a height of 1700ft. Aircraft intending to join on downwind, base leg or final must ensure the FISO is informed prior to entering the ATZ.

Circuit Height: 1000ft (Fixed Winged), 500ft (Helicopters).

Circuit Direction: Left Hand - 02, 08L, 08R, 31; Right Hand - 13, 20, 26L, 26R

Orbits are not permitted within the circuit.

Pilots should endeavour to ensure that circuits are flown within the ATZ (2nm radius centered on the airfield). In the event that the circuit is busy and traffic conditions are such, pilots should exercise judgment and may consider the following options;

- Operate the aircraft at a slower safe cruising speed in accordance with safe aircraft operating ability.
- Go around and re-position within the circuit, advising the FISO of your intentions.
- Climb to the overhead and rejoin the circuit, advising the FISO of your intentions.
- Cease circuit flying or vacate the ATZ and rejoin when traffic levels have reduced.

Analysis and Investigation

MANCHESTER BARTON AERODROME

Summary

Airborne conflict reported between a Harvard and C172 base leg for 26R. Both aircraft landed safely.

Investigation

Upon receiving notification of the Airprox, they reviewed and archived the R/T and ADS-B recordings. The Harvard was not transmitting 'ADS-B Out' data so did not display on the ADS-B Flight Information Display (FID). The [pilot of the] Harvard reported inbound, 1700ft at the Middlebrook Stadium at 1608 and was passed the aerodrome information.

At approximately 1611 the [pilot of the] Harvard reported joining the ATZ and requested to join downwind. The standard join for [Barton] is an overhead join at 1700ft. The [pilot of the] Harvard was passed specific Traffic Information on a C172 established in the circuit, downwind and an E200 joining from the deadside. The pilot of the Harvard acknowledged the traffic. At 1613, the Harvard [pilot] reported on right base and looking for the traffic *"where is he"*. The Duty AFISO and pilot of the C172 responded at the same time, but the pilot of the C172 could be heard reporting their position to which the pilot of the Harvard acknowledged and responded that they were visual and turning final now. The [pilot of] C172 then initiated a go-around deadside.

Specific Traffic Information was not passed to the [pilot of the] Harvard at initial contact as it was reasonable to expect that the aircraft was to conduct a standard overhead join at which point specific Traffic Information would have been passed when entering the ATZ. The pilot next reported entering the ATZ and joining downwind at which point the AFISO prioritised passing specific Traffic Information on the two aircraft within the ATZ. The [pilot of the] Harvard conducted a tighter circuit than the C172. A debrief with the Duty AFISO took place during which it was agreed that specific Traffic Information was relevant and appropriate to the AFISO workload at the time.

A phone call with the pilot of the Harvard was also had during which they covered best practice for non-standard joins and ensuring that ample notice of the intention to join non-standard is given to the AFISO to allow them to provide Traffic Information to allow the [pilot] to make their decision on how to join the circuit safely.

CAA ATSI

At 1608:15 the pilot of the Harvard called the Barton AFISO for rejoin from the north and was advised that the runway in use was RW26 with a right-hand circuit, they were passed the QFE and instructed to set the Barton Conspicuity code. 4 miles ahead of the Harvard also joining was an E300. The circuit was active with the C172 on final approach at that time.

At 1611:38 the pilot of the C172 reported downwind for a touch and go. They were advised by the AFISO that there was *"no reported traffic ahead"* and instructed to report final which the pilot acknowledged.

At 1611:46 the Harvard pilot reported *"just entering the ATZ and I'll join for a er, and I'll join for the downwind 26 right"*. The AFISO replied: *"(Harvard callsign) roger. Two in the fixed wing circuit. C172 downwind and an Extra 300 joining from the deadside"*. The Harvard pilot replied: *"er copy all the traffic and joining downwind now"* (Figure 1).

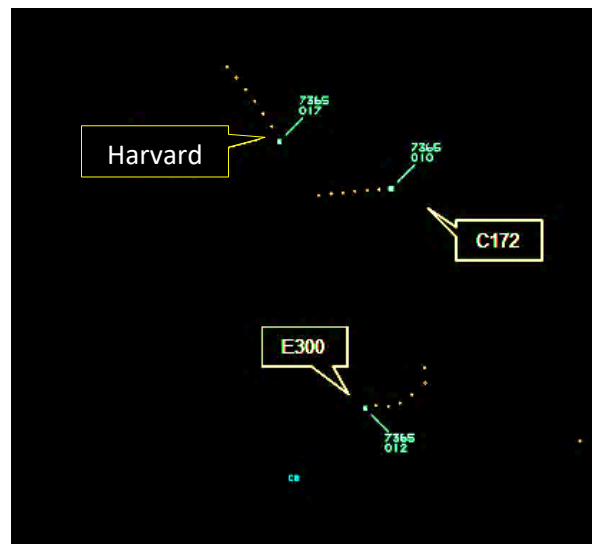


Figure 1 - 1611:46

At 1612:07 the E300 pilot reported downwind and was advised by the AFISO: “*roger – one ahead – report final*”, which was acknowledged by the pilot. The Harvard had not yet turned downwind (Figure 2).

