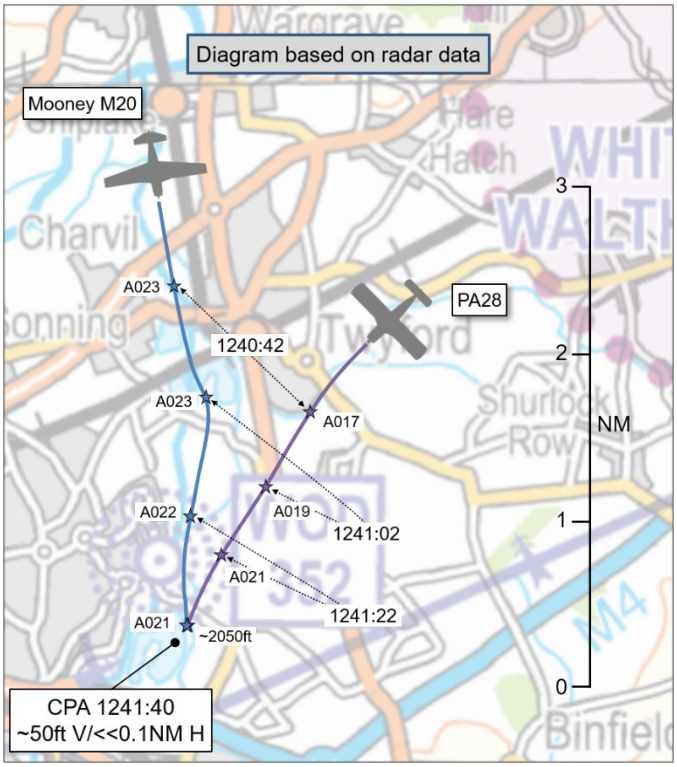
AIRPROX REPORT No 2026126

Date: 26 Jun 2026 Time: 1242Z Position: 5127N 00052W Location: 3NM E Reading

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Mooney M20	PA28
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Basic
Provider	F'borough LARS W	F'borough LARS W
Altitude/FL	A021	~2050ft
Transponder	A, C, S	A, C, S
ADS-B Out	Not Observed	Observed
Reported		
Colours	White, turquoise	White, red
Lighting	Strobes	Strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2000ft	2200ft
Altimeter	QNH (1014hPa)	QNH
Heading	180°	214°
Speed	150kt	100kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	None
	Separation at CPA	
Reported	10ft V/0m H	0ft V/0m H
Recorded	~50ft V/<<0.1NM H	



THE MOONEY M20 PILOT reports that, to them, the collision risk was more than high, it was almost a collision.

As they do not have any anti-collision [electronic conspicuity] equipment, they went through a lot of trouble to [try to] avoid flying at 2400ft north and west of Heathrow CTR due to the poor service typically provided in the UK in Class G airspace [they opined].

They could not get [either of their two different flight planning solutions] to find an acceptable IFR routeing from [their takeoff airfield on the continent] to [their destination airfield in the UK], but they managed to find a routeing manually at FL50 and filed a 'Y' flightplan with Eurocontrol (cancelling IFR at CPT VOR). That Eurocontrol-approved routeing would take them through [the] Class A [airspace of the] London TMA from about Cambridge, north of Stansted and overhead Luton. Then they hoped that Farnborough would vector them […] through Class A and D airspace, or vector them to a holding point in [the] Farnborough CTR at 1600ft QNH […].

[They were] soon cruising at FL50 over the North Sea in uncontrolled airspace. Near NEKAS, Amsterdam Information told them to proceed 'direct destination'. This surprised them a bit as this would take them straight through the busy Heathrow [London] TMA. Such clearances are common in other parts of Europe. This is, apparently, not common in the busy London FIR. In Europe, this would normally mean that Amsterdam would have coordinated with London to issue that clearance. At the FIR boundary, they were passed on to London Information who obviously did not have a copy of their IFR flightplan and asked them to report the name of the place where they would pass the coastline - not a normal report for an IFR flight.

