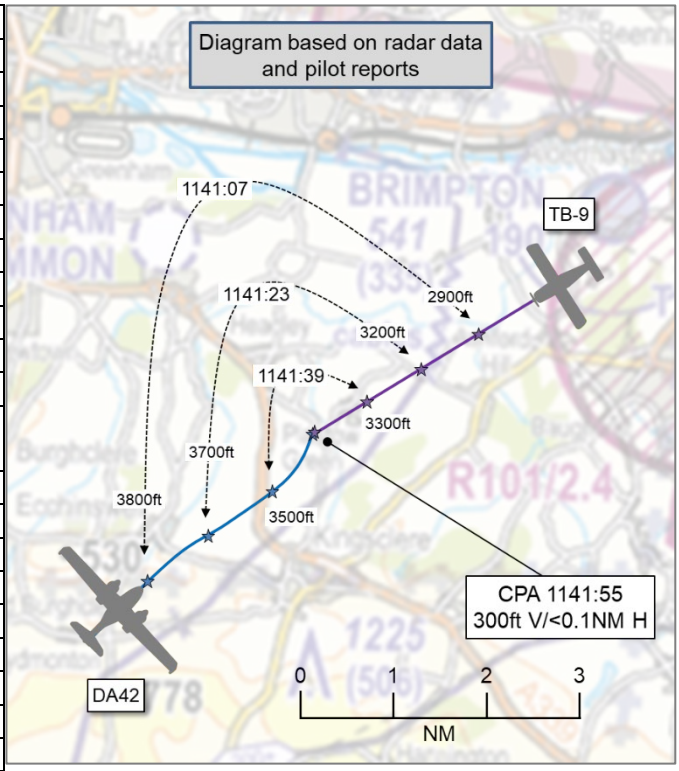
AIRPROX REPORT No 2025014

Date: 13 Feb 2025 Time: 1142Z Position: 5121N 00114W Location: 4.5NM Southeast of Newbury

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	TB-9
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	IFR
Service	Traffic	Traffic
Provider	Farnboro' LARS W	Farnboro' LARS W
Altitude/FL	3300ft	3600ft
Transponder	A, C, S+	A, C, S
Reported		
Colours	White	Blue and white
Lighting	Nav, landing, strobe	Strobes
Conditions	IMC	IMC
Visibility	<5km	<5km
Altitude/FL	3000ft	2800ft
Altimeter	QNH (1022hPa)	QNH (1022hPa)
Heading	050°	235°
Speed	140kt	105kt
ACAS/TAS	TAS	PilotAware
Alert	TA	None
Separation at CPA		
Reported	0-200ft V/0.5NM H	Not seen
Recorded	300ft V/<0.1NM H	



THE DA42 PILOT reports that they were conducting a cloud-break descent from FL50 to 2300ft after an IFR training flight to and from […] and were returning to […] on a Traffic Service. They entered a cloud layer, possibly 500-700ft thick and Farnborough Radar called the same conflicting traffic twice; on the first call the DA42 pilot had been happy that sufficient separation existed (they cannot recall if they had been IMC at that point). On the second call they had been in IMC and therefore focussed their attention to the TA readout where they identified the confliction. Overall they saw the conflicting traffic's relative height to show -02 and then quickly move through zero to +02. At the point when the TA confliction showed -01 to 00 and lateral separation was less than 1NM, the pilot realised that it was climbing so initiated a gentle left turn (the direction had been best guess as they were not sure of the closing angle of the conflictor) and initiated an increased RoD to get beneath. The conflicting traffic was also climbing through the cloud layer so both aircraft would have been in IMC and passed through each other's level within close proximity. From [the DA42 pilot] looking at Flightradar24, it seems like the left turn that they had initiated had reduced lateral separation and possibly increased the chances of collision; a right turn would have been better. They believe that the decision to increase their rate of descent when the aircraft were at around 1NM laterally prevented an extremely high chance of collision. This Airprox was not reported on ATC frequency so the pilot had called Farnborough ATC via landline at 0923 on Fri 14 Feb 25 with the details so they could initiate recovery of the radar replay and RT.