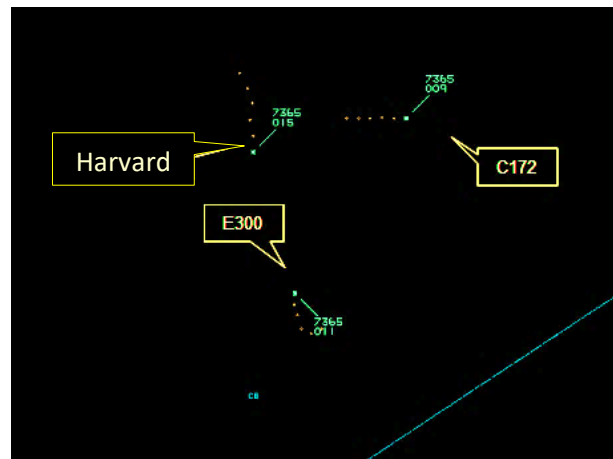


Figure 2 – 1612:07

At 1612:25 the AFISO replied to another pilot calling for rejoin.

At 1612:41 the pilot of the E300 reported “*climbing back into the overhead*”, to which the AFISO replied: “*roger – report descending deadside*” which was acknowledged by the pilot (Figure 3).

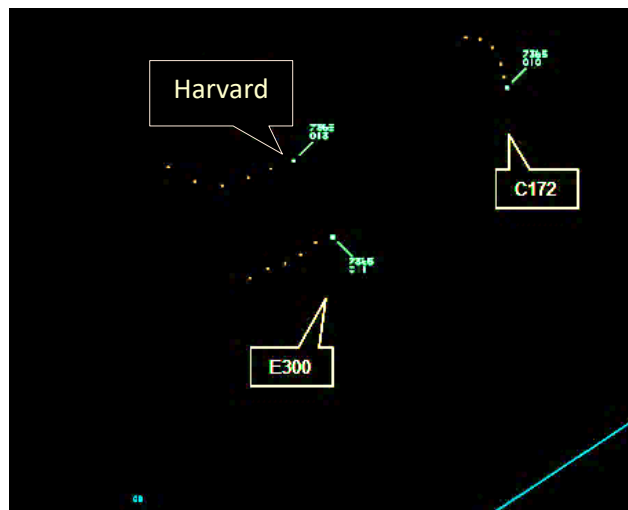


Figure 3 – 1612:41

At 1612:52 a pilot on the ground reported ready for departure and was instructed to hold due to landing traffic.

At 1613:07 the Harvard pilot reported: *"right base – looking for the traffic on final – where is he?"* Before the AFISO could reply, the C172 pilot responded: *"just off your left side, at your 10 o'clock"*. There were then two transmissions together, believed to be the [Harvard] pilot and the, subsequently reported, as also being the AFISO passing the position of the C172. Although the transmissions were mostly unintelligible the word *"visual"* was heard. It could not be determined if this was the Harvard pilot reporting visual with the C172 or not. (Figure 4).

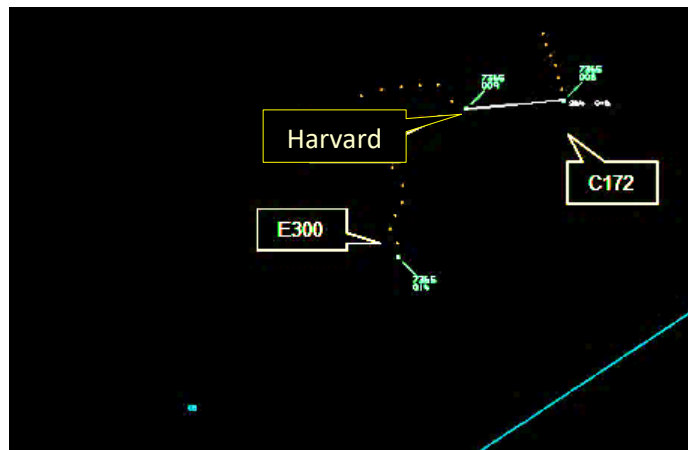


Figure 4 – 1613:07

At 1613:22 the [pilot of the] C172 reported going around deadside with *"(Harvard callsign) just inside me on final"* which was acknowledged by the AFISO (Figure 5).

