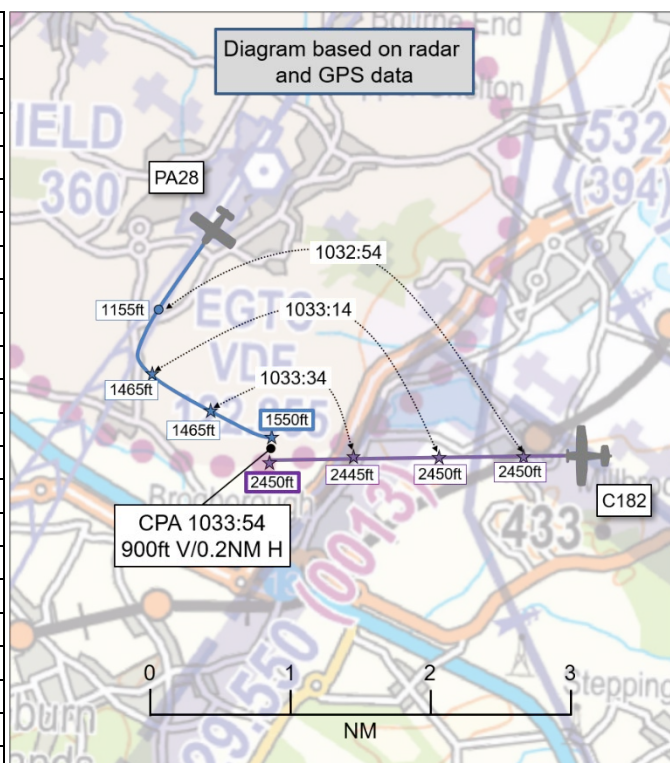


AIRPROX REPORT No 2026079

Date: 24 May 2026 Time: 1034Z Position: 5202N 00037W Location: 2.2NM S of Cranfield Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	C182
Operator	Civ FW	Civ FW
Airspace	Cranfield ATZ	London FIR
Class	G	G
Rules	VFR	VFR
Service	ACS	Basic
Provider	Cranfield Tower	London Info
Altitude	1550ft	2450ft
Transponder	A, C, S	A, S ¹
ADS-B Out	Not observed	Not observed
Reported		
Colours	Blue	White
Lighting	Tail Beacon	Beacon & strobe
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1500ft	2450ft
Altimeter	QNH (1031hPa)	QNH (1031hPa)
Heading	030°	~270°
Speed	95kt	109kt
ACAS/TAS	Not fitted	FLARM
Alert	N/A	None
Separation at CPA		
Reported	100-200ft V/0m H	Not seen
Recorded	900ft V/0.2NM H	



THE PA28 PILOT reports that, shortly (approximately 15-30sec) after turning downwind, and with the aircraft about 1500ft (normal circuit altitude on QNH at Cranfield is 1400ft, they had slightly over-climbed and were correcting), both they [as instructor/PIC] and their student simultaneously became aware of a high wing Cessna single very close in their 1-2 o'clock position, and 100-200ft above them. Neither of them could see any registration or other markings. [The PIC] estimated that its heading was 20-30° to the right of a direct reciprocal of their heading. The time they had to observe it was very short before it passed directly above them. [The PIC] immediately reported this to [the Cranfield Approach controller], who stated that they were unaware of the aircraft, and asked if [the instructor] was declaring an Airprox. They confirmed that they were. They continued the circuits sortie, landing at 1056.

The instructor noted that the aircraft above them was heading approximately 240° and appeared to be a single engine Cessna. They had been on a standard training sortie with a good pre-solo student. They presumed that the closing velocity was about 180-200kt. They further noted that, given the geometry, they anticipated that they were in the other pilot's blind spot at 1-2 o'clock low.

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

THE C182 PILOT reports that they had been trying to fly to [their destination] for a few years, but the weather had never cooperated. This May, however, the weather was perfect. There were four of them, all pilots, flying two aircraft. On [this day] their friend was flying with them (acting as a 'sort-of' co-pilot). [Neither the pilot nor passenger] noticed anything unusual during that leg of the flight.

¹ The pilot reported the aircraft as transmitting Modes A and C. However, it was operating on Modes A and S, with Mode C not displaying (no altitude read-out).

The pilot noted that they had planned to avoid nearby restricted areas and divert both around the Cranfield ATZ and at 100ft above it. On providing information for this Airprox report the pilot had been concerned about what had, supposedly, gone wrong and wanted to learn from this experience, stating that this was important. On being informed that the C182 transponder's Mode C had not been detected at the time of the Airprox the pilot responded that no controllers enroute had offered an altimeter check.