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

THE TB-9 PILOT reports that they were at a loss to understand this report. They had been flying under a Traffic Service from Farnborough Radar and had just started a climb to be above cloud. They had received a number of reports from Farnborough of aircraft in the vicinity but none seemed to pose any particular risk. The TB-9 pilot did not see the other aircraft nor hear it on frequency.

THE FARNBOROUGH LARS WEST CONTROLLER reports that they had been advised that a pilot had reported an Airprox whilst in receipt of a service from them a number of days ago. Given the time that had elapsed due to a period of annual leave, they have no recollection of the events reported here.

NATS Safety Investigations

The pilots of the DA42 and TB-9 were both operating under a Traffic Service with reduced Traffic Information due to areas of high traffic density outside controlled airspace. The Farnborough LARS West controller passed initial Traffic Information to the pilot of the DA42 regarding the TB-9 on an opposite direction track, however the aircraft subsequently came into close proximity. The pilot of the TB-9 had contacted the Farnborough LARS frequency at 1130:34. A service type was not requested. The Farnborough LARS (LF-LARS) controller initially provided the Farnborough QNH (1023hPa) and issued squawk 0432 which had been read back correctly. The controller then prioritised other tasks. The pilot of the TB-9 was then informed that they had been identified at 1131:20 and informed they were receiving a "*Traffic Service, reduced Traffic Information due areas of high traffic density, possible late warning of traffic, you have traffic, right two o'clock, one mile, diverging left to right indicating three hundred feet above, [aircraft] type unknown*." Multiple examples of Traffic Information were further provided to the pilot on their south-westerly track. At 1139:51 the pilot of the DA42 contacted the LF-LARS frequency. The pilot reported their position as west of Odiham by approximately 15NM, tracking northeast, descending to altitude 2800ft and requested a Traffic Service. The Farnborough QNH was provided with a squawk of 0441. The LF-LARS controller then informed the pilot of the DA42 at 1140:31 that they were identified and receiving a Traffic Service, "*reduced Traffic Information due high density possible late warning of traffic, you have traffic one o'clock, four miles, right to left, indicating two thousand eight hundred feet, that is a TB nine*." This was acknowledged by the pilot.

As the Traffic Information continued to be passed, the TB-9 (squawking 0432) indicated climbing through altitude 2800ft. Complementary Traffic Information was not initially passed to the pilot of the TB-9. A sector handover commenced at 1141:14 (based on deskside recording) and was paused at 1141:42 when the LF-LARS controller informed the pilot of the TB-9 "*that previously mentioned contact now left, half past eleven, half a mile opposite direction, similar level, is a DA forty-two*." This was not responded to. The pilot of the DA42 was then advised, "*your TB nine just passed down your left-hand side, similar level*." This was also not responded to.

The closest point of approach occurred at 1141:52 and was recorded on NODE Multi-Track Radar as 0.1NM and 100ft. Note: NODE radar trails displayed the DA42 pilot as having performed a left turn manoeuvre with increased rate of descent, whilst the TB-9 pilot maintained their south-westerly track. During the subsequent handover, the LF-LARS controller provided a traffic situation description to the incoming controller, informing them that that the TB-9 was on a "*Traffic Service reduced due to areas of high traffic density*", with the DA42 also receiving a "*Traffic Service reduced again, going into […] IFR*." The pilots of the TB-9 and DA42 did not report any confliction on the Farnborough frequency. The NATS4118 stated that the pilot of the DA42 had contacted Farnborough ATC on the following day to advise they would be submitting an Airprox report.