They were then with Southend Radar for a while at FL50 (who, again, did not appear to have a copy of their IFR flightplan, as would be normal in Europe), and were given a good and timely Traffic Service.

When approaching the London TMA, they said that they were unable to coordinate the 'direct destination […]' with Heathrow. At that time, it was a bit late to revert to the filed routeing, so they were ordered to descend to 2400ft below the TMA and to use VFR routeing north and west of the Heathrow CTR. They contacted Farnborough Radar and were given […] a 'Basic Service' which, for a European pilot, translates to 'no service' [they opined]. It was hot and bumpy, and the frequency was busy with numerous traffic advisories.

Then, at 2000ft about 7NM north of Blackbushe and in radio and radar contact with Farnborough Radar, they almost collided with another aircraft. They were both travelling at, perhaps, 150kt so they just saw a quick flash of another white aeroplane passing about 10-20m below them.

The RT conversation (as they remember):

The pilot of the M20: "*...that was a close call...*"

The pilot of the other aircraft: "*Yes, we had to do a last second evasion manoeuvre*".

Farnborough Radar: "*I told you about the other aircraft, but you did not respond*".

It was not clear to them whether the Farnborough [controller] was referring to them or the other traffic. Neither they, nor [their passenger], remember [the Farnborough controller] calling them. They did not have time to discuss it further with the Farnborough [controller] and, within a minute, they asked to leave for [an onward frequency].

[The pilot of the M20 commented that] they were somewhat distracted by preparing their approach to [their] busy [destination], so did not look out of the window all the time.

The pilot assessed the risk of collision as 'Almost a collision'.

THE PA28 PILOT reports that, at 1238, it was a normal departure and, upon leaving the circuit, they established contact with Farnborough Radar (125.250MHz) and obtained a Basic Service and received a squawk 0431. For their routeing, they requested transit of the Odiham MATZ which was approved.

Shortly after receiving the service, Farnborough Radar called: "[PA28 C/S] *are you visual with the aircraft behind you?*". [The pilot of the PA28] replied: "*Farnborough, did you say behind me?*" (reflecting the fact that that was not possible), and the reply came as they were turning to look behind: "*Yes, 4 o'clock*" and, at same time, their passenger shouted out. [The pilot of the PA28] saw a light aircraft so close that the nose nacelle filled the rear RHS window. It was also large enough that they registered that the aircraft was a Mooney with its distinctive nose. They reacted immediately, diving the [PA28] down and to the left (by approximately 100ft) as they thought that was the most effective avoiding action.

Farnborough Radar then called and said: "[PA28 C/S] *Did you see the aircraft?*" to which they replied: "*Yes, I took avoiding action*". They then heard another transmission, presumably from [the pilot of the] conflicting aircraft, saying: "*That was very close*".

[The pilot of the PA28 commented that] their [navigation system] was displaying traffic (it receives ADS-B Out) but no converging-track aircraft was seen and no 'close warning' of traffic was received. They also did not hear any transmissions between Farnborough Radar and the [pilot of the] conflicting traffic before the incident, so were not aware of its converging position or routeing.

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

THE FARNBOROUGH RADAR CONTROLLER reports that, from memory, they had two [pilots under a] Basic Service on frequency, [the pilot of the M20] tracking south and [the pilot of the PA28] tracking west. Initially, it seemed like [the M20] would go behind [the PA28] so they did not pass Traffic Information in line with CAP 774. [The pilot of the M20] turned right which, they perceived, put them in definite risk of collision. They called the traffic to [the pilot of the M20] and they did not reply. [The controller] then called the traffic to [the pilot of the PA28] who did reply. [The controller] then passed Traffic Information again to [the pilot of the M20] who did reply. One of [the pilots] mentioned that they

had to turn to avoid. [The controller] cannot remember their levels, but they were probably the same on Mode C.