THE CRANFIELD TOWER CONTROLLER reports that [at] approximately 1034, the PIC of [the PA28] queried the presence of a Cessna-type aircraft, which had just passed overhead them at the start of the downwind leg. The aircraft was not known to the controller - the only other aircraft on frequency at the time was displaying on the FID as some miles southwest of the airport. After this report, they located an aircraft with the zoom camera, which matched the description and appeared to be heading southwest-bound. Following the occurrence, they spoke to the pilot [of the PA28], who offered the following information: they were at approximately 1500ft QNH and the aircraft passed approximately 100-200ft above them-they felt that the aircraft was definitely within the ATZ and heading generally 240°.

THE LONDON INFORMATION FISO reports that [the pilot of C182 C/S] called them at 1026 enroute from [departure to destination], they provided the [pilot] with a Basic Service and squawk 1177C. The aircraft was transferred to [their enroute frequency] by the FISO at 1057 and they had subsequently been advised that the pilot reported an Airprox after the flight had ended. The FISO had no recollection of the incident, and nothing was mentioned to them whilst the aircraft was on their frequency, therefore they could add no more detail for this event. It was noted that the C182 was at 2400ft while enroute to their destination.

Factual Background

The weather at Luton Airport was recorded as follows:

METAR EGTC 241020Z VRB03KT CAVOK 24/13 Q1031

The London TMA base in the vicinity of Cranfield is notified as 5500ft in LTMA 9 and 19:

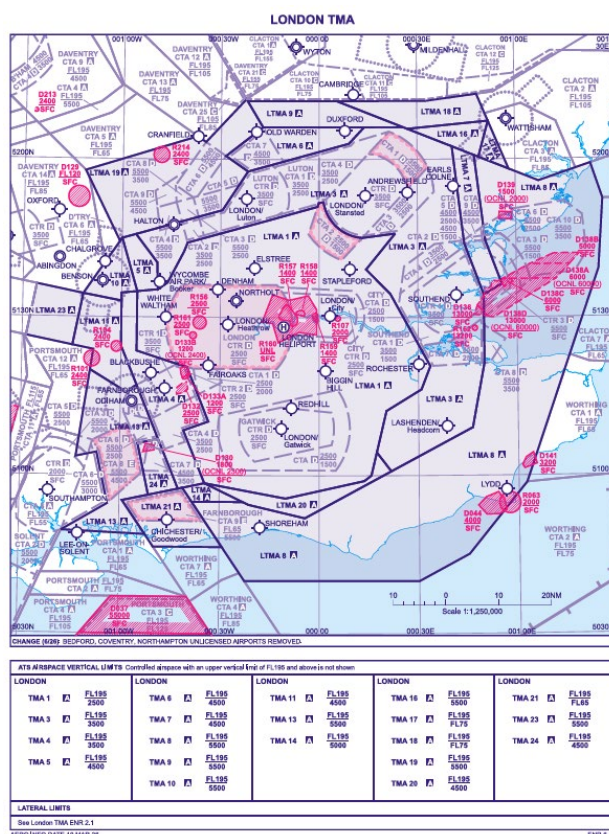


Figure 1

Analysis and Investigation

Cranfield Airport

The investigator was present at the time of occurrence. They had a discussion with the ATCO involved and reviewed the discussion between the ATCO and the reporting pilot via telephone.

Findings

The ATCO was first made aware of the conflict by the reporting pilot of the PA28 in the circuit. The pilot asked if the ATCO was aware of an aircraft passing over the top of them, inside the ATZ. The conflicting traffic was detected and 'boxed' by the tracking system on the Digital Tower 'Out The Window' [OTW] view. However, their relative position was such that it would have been indistinguishable from airways traffic frequently detected in the same position. No track existed for the conflicting aircraft on the Flight Information Display. As such, the ATCO's situational awareness of the conflicting traffic was effectively nil. One other aircraft was on frequency at the time of the occurrence but did not match the description of the conflicting traffic. Outside the pilot's report, no data was available at Cranfield to establish whether the aircraft [was either inside or outside] the ATZ.

NATS Safety Investigations

Summary

The UK Airprox Board notified Safety Investigations of a pilot-reported Airprox involving [a PA28] and [a C182, the pilot of which] was receiving a Basic Service from London Information. The confliction was not reported on frequency.

Description and Investigation

Information available to the investigation included:

- CA4114 from the London Information FISO (LFISO)

The pilot of [the C182] contacted the London Information frequency at 1025:27 (all times UTC) and reported they were in a Cessna C182 having just departed [departure point], inbound to [destination], at altitude 2400ft, and requested an "information [service]". The pilot was informed they were receiving a Basic Service with 1177 squawk assigned. The London FISO requested the pilot's routeing, which was stated as [waypoints and destination] at 1026:39.