Investigation

At the time of the event, the LF-LARS controller had been operating LARS West and Zone functions combined. The NATS4118 described the traffic levels as '*light and consisted of 4 aircraft on LARS, two in receipt of a Traffic Service and no aircraft on Zone.*' The TB-9 was outbound from […], inbound to […]. The pilot contacted the LF-LARS West frequency abeam the southwestern edge of Wycombe Air Park ATZ. The pilot did not request any type of service and was subsequently informed by the LF-LARS controller that they were receiving a reduced Traffic Service, with "*reduced Traffic Information due areas of high traffic density*." Heathrow was operating on easterly arrivals, therefore the TB-9 had been crossing the Heathrow approach track, beneath controlled airspace (CAS) which further exacerbated the radar traffic density. The pilot of the TB-9 was provided with 5 separate examples of Traffic Information on both VFR aircraft outside CAS and information on IFR Heathrow inbounds on the approach track that were descending within the London TMA. The DA42 had been outbound from and inbound to […]. The Airprox report from the pilot described the flight as an '*IFR training sortie for IR,*

second lesson so lots to discuss. Flight Plan to Exeter for 2 IFR approaches prior to IFR transit back to […].' The pilot of the DA42 contacted the LF-LARS frequency and requested a Traffic Service. The aircraft had been approaching to the west of the Odiham MATZ, with again a high density of traffic in the vicinity, so was also given a Traffic Service with "*reduced Traffic Information due high density possible late warning of traffic*." The pilot of the DA42 was immediately passed Traffic Information on the TB-9. Complementary Traffic Information was not immediately passed to the pilot of the TB-9 on the now known traffic of the DA42, although the subsequent Traffic Information provided to the TB-9 prior to the closest point of approach ("*that previously mentioned contact now left, half past eleven*") suggested the controller believed they had previously passed Traffic Information on this then unknown aircraft. The NATS4118 clarified that during post event replay, the '*controller was surprised when they watched the replay that this had not occurred.'* The NATS4118 detailed 'however, [Traffic information] had been passed on a return squawking 2656 at 1139:30 which was operating in a similar position, just prior to the DA42 pilot calling on frequency'.

Traffic Information Requirements CAP774 stipulated that:

> 'A Traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance-derived Traffic Information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the pilot remains responsible for collision avoidance.'
>
> CAP774 1.11 stated: '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. Controllers/FISOs shall inform the pilot of reductions in Traffic Information along with the reason and the probable duration; however, it may not always be possible to provide these warnings in a timely fashion ….. High traffic density can cause difficulty interpreting ATS surveillance system data and may affect RTF loading or controller/FISO workload to the extent that the controller/FISO is unable to pass timely Traffic Information and/or deconfliction advice on all traffic.'

The Airprox report from the pilot of the DA42 stated they were '*descending through a cloud layer after IFR flight from Exeter*.' The METAR for the nearest airfield, Odiham, was:

METAR EGVO 131150Z 03006KT 9999 FEW013 OVC025 03/01 Q1023 TEMPO SCT015 RMK BLU TEMPO WHT

> CAP774 Ch 3-3 stated: 'Pilots should be aware that a Traffic Service might not be appropriate for flight in IMC or where lookout is significantly constrained by other factors, when other ATSs are available.'

The NATS4118 described the subsequent telephone conversation with the pilot of the DA42, stating: "*There was nothing Farnborough Controller could have done more and that [the pilot of the DA42] should have requested a Deconfliction Service*".

Farnborough ATC utilises recorded handover functionality. A review of recordings displayed this functionality had been initiated at 1141:14 with the handover narrative appearing to have been started at 1141:30 and postponed whilst the LF-LARS controller updated the Traffic Information to both pilots. The LF-LARS controller highlighted to both pilots, at 1141:42, to the TB-9 pilot - "*that previously mentioned contact, now left, half past eleven, half a mile opposite direction, similar level, is a DA forty-two*". To the DA42 pilot - "*your TB nine just passed down your left-hand side, similar level*." Neither pilot responded to this information. Although the pilot of the TB-9 was previously unaware of the potential traffic, the pilot of the DA42 had previously acknowledged the "*traffic one o'clock, four miles, right to left, indicating two thousand eight hundred feet, that is a TB nine*". Mode-S SFL displayed the DA42 pilot to have their continued descent to 2800ft whilst, as per the pilot's report, they were descending '*through a cloud layer'*. Neither pilot reported the confliction on frequency, with the pilot of the DA42 report stating: '*I didn't think to report as we were busy discussing how close we thought that was, and then needing to change to […]*.' The pilot of the DA42 Airprox report did not specify their recollection of the respective aircraft confliction, although it detailed their assessment of the risk of collision as being 'High'.