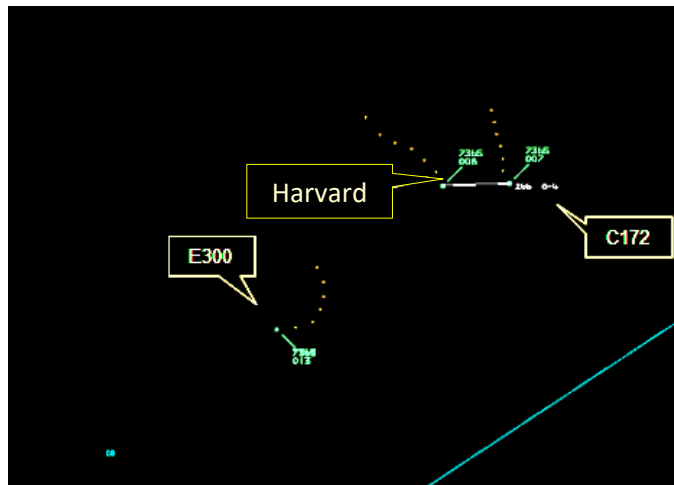


Figure 5 – 1613:22

The Harvard pilot then reported on final and was given a *"land at your discretion"*.

The AFISO passed accurate and timely Traffic Information throughout this period. When they reported entering the ATZ, the pilot of the Harvard was advised by the AFISO that the circuit was active with two aircraft.

Included in their ATZ entry call the pilot of the Harvard reported *"joining downwind now"* but made no definitive downwind call and was not given an update on traffic in the circuit ahead of them having already just been told that there were *"two in the fixed wing circuit"*. Whereas when the E300 pilot subsequently reported *"downwind"* they were given *"one ahead"* (the C172) suggesting that the AFISO's mental model for the order in the circuit was C172, E300 and Harvard.

The pilot of the E300 elected to leave the circuit and return to the overhead. It is not known if this was in response to the proximity of the Harvard outside them in the downwind position, but in doing so it reduced the complexity of the traffic situation.

The Harvard pilot turned onto base leg without apparently being visual with the C172 in the circuit ahead of them. Having been given the position of the C172 by the C172 pilot themselves in response to a request from the Harvard pilot, the Harvard pilot continued inside and turning onto final ahead of the C172, the pilot of which subsequently reported going around.

CAP797 states (Chapter 1 Para 1.15) that a FISO may issue advice and information to aircraft in their area of responsibility, useful for the safe and efficient conduct of flights. A FISO is not permitted to issue instructions to aircraft in the air (paraphrased) and *“pilots therefore are wholly responsible for collision avoidance in conformity with the Rules of the Air”* (Para 1.16).

Manchester Barton ATC is equipped with a Flight Information Display (FID). CAP707 (Appendix F) states that: *“The purpose of the FID is to improve the situational awareness of AFISOs and to assist them in providing information that is useful for the safe and efficient conduct of flights.”* The FID only displays ADS-B capable aircraft.

In their investigation report, Manchester Barton ATC stated that the Harvard was not displaying on their FID. The AFISO later reported that they had been visual with the C172, but not with the Harvard until it turned onto base.

The fixed wing standard join for Manchester Barton is overhead at 1700ft Barton QFE. Pilots must inform ATS if performing a non-standard join prior to entering the ATZ (UK AIP AD 2.22 EGCB).

The Harvard pilot did not announce their intention to join downwind until the point at which they were entering the ATZ, with their RTF suggested they were already about to join downwind giving no time for the AFISO to warn other pilots, in particular, the E300 which was crosswind in the circuit having descended from the overhead.

The Harvard pilot [did not] integrate with the existing traffic pattern at Barton.

UKAB Secretariat

The NATS radar replay was reviewed, and the Harvard was identified using Mode S data sources. A further analysis of aircraft tracking software was undertaken, and the C172 was observed and identified by reference to ADS-B data sources. Both pilots provided their aircraft GPS navigation data. CPA was assessed to have occurred at 1613:18 with 5ft vertical and 0.4NM lateral separation.