The FISO provided clarity on the base of the LTMA of 2500ft, issued the London QNH of 1031hPa and advised the pilot to remain outside controlled airspace, including the Luton zone, which was acknowledged by the pilot.

The pilot-reported routeing suggested that it would track to the south of Cranfield ATZ where the UK AIP stipulated radius was 2NM and up to altitude 2360ft. Therefore, the pilot reported altitude would also ensure that the [C182] would remain outside the ATZ (Figure 2).



Figure 2

Note: From departure from [departure airfield], [the C182 transponder's] Mode-C was not displayed.

The Piper PA28, displayed operating in the vicinity of Cranfield ATZ with a maximum altitude of 1600ft, and appeared to be operating circuits with touch and go approaches. At approximately 1031:01, [the PA28] disappeared from radar as it again descended into Cranfield from the northwest.

[The PA28] reappeared on radar at 1033:01 climbing through altitude 1300ft for 1600ft and turned towards the approaching [C182] that was maintaining their lateral track. The NODE Radar range and bearing tool suggested [that the C182] remained outside the lateral boundary of the Cranfield ATZ (Radius 2NM) (Figure 3).



Figure 3

The subsequent closest point of approach occurred at 1033:51 and was recorded on NODE Multi-Track Radar as 0.1NM with no Mode-C data for [the C182] available (Figure 4).



Figure 4

Radar data suggested that the pilot of [the PA28] enacted a significant lateral avoidance manoeuvre to resolve the confliction (Figure 5).



Figure 5

Conclusions and Assessment

The Airprox occurred when the pilot of [the C182] tracked to the south of the Cranfield ATZ, whilst receiving a Basic Service from London Information and came into conflict with [a PA28] that was climbing out of Cranfield.

The Closest Point of Approach occurred at 1033:51 and was recorded on NODE Multi-Track Radar as 0.1NM with no Mode-C for [the C182] available. The incident was resolved by the pilot of [the PA28] enacting a significant lateral avoidance manoeuvre to resolve the conflict.

CAA ATSI

On reviewing the NATS investigation, ATSI was satisfied that most of their points were covered, if only to add that making such wide circuits at Cranfield was not affording the pilot of [the PA28] very much 'protection' when they were nearly on the boundary of the ATZ.

UKAB Secretariat

The NATS radar replay, CAA Airspace Analyser and other third-party tracking software were reviewed. Both aircraft were identified through Mode S data (Figure 5), but neither aircraft was observed by reference to ADS-B data sources.

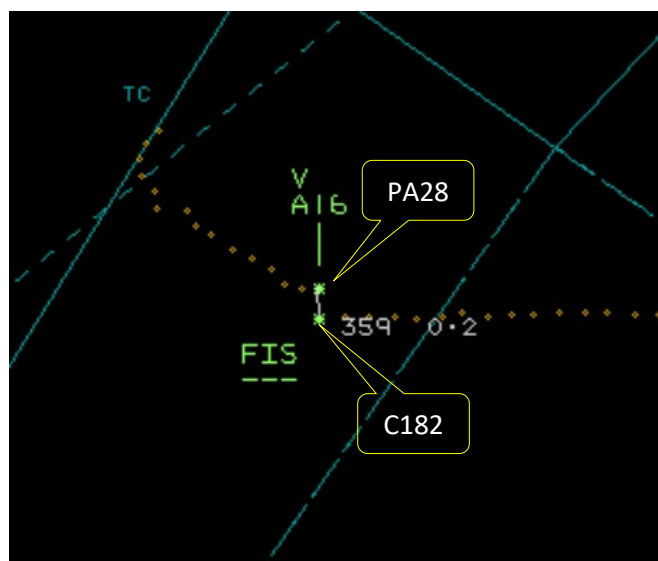


Figure 5 – CPA Time 1033:54

Both the PA28 and C182 pilots provided their GPS navigation track and altitude data, and CPA was assessed, from the GPS data available to the UKAB Secretariat, to have occurred at 1033:54 with 0.2NM lateral and 900ft vertical separation.

The PA28 and C182 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 PA28 and a C182 flew into proximity at Cranfield at 1034Z on Sunday 24th May 2026. Both pilots were operating under VFR in VMC, the PA28 pilot in receipt of an ACS from Cranfield Tower and the C182 pilot in receipt of a Basic Service from London 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 both the PA28 and C182 flights, reports from the Cranfield controller and London FISO 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.