Conclusions

The Farnborough LARS West controller was operating in a combined configuration with Zone, with 'light' traffic levels on their frequency, although multiple returns had given a high density radar picture. Due to this high traffic density, a reduced Traffic Service was provided to both aircraft, with the reasoning provided, and possible late notice Traffic Information advised. Despite this, multiple examples of Traffic Information were passed, primarily to the pilot of the TB-9, and subsequently the pilot of the DA42 on the TB-9, on an opposite direction track. The controller was unaware that they had omitted to provide Traffic Information to the pilot of the TB-9 to complement the information provided to the pilot of the DA42 on initial contact on their frequency, although the TB-9 pilot had been provided with Traffic Information on aircraft in a similar position. A Sector handover was initiated just prior to the subsequent confliction and as the confliction worsened the LF-LARS controller paused the handover, and immediately provided updated Traffic Information to both pilots. The Airprox report from the pilot of the DA42 stated they were descending through a layer of cloud around the time of the confliction and suggested, in retrospect, they should have requested a Deconfliction Service. The Airprox report from the pilot of the TB-9 stated they had initiated climb to be above cloud and were not aware of any traffic in the vicinity and were unaware of any confliction. The Airprox report from the pilot of the DA42 stated that they had observed the conflicting aircraft and had taken evasive action of a '*slight left turn and increased rate of decent*'.

Factual Background

The weather at Odiham was recorded as follows:

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METAR EGVO 131120Z 03006KT 9999 FEW015 OVC025 03/01 Q1023 TEMPO SCT015 RMK BLU TEMPO
WHT=
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Analysis and Investigation

UKAB Secretariat

Both aircraft were tracked via radar and identified using Mode S data.

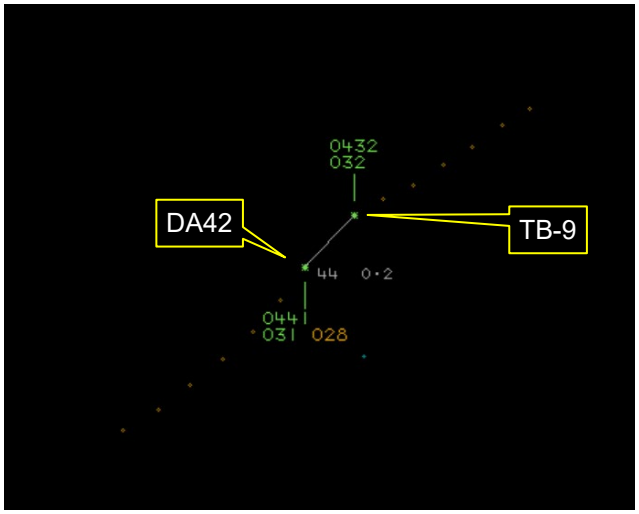

Figure 1: At 1141:51 (CPA minus 4sec)