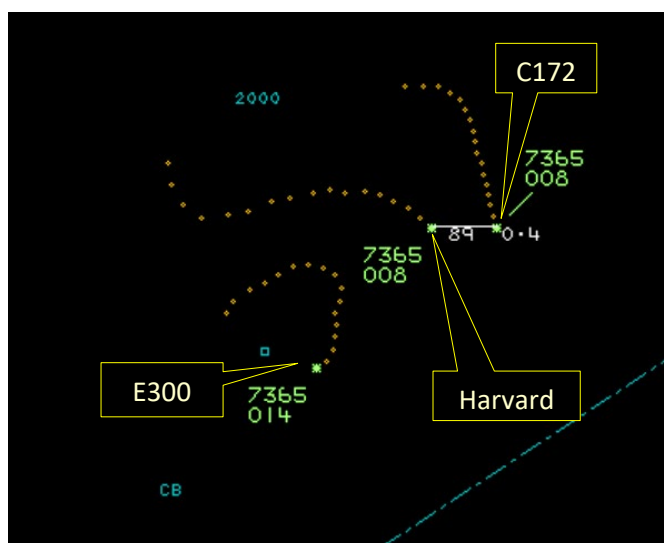


Figure 6 – 1613:18 CPA

The C172 and Harvard pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.³ 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.⁴

Summary

An Airprox was reported when a C172 and a Harvard flew into proximity at Manchester Barton Aerodrome at 1613Z on Friday 5th June 2026. Both pilots were operating under VFR in VMC and in receipt of an AFIS from Barton Information.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data for the flights of both the C172 and the Harvard, a report from the AFISO involved and a report from the appropriate operating authority. 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 C172 pilot, and noted that the pilot had been established in the Manchester Barton circuit pattern for RW26R. The Board opined that, on having heard the Harvard pilot calling for rejoin, the pilot of the C172 would have reasonably had a mental model placing the Harvard behind them in the circuit and members agreed that the C172 pilot, therefore, had only had generic situational awareness of the presence of the Harvard (**CF5**), not yet aware of the Harvard pilot's intentions. The Board noted that the C172 had been carrying an electronic conspicuity (EC) device which had alerted, but that had likely been in reaction to other nearby traffic and not to the Harvard, which had not been emitting an ADS-B out signal that could have been detected by the C172's equipment (**CF6**). The Board noted that, despite the C172 pilot's uncertainty over the Harvard's exact position, the C172 pilot had heard the Harvard pilot call, *'asking where the base traffic was'*, and had seen the Harvard turning base inside their own base leg. Members agreed that, at this point, the C172 pilot had become very concerned by the proximity of the Harvard (**CF8**).

The Board then considered the actions of the Harvard pilot, noting that the pilot had called for a downwind join as they had entered the ATZ. Members noted that, in response to the Harvard pilot's call, the AFISO had responded *"(Harvard callsign) roger. Two in the fixed wing circuit. C172 downwind and an Extra 300 joining from the deadside"*. Members agreed that this call had been sufficient to have provided the Harvard pilot with a reasonable mental model of the positions of the other two aircraft. Nonetheless, it was noted by the Board that the pilot of the Harvard immediately responded, *"er copy all the traffic and joining downwind now"*. In doing so, members agreed that the Harvard pilot had not complied with the Manchester Barton joining procedures (**CF2**) as they had not informed the AFISO of their intentions to join downwind prior to entering the ATZ. Furthermore, members agreed that the pilot had not integrated with the pattern of traffic already formed (**CF3**), despite having been informed by the AFISO of other aircraft in the visual circuit (**CF4**). The Board considered that the pilot of the Harvard could have significantly reduced their speed (to approximately 90kt) to have remained behind both the C172 and the E300 (had the E300 pilot remained in the circuit) and that they may not have had to ask, *'where is he?'*, in reference to the C172 on base, had they remained visual with that aircraft or had carried an EC device connected to a display that may have potentially assisted their own mental model by locating the C172. As such, members agreed that the Harvard pilot had seen the C172 at a late stage on the base leg of the circuit after obtaining a position report on frequency from both the C172 pilot and the AFISO (**CF7**).

Moving their attention to the actions of the Manchester Barton AFISO, the Board noted that the AFISO had likely been taken by surprise by the late notice given to them by the Harvard pilot of their intention to conduct a downwind join. Members agreed that, based on the Traffic Information passed to the pilot

³ (UK) SERA.3205 Proximity.

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

of the Harvard, the AFISO would have had a mental model of C172, E300 followed by the Harvard as a circuit sequence, but could not have sequenced the traffic in any case. The Board noted that the AFISO had been using a FID, which displayed ADS-B traffic only, and that the Harvard had not appeared on their screen. Members agreed that the AFISO, therefore, had only had generic situational awareness of the position of the Harvard (**CF1**), having not sighted it until the Harvard had been on base leg.