Factual Background

The weather at Farnborough Airport was recorded as follows:

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METAR EGLF 261250Z AUTO 23010KT 9999 NCD 32/16 Q1015
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Analysis and Investigation

CAA ATSI

ATSI has nothing to add to the NATS investigation.

NATS Operations Safety Performance and Investigations

The pilot of [the M20] called onto frequency with the Farnborough LARS West controller (West) at 1239:07 (all times UTC), having been transferred from Farnborough LARS North in receipt of their requested Basic Service. The pilot stated that they were squawking 5024 and inbound to [their destination]. The West controller issued Mode A code 0440, QNH 1015hPa and informed the pilot it was a Basic Service.

The pilot of [the PA28] called onto frequency with the West controller at 1239:55 and requested a Basic Service, which was issued along with Mode A code 0431 and QNH 1015hPa. The pilot requested a clearance through the "*Odiham stub*", which was approved at 1240:43.

At 1241:12, the West controller transmitted "*Ahh,* [M20 C/S (with an incorrect prefix)] *are you visual with traffic just off to your left - it's climbing to a similar level?*", to which there was no response.

The controller then transmitted, at 1241:21: "[PA28 C/S] *traffic just behind you to your right at 2200 feet, quarter of a mile*", and the pilot responded that they had copied the traffic and requested clarification that the controller had stated the traffic was behind them. The controller responded "*you're merging with it, it's on your right now*". On completion of that transmission, the controller transmitted, at 1241:34: "[M20 C/S (with the correct prefix)], *you're merging with traffic now that's similar track, similar level*".

The Closest Point of Approach between [the M20] (0440) and [the PA28] (0431) occurred at 1241:39 and was measured on the Multi-Track (NODE) radar system as 0NM and 0ft.

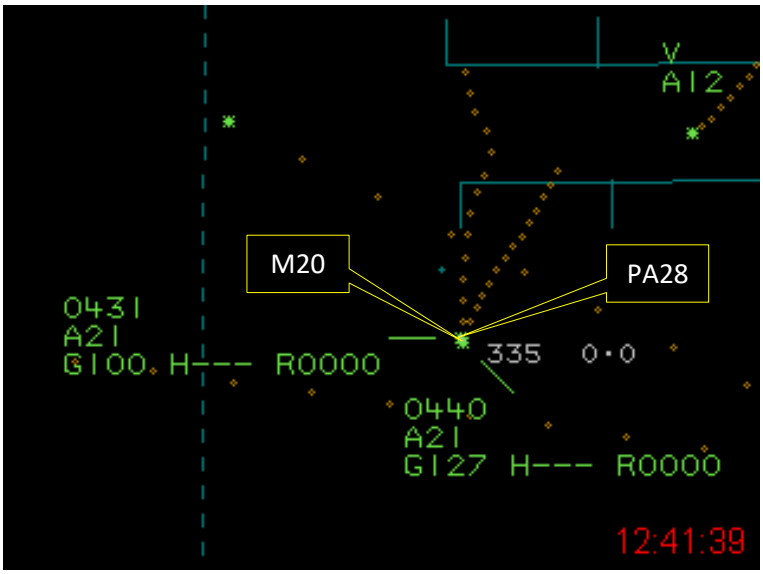


Figure 1 – NODE radar



Figure 2 – Farnborough radar

Note: The NODE replay system displays range and bearing distances to a maximum accuracy of one tenth of a nautical mile (Figure 1), the Farnborough radar replay system recorded a minimum lateral distance of 0.03NM (Figure 2).

The pilot of [the M20] transmitted at 1241:47: "*That was a very close call*", and the controller stated that they did try to call the traffic before giving updated Traffic Information to both pilots. The pilot of [the PA28] reported that they had taken avoiding action.

The CA4114 from the West controller explained that the pilot of [the M20] contacted Farnborough Radar on the 27th June 2026, the day after the event, to notify the Unit they would be submitting an Airprox report.