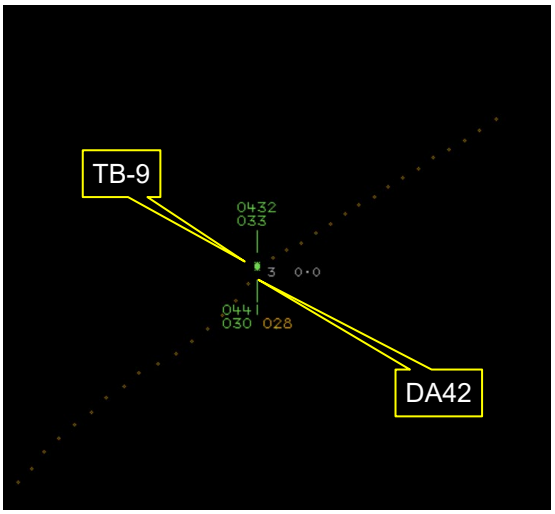

Figure 2: At CPA - 1141:55 300ft V/<0.1NM H

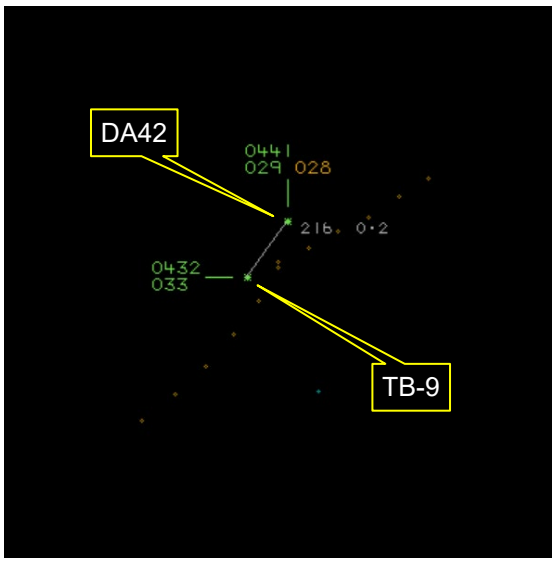

Figure 3: At 1141:59 (CPA plus 4sec)

time	AC1	alt	AC2	alt	rge	SPS	1013	0
	DA42		TB-9			QNH	1024	+300ft
11:40:59		3600		2600	3.7			
11:41:03					3.4			
11:41:07		3500			3.1	*	AC1 689fpm ROD/AC2 272fpm ROC	
11:41:11				2700	2.9		AC1 698fpm ROD/AC2 488fpm ROC	
11:41:15		3400		2800	2.6		AC1 663fpm ROD/AC2 650fpm ROC	
11:41:19					2.3		AC1 645fpm ROD/AC2 775fpm ROC	
11:41:23				2900	2.1	*	AC1 700fpm ROD/AC2 822fpm ROC	
11:41:27		3300		2900	1.8		AC1 605fpm ROD/AC2 797fpm ROC	
11:41:31				3000	1.5		AC1 634fpm ROD/AC2 766fpm ROC	
11:41:35		3200			1.3		AC1 661fpm ROD/AC2 795fpm ROC	
11:41:39					1	*	AC1 753fpm ROD/AC2 593fpm ROC	
11:41:43				3100	0.7		AC1 502fpm ROD/AC2 508fpm ROC	
11:41:47					0.5		AC1 259fpm ROD/AC2 583fpm ROC	
11:41:51		3100		3200	0.2		AC1 550fpm ROD/AC2 775fpm ROC	
11:41:55		3000		3300	0	CPA	AC1 1240fpm ROD/AC2 843fpm ROC	
11:41:59		2900			0.2		AC1 1191fpm ROD/AC2 905fpm ROC	
11:42:03		2800		3400	0.5		AC1 1164fpm ROD/AC2 1019fpm ROC	

Figure 4: Analysis of available data shows relative altitudes/distance/attitude for both aircraft.

The DA42 and TB-9 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 head-on or nearly so then both pilots were required to turn to the right.[2]

Summary

An Airprox was reported when a DA42 and a TB-9 flew into proximity 4.5NM southeast of Newbury at 1142Z on Thursday 13th February 2025. Both pilots were operating under IFR in IMC in receipt of a Traffic Service from Farnborough LARS West.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the air traffic controller 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 firstly considered the actions of the DA42 pilot, noting that they had been established on a Traffic Service with Farnborough LARS and had been on an IFR training flight and that both aircraft had been operating in IMC and had been effectively obscured from the other (**CF11**). The Board noted that