The Board first considered the actions of the pilot of the PA28, noting that they had been in receipt of an ACS while training their student in the Cranfield circuit. The Board noted that the pilot had neither heard nor been made aware of any passing traffic and had not carried any additional electronic conspicuity equipment capable of detecting the C182. Members agreed, therefore, that the pilot had had no situational awareness of the presence of the C182 (**CF5**) as it had passed above and marginally to the south of the ATZ. The Board further noted that the PA28 student pilot had slightly overshot the intended level on the climb-out in the crosswind segment of the circuit, heading approximately southeast, but had remained within the ATZ, when they and the PIC had seen the C182 and had become concerned by their perceived proximity of it (**CF8**).

Turning their attention to the actions of the pilot of the C182, the Board noted that the pilot's planned track had taken the aircraft close to Cranfield ATZ. Members agreed that it would have been prudent, therefore, to have planned to have called Cranfield ATC and to have made them aware of their proximity and intended routeing (**CF3**, **CF4**). On the subject of routeing and planned altitudes, one member wondered whether the information passed to the pilot regarding the level of the LTMA starting at 2500ft had caused the pilot to have flown lower than originally planned, to staying just below 2500ft, with the lowest point of the LTMA to the south of Cranfield on their planned routeing being no lower than 3500ft (Figure 1) and the weather CAVOK. The Board was concerned that overflying the ATZ by 100ft had not afforded the pilot any margin for error, especially as transponders and altimeters are only required to be accurate to within 150ft, and members agreed that it would have been prudent for the pilot to have applied similar separation criteria to the Cranfield ATZ as recommended for controlled airspace in the GASCo 'Take Two' initiative.⁴ At this point, members addressed the C182 pilot's comments that '*no controller enroute had offered an altimeter check*' noting that altimeters will only usually be checked by radar-based surveillance units when requesting a Traffic Service, and that London information is not radar-based and does not monitor the aircraft's path. However, members acknowledged that the C182 pilot had possibly received a radar-based service elsewhere on their route. The Board then concentrated on the ramifications of not having had information provided by Cranfield ATC, and members agreed that the pilot had only had generic situational awareness of the possibility of circuit traffic operating in the vicinity of Cranfield airfield (**CF5**), rather than specific information about the PA28 itself. Members further agreed that, unfortunately, the C182's electronic conspicuity device had

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

⁴ [Take Two](#)

provided no assistance to the pilot's situational awareness as it had been unable to detect the PA28 (CF6), and that the pilot had not seen the PA28 (CF7).

The Board then considered the actions of the Cranfield controller, noting that the Cranfield FID had not displayed the C182 and that the controller reported using a zoom camera to visually acquire the passing aircraft only after it had been reported to them by the pilot of the PA28. Members agreed, therefore, that the Cranfield controller had had no situational awareness of the presence of the C182 (CF2) and had been unable to pass any Traffic Information to the PA28 pilot on the C182.

The Board finally considered the actions of the London FISO, noting that they had only been providing the C182 pilot with a Basic Service and had not been required to monitor them under the terms of a Basic Service (CF1).

Finalising their discussion and in consideration of a Risk Category, the Board noted that while the PA28 pilot had been concerned by the proximity of the C182, they appear to have manoeuvred away from the C182's track and remained within the ATZ. The Board noted that C182 pilot had been recorded, as reported, at 2450ft outside the ATZ and vertically separated from the PA28 by 900ft. As such, the Board concluded that normal safety parameters had pertained and assigned Risk Category E to this event.

CF1: The London FISO was not required to monitor the C182 under the terms of a Basic Service.

CF2: The Cranfield controller had no situational awareness of the presence of the C182.

CF3: The pilot of the C182 could have communicated with Cranfield ATC.

CF4: Given their planned track and altitude in the vicinity of Cranfield, the pilot of the C182 could have pre-planned to call Cranfield.

CF5: The pilot of the PA28 had no situational awareness of the presence of the C182, and the C182 pilot had only generic situational awareness of the likelihood of traffic in the Cranfield circuit.

CF6: The C182's electronic conspicuity equipment was unable to detect any emissions from the PA28.

CF7: The pilot of the C182 did not see the PA28.

CF8: The pilot of the PA28 was concerned by the proximity of the C182.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2026079			
	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
2	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			
	• Tactical Planning and Execution			
3	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider

4	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
• Situational Awareness of the Conflicting Aircraft and Action				
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	• 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
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: E.

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:

Ground Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the Cranfield Tower controller had no situational awareness of the presence of the C182.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the C182 pilot could have planned to contact Cranfield at the initial flight planning stage.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the PA28 pilot had no situational awareness of the presence of the C182, and the pilot of the C182 had only generic awareness of the likelihood of circuit traffic in the Cranfield ATZ.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the C182's electronic conspicuity device could not detect the PA28.

⁵ 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: 2026079		Outside Controlled Airspace				
Barrier		Provision	Application	Effectiveness		
				0%	5%	Barrier Weighting
						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		■	■	■	■	□