Investigation

Information available to the investigation included: CA4114 from the Farnborough LARS West and Zone controller, NATS4118 Initial Watch Management Investigation Report, [redacted copies of] Airprox reports from the pilots of [the M20 and PA28], CAP 774 UK Flight Information Services.

The NATS4118 stated that 'both aircraft were under a Basic Service with Farnborough, as they had requested, both had been validated and verified.'

CAP 774 UK Flight Information Services Chapter 2, 2.1 states:

> 'A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.
>
> Basic Service relies on the pilot avoiding other traffic, unaided by controllers/ FISOs. It is essential that a pilot receiving this ATS remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.'

CAP 774 Chapter 1, 1.11 highlights:

> 'There may be circumstances that prevent controllers/FISOs from passing timely traffic information and/or deconfliction advice, e.g. high workload, areas of high traffic density, unknown aircraft conducting high energy manoeuvres, or when traffic is not displayed to the controller or is obscured by surveillance clutter … In high workload situations, which may not always be apparent from RTF loading, controllers/FISOs may not always be able to provide timely traffic information and/or deconfliction advice. High workload situations may not necessarily be linked to high traffic density.'

The CA4114 from the West controller stated that: 'Initially, it seemed like [the M20] would go behind [the PA28] so I didn't pass Traffic Information'. The controller's report subsequently added that: '[The M20 pilot] then turned right, which I perceived put them in definite risk of collision'.

The West controller intended to pass Traffic Information to the pilot of [the M20], however they used an incorrect callsign [prefix], there was no response and the controller issued Traffic Information to the pilot of [the PA28]. Figure 1 above shows that [the pilot of the M20] appeared to be turning left to track behind [the PA28], before turning right and then onto a southerly track, bringing the aircraft into closer confliction.

The NATS4118 detailed 'The reporting ATCO recalled that both [pilots] were under a Basic Service and that they called the traffic to both. They stated that it appeared that the southbound [pilot], who had not responded to the Traffic Information, turned towards the westbound traffic, which could have made the situation more serious, and that the traffic had been called again'.

The Closest Point of Approach occurred at 1241:39 and was recorded on Multi-Track radar as 0NM and 0ft.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data. The PA28, but not the M20, was observed by reference to ADS-B data sources.

The diagram was constructed and the separation at CPA determined from the radar data. CPA was assessed to have occurred between the radar sweeps at 1241:38 and 1241:42, (Figures 3 and 4). The altitude of the PA28 has been shown as an approximate value as it had been at 2100ft 2sec before CPA and 2000ft 2sec after CPA.

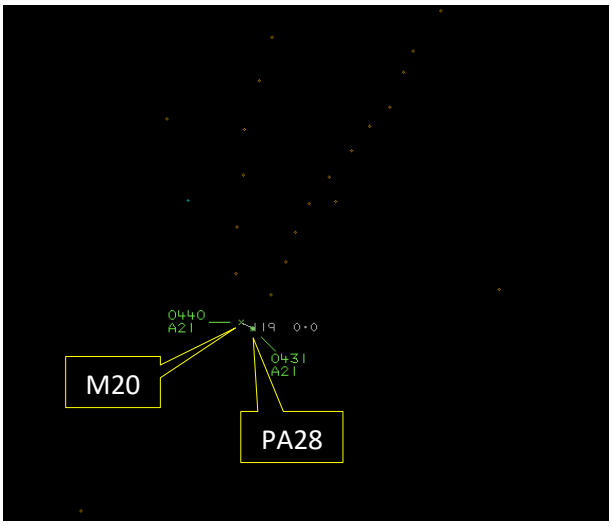


Figure 3 – 1241:38 (2sec before CPA)