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

they had received a Traffic Information call from Farnborough regarding the TB-9 and had, having been satisfied that separation existed on the first call, become more concerned at the second call and had referred to their TAS unit for confirmation following an alert indication (**CF9**). Members agreed that, at this point, the pilot had become concerned by the proximity of the TB-9 (**CF8**), had recognised the altitude reference variation and elected to make a turn to avoid the oncoming aircraft although they had not had any clear indication as to the possible direction the opposing traffic had been approaching from. The Board stressed that, on a TAS unit, azimuth accuracy can be markedly less reliable than altitude references and a change in vertical profile might have been a better choice at that time. In considering the level of service that both the DA42 and TB-9 pilots had been under, members stressed that it may have been more appropriate to have requested a Deconfliction Service (**CF5**), recognising that under heavy traffic conditions this is not always available. They wished to highlight that if such a service level were not available, a simple request whilst under a Traffic Service for 'deconfliction advice' may well have offered more support. On receipt of Traffic Information confirming the conflict risk, members felt that neither the DA42 nor the TB-9 pilot had adequately adapted their plan to increase separation (**CF6**).

Members moved on to discuss the actions of the TB-9 pilot, noting that they had also had been in receipt of a Traffic Service from Farnborough LARS and had also been operating in IMC. The TB-9 pilot had received Traffic Information from the LARS controller but this had been at a late stage and, as the TB-9 pilot had carried a basic form of electronic conspicuity equipment which had not registered any emissions from the DA42 (**CF10**), had combined to offer the TB-9 pilot only very late situational awareness of the presence of the DA42 (**CF7**). The TB-9 pilot reports that they had not at any stage either seen the DA42 or heard pilot calls on RT. Members again reinforced the concept of a higher grade of Air Traffic Service where it is available, particularly when operating in a busy area in IMC.

In reviewing the actions of the Farnborough LARS controller, members noted that they had provided a Traffic Service to both the DA42 and TB-9 pilots as requested and had caveated that as a reduced service due to traffic density. They had passed Traffic Information to both pilots but unfortunately it had been late provision for the TB-9 pilot (**CF1**). Both pilots had been in receipt of a reduced Traffic Service due to traffic density and Board members believed that this had contributed to the late detection of the conflict between the two aircraft (**CF2**) and hence the late provision of Traffic Information to the TB-9. The Board also considered the controller handover, although paused at times, had distracted the controller during this event (**CF3**). Although Farnborough is equipped with a conflict alert system (STCA), this had not been utilised in this scenario as the allocated squawks sit outside the use case for that safety tool (**CF4**).

Concluding their discussion, members noted that the TB-9 pilot had gained only late situational awareness of the presence of the DA42 through the provision of late Traffic Information and the DA42 pilot reported having received a TAS alert had been aware of the proximity of the TB-9 and acted to increase separation between the 2 aircraft. Members felt that, although safety had been degraded, there had been no risk of collision. Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025014			
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	Human Factors	• Conflict Detection - Detected Late	An event involving the late detection of a conflict between aircraft	
3	Human Factors	• Task Monitoring	Events involving an individual or a crew/ team not appropriately monitoring their performance of a task	Controller engaged in other tasks
	• Electronic Warning System Operation and Compliance			

4	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			
5	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
6	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
	• Situational Awareness of the Conflicting Aircraft and Action			
7	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
8	Human Factors	• Unnecessary Action	Events involving flight crew performing an action that was not required	Pilot was concerned by the proximity of the other aircraft
	• Electronic Warning System Operation and Compliance			
9	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
10	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			
11	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other

Degree of Risk: C.

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 **partially effective** because the Farnborough controller had been distracted by an ongoing handover brief, detecting the conflict late due to the traffic density and had therefore passed late Traffic Information to the TB-9 pilot.

Electronic Warning System Operation and Compliance were assessed as **not used** because the conflict alert system was not utilised in this case.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because both the DA42 and TB-9 pilots could have asked for a higher level of Air Traffic Service when operating in IMC and neither pilot had manoeuvred to increase separation on receipt of Traffic Information.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the TB-9 pilot had gained only late situational awareness of the proximity of the DA42, and the DA42 pilot had been concerned by the proximity of the TB-9.

[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 **partially effective** because the DA42 pilot had received a TAS warning of the proximity of the TB-9 and the electronic equipment carried by the TB-9 had not registered any emissions from the DA42.

See and Avoid were assessed as **not used** because both aircraft had been operating in IMC and, as such, had been obscured from the other aircraft.