In concluding their discussion, the Board noted that the Harvard pilot had joined and flown inside the circuit ahead of a C172 and E300 reported as having been in the circuit ahead of them. Members agreed that the pilot of the C172 had been concerned as the Harvard had flown inside their own circuit pattern, approximately co-altitude and at 0.4NM, at which point the C172 pilot had elected to go around to the deadside and away from the Harvard. Members agreed that the pilot of the C172 had taken timely and effective action to have prevented the aircraft from coming into closer proximity and that, although safety had been degraded, there had been no risk of collision. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2026100			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
2	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			
3	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			
4	Human Factors	• Incomplete Action	Events involving flight crew performing a task but then not fully completing that task or action that they were intending to carry out	Pilot did not sufficiently integrate with the other aircraft despite Situational Awareness
5	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			
6	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
	• See and Avoid			
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	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk:

C.

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:

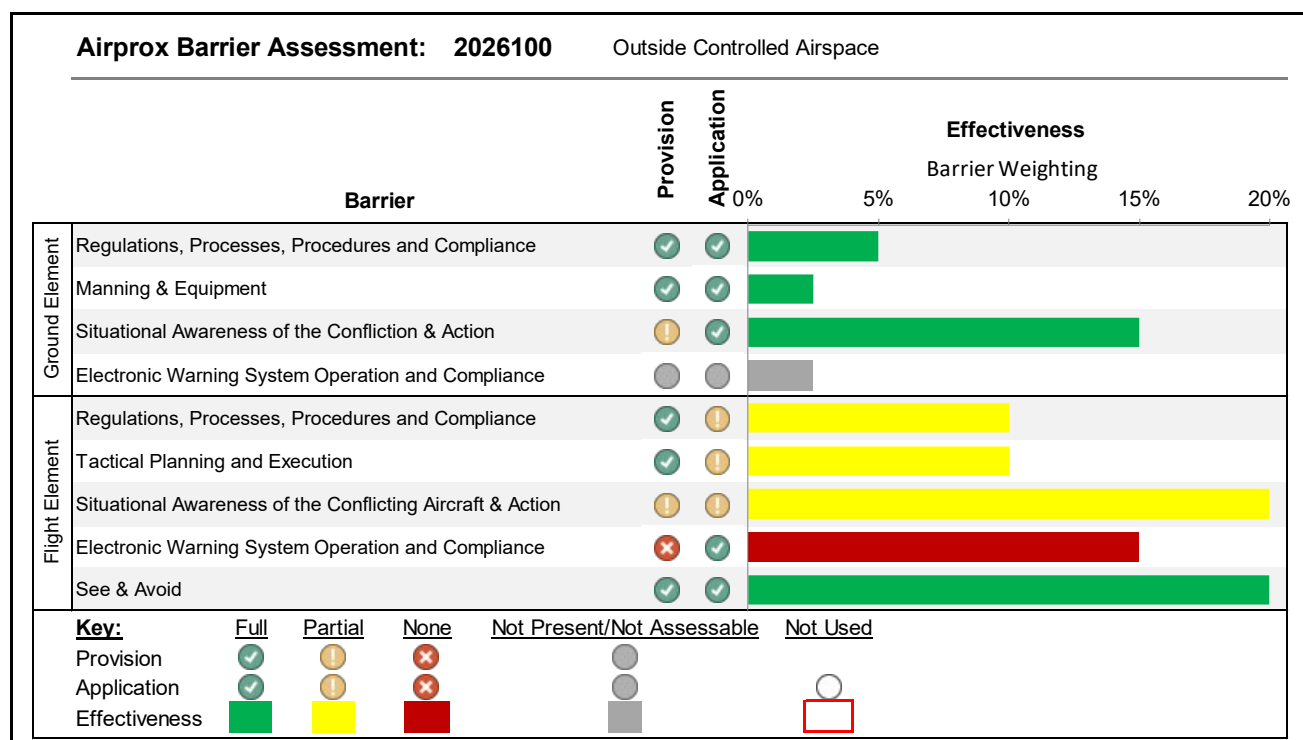
Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the pilot of the Harvard had not fully complied with the airfield joining procedures.

Tactical Planning and Execution was assessed as **partially effective** because the Harvard pilot did not conform with the pattern of the traffic already formed in the circuit.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the C172 pilot only had generic situational awareness of the presence of the Harvard joining the circuit behind them, and the Harvard pilot had positioned themselves inside the circuit pattern despite having been informed of the positions of other circuit traffic.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the C172's electronic conspicuity device was unable to detect the Harvard.



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