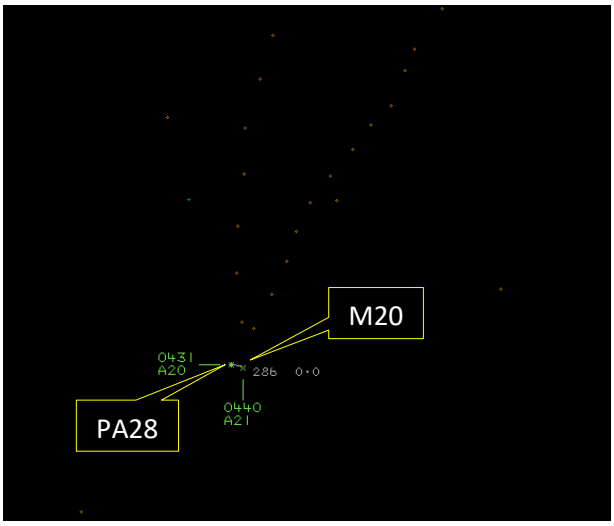


Figure 4 – 1241:42 (2sec after CPA)

The M20 and PA28 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] If the incident geometry is considered as overtaking then the PA28 pilot had right of way and the M20 pilot was required to keep out of the way of the other aircraft by altering course to the right. No subsequent change in the relative positions of the two aircraft shall absolve the overtaking aircraft from this obligation until it is entirely past and clear.[2] An aircraft that is obliged by the rules to keep out of the way of another

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(3) Overtaking.

shall avoid passing over, under or in front of the other, unless it passes well clear and takes into account the effect of aircraft wake turbulence.[3]

Summary

An Airprox was reported when a Mooney M20 and a PA28 flew into proximity 3NM east of Reading at 1242Z on Friday 26th June 2026. Both pilots were operating under VFR in VMC and in receipt of a Basic Service from Farnborough LARS West.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, a report from the air traffic controller involved, radar photographs/video recordings 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 pilot of the Mooney M20, and members pondered the composition of their flightplan. A member with specific knowledge of intercontinental navigation explained that a 'Y' flightplan describes a flight that is initially conducted under IFR and, at a predetermined waypoint, reverts to flight under VFR. Such an arrangement is convenient insofar as the majority of the workload for navigation-planning can be completed before flight, with minimal navigation under VFR required until much nearer a destination. However, it was also explained that, should the unexpected happen, and the flight is to be conducted under VFR prematurely, the workload for the pilot may rise sharply when the navigation of the flight is conducted extemporaneously. In that regard, members noted that the pilot of the M20 had deviated from their filed flightplan before they had crossed the FIR boundary and, therefore, had accepted to undertake their flight by formulation of a dynamic plan.

Focussing on the moments before CPA, members noted that the pilot of the M20 had been in receipt of a Basic Service from the Farnborough LARS West controller. As such, members agreed that they would not have expected to have received any Traffic Information along their route and that they had been responsible for collision avoidance without assistance from the controller. Members suggested that it may have been prudent to have requested a surveillance-based service (**CF4**) which may have assisted their situational awareness. Members noted that no ADS-B emissions had been observed from the transponder fitted to the M20 and that no additional EC device had been in use. Members were keen to encourage the fitment and use of appropriate EC equipment, especially when conducting a flight in notably congested, and unfamiliar, airspace.

Members acknowledged that the pilot of the M20 had recalled that they had been 'somewhat distracted by preparing their approach'. It was appreciated that such preparation had been necessary, but members pointed out that it had been of paramount importance to have maintained a thorough and effective lookout, particularly as they had relied heavily on the effectiveness of the see-and-avoid barrier. Members were in agreement that the pilot of the M20 had been distracted at a critical moment in their flight (**CF7**) and that that may have compromised their lookout.

Reviewing the timing of the encounter, members noted that the Farnborough controller had attempted to pass Traffic Information to the pilot of the M20 approximately 28sec before CPA, but had used an incorrect callsign prefix. The controller subsequently passed a message to the M20 pilot, 6sec before CPA, that: "*you're merging with traffic now that's similar track, similar level*". Members acknowledged that the pilot of the M20 would not have had time to have assimilated the content of that message and to have taken action before CPA occurred. Consequently, members agreed that the pilot of the M20 had not had situational awareness of the presence of the PA28 until it had been visually acquired (**CF5**). As the PA28 had not been sighted until the moment of CPA, members agreed that that effectively constituted a non-sighting (**CF8**).

[3] (UK) SERA.3210 Right-of-way (c).

Turning their attention to the actions of the pilot of the PA28, members noted that they had requested a Basic Service from the Farnborough LARS West controller. Recalling their previous thoughts on the matter, members again suggested that it may have been prudent to have requested a surveillance-based service (**CF4**) to have assisted with their situational awareness of the traffic in their vicinity. Members agreed that the EC device fitted to the PA28 would not have been expected to have detected the presence of the M20 (**CF6**). However, members noted that the Farnborough controller had passed Traffic Information to the pilot of the PA28 regarding a contact that had been "*just behind you to your right at 2200ft, quarter of a mile*". Members noted that that information had been passed 19sec before CPA and, following a subsequent query by the PA28 pilot regarding the direction in which the contact had been approaching, very little time had been available to have considered the safest course of action. It was agreed that the pilot of the PA28 had received late situational awareness of the M20 from the controller's message (**CF5**). Members agreed that the M20 had not been visually acquired until the moment of CPA which, effectively, meant that it had been a non-sighting (**CF8**). Nevertheless, it was appreciated that the pilot of the PA28 had initiated urgent action to increase the separation.

The Board next turned its attention to the actions of the Farnborough LARS West controller, and members agreed that they had not been required to have monitored the flights of the M20 or PA28 under the terms of a Basic Service. However, members noted that the controller had observed that a change in track of the PA28 had altered the geometry of the encounter such that a risk of collision with the M20 had been perceived. Members agreed that the transponder squawk codes provided to each pilot had fallen outside the select frame for the STCA in use at the Farnborough position (**CF3**) and, therefore, the controller would not have been expected to have received an alert. Whilst members agreed that the controller had gleaned late situational awareness of the unfolding encounter (**CF2**), it was appreciated that, once a risk of collision had been perceived, they had reacted to pass Traffic Information as quickly as possible. Members noted that it had been unfortunate that they had transmitted their first message with an incorrect callsign prefix which had rendered the content of the message somewhat redundant. However, they had passed a subsequent message to each pilot, at 19sec and 6sec before CPA respectively. Members agreed that that Traffic Information had, in the context of the encounter, been passed at a late stage (**CF1**).

Concluding their discussion, members summarised their thoughts. It was agreed that the pilot of the PA28 had acquired late situational awareness of the presence of the M20 and had not had sufficient time to have taken effective avoiding action to have resolved the situation. It was also agreed that the pilot of the M20 had not had situational awareness of the PA28, and that neither pilot had sighted the other aircraft until the moment of CPA. Whilst it was appreciated that the pilot of the PA28 had taken emergency avoiding action, members agreed that it had not materially affected the outcome.

It was clear to members that the separation had reduced to the absolute minimum and that it had been entirely providential that the aircraft had not collided. The Board agreed that there had been the most serious risk of collision (**CF9**) and assigned Risk Category A to the event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2026126			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
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
	• Electronic Warning System Operation and Compliance			
3	Technical	• Conflict Alert System Failure	Conflict Alert System did not function as expected	The Conflict Alert system did not function or was not utilised in this situation
	Flight Elements			

	• Tactical Planning and Execution			
4	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
	• 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	• Distraction - Job Related	Events where flight crew are distracted for job related reasons	
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: A.

Safety Barrier Assessment[4]

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 **partially effective** because the Farnborough controller had gained situational awareness of the conflict late and, within the context of the evolution of the encounter, had subsequently passed Traffic Information late.

Electronic Warning System Operation and Compliance were assessed as **not used** because the selected transponder codes had been outside the select frame in use at the Farnborough position.

Flight Elements:

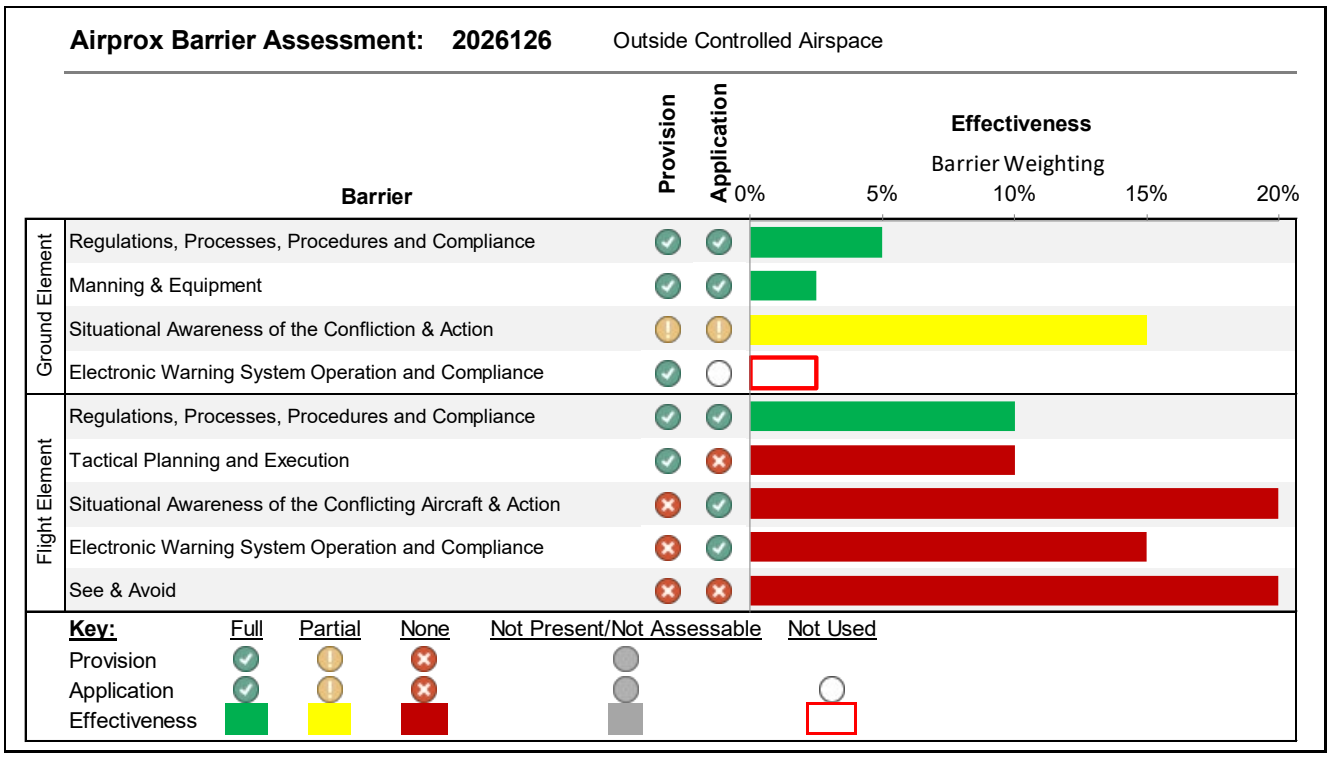
Tactical Planning and Execution was assessed as **ineffective** because it may have been prudent for each pilot to have requested a surveillance-based service.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the PA28 had late situational awareness of the presence of the Mooney M20. The pilot of the Mooney M20 had not had situational awareness of the PA28 until it had been sighted.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC device fitted to the PA28 would not have been expected to have detected the Mooney M20.

See and Avoid were assessed as **ineffective** because neither pilot had sighted the other aircraft until the moment of CPA.

[4] 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: 2026126
Outside Controlled Airspace
Barrier
Provision
Application
Effectiveness
Barrier Weighting
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
Key:
Full
Partial
None
Not Present/Not Assessable
Not Used
Provision
Application
Effectiveness