

AIRPROX REPORT No 2023086

Date: 19 May 2023 Time: 1040Z Position: 5239N 00250W Location: 5NM SW Shrewsbury

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Juno(A)	Juno(B)
Operator	HQ Air (Trg)	HQ Air (Trg)
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	IFR
Service	Traffic	Traffic
Provider	Shawbury	Shawbury
Altitude/FL	FL021	FL024
Transponder	A, C, S+	A, C, S+
Reported		
Colours	Black, Yellow	Black, Yellow
Lighting	Strobes, HISLs, Position, Landing	NR
Conditions	IMC	IMC
Visibility	<5km	<5km
Altitude/FL	2500ft	2600ft
Altimeter	QFE (1019hPa)	QFE
Heading	120°	180°
Speed	65kt	90kt
ACAS/TAS	TAS	TAS
Alert	None	TA
Separation at CPA		
Reported	300ft V/NK H	Not Seen
Recorded	300ft V/0.4NM H	



THE JUNO(A) PILOT reports that they were the aircraft captain and NHP at the time of the occurrence. They had been conducting confined area training in the Shawbury Western Designated User Area and were recovering to Shawbury to conduct sloping ground and underslung-load training. As the weather was poor at Shawbury, on departure they called Low Level (stud 4) to ask if there was capacity to take them for an instrument recovery (at this point they were good VMC at 1000ft QNH, 12NM to the WSW of Shawbury). They were told that there were already 5 other aircraft in the pattern and to standby - at this point they discussed as a crew that the answer would probably be no and that they would have to recover VFR through the gates, however, they were then told to call Shawbury Director on stud 11 for IF recovery. Having passed their details (1000ft on QNH 1028hPa, 12NM on the 250° radial heading 120°) they were given the squawk of 7411, provided with a Traffic Service and told to climb to height 2600ft (QFE 1019hPa). They checked ACAS for other aircraft, saw no conflicts and initiated a climb as directed, entering IMC at around 1600ft. As they were passing 2200ft, they were told of a conflict in their 9 o'clock, 1 mile, at 2600ft and that if not visual, to stop the climb. The HP initiated a level-off, and the NHP directed a descent to 2100ft rather than maintaining the nearly 2300ft they had reached by this point, in order to increase the separation. Once confirmed clear of the conflict, they were redirected to climb to 2600ft and continued with the recovery without further incident.

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

THE JUNO(B) PILOT reports that during the end of the sortie, they had finished 4x IF holds at Shawbury and were now being vectored for a PAR to RW36. They were in receipt of a Traffic Service from Shawbury Approach and were IMC. At the time, Shawbury Approach appeared to also be controlling 1 aircraft ahead of them, being vectored for an approach to Shawbury, and an additional aircraft in the hold at 4000ft. In the lead-up to the incident they were being vectored in a southerly direction at 2600ft. The crew noticed a solid blue diamond proximate warning on ACAS at approximately 1000ft. The

position of the ACAS warning was in their 2 o'clock and converging. At this point the crew were content as there was adequate separation in height between the 2 aircraft. The ACAS warning then started to indicate it was climbing at a fast rate. As the ACAS warning indicated 2000ft, Shawbury Approach transmitted to them about the conflict and asked if they were visual. They stated that they were not and requested a Deconfliction Service. Shawbury Approach instructed them to conduct an avoiding turn onto 270°, which they carried out. At the time of conducting the avoiding turn, the solid blue diamond proximate warning on ACAS had turned to a yellow traffic indication with audio alert. During the time of the avoiding turn they did not manage to see the height indication of the yellow ACAS alert. However, during the avoiding turn it appeared that the yellow ACAS indication and their own aircraft symbol on the DMAP display were overlapped on top of each other. After the avoiding turn, they completed their PAR to Shawbury without further incident. They changed their intentions to land and the aircraft was handed over to the next crew post refuel.

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

THE SHAWBURY DIRECTOR CONTROLLER reports that they had just completed an hour in the Approach position and, after being relieved by another controller, discussed with the Supervisor opening the Director control position to work a Merlin inbound that was currently with Zone. With this now on frequency, the Supervisor informed them that an aircraft that would normally free-call the Approach controller was going to call Director for IF recovery, and would be No5 in the radar pattern. Once on frequency this aircraft was identified, provided with a Traffic Service, and climbed to the terrain safe level. Traffic Information was passed versus potential conflicting traffic on a 7426 squawk (Zone Basic Service), indicating slightly below their current height. They then saw an Approach track turn onto what looked like a southerly heading towards their (Director's) traffic, indicating 025 on Mode C. This would be the same height as the climb instruction that had been issued and, after passing Traffic Information, they asked the Supervisor what Approach was going to do with it, as the Merlin was still 10NM from the airfield and next for recovery. With no reply, and the aircraft still converging, they were mindful that a potential risk of collision was developing. Even though, under CAP774, the pilot remains responsible for collision avoidance and Shawbury aircraft are ACAS equipped, with no request for deconfliction advice from the pilot, they decided to update Traffic Information and suggested a stop climb with a terrain alert [they recalled]. The pilot stated that they were stopping the climb and the radar returns passed in close proximity, with 300ft separation indicating on Mode C. With the situation now resolved, the aircraft was again climbed to the terrain safe level and recovered to the airfield. After deciding to file this scenario as an Airprox, they were later informed that the aircrew were also filing an Airprox and these would be linked.

The controller perceived the severity of the incident as 'Medium'.

THE SHAWBURY APPROACH CONTROLLER reports that they were working a total of 3 aircraft. Two were on a Traffic Service and one was on a Deconfliction Service. They were also aware that they needed to create a gap in their radar pattern for Director who was vectoring in a Merlin. The [Juno(B)] pilot requested vectors for the PAR and was given a heading to the southwest to exit the hold. Once they were approximately 5NM away from the overhead they were given a turn to the south for the downwind leg. On turning the [Juno(B)] they noticed a Director squawk pop-up, which started to climb in [Juno(B)'s] 10 o'clock, so they called the traffic. After speaking to the other aircraft they noticed the previously called traffic was now much closer, so they called the traffic again and asked if the pilot was visual. The pilot said they were not visual and requested a Deconfliction Service. A Deconfliction Service was given along with an avoiding action turn to the west to avoid the traffic.

THE SHAWBURY SUPERVISOR reports that as the situation unfolded, the Radar Approach (RA) ATCO had 2 tracks in the VOR hold under Traffic Service and another in the Radar Training Circuit (RTC) under Deconfliction Service. They took a prenote for another track inbound from Brize, and initially allocated Zone to take the handover and transit. As the situation developed, they opened up the Director console to act as an RA overload, and not specifically as Director, to free capacity with the Brize track inbound to land. They agreed an order of recovery with RA for their tracks to sequence behind, making the Brize aircraft No1. The first VOR track was conducting VOR radials and, when ready, requesting vectors for a PAR, with the other track in the hold for the VOR/DME procedure. With

the VOR/PAR track calling ready for vectors, this track was vectored out of the hold to sequence No2 to the Brize aircraft; they did not recall at what point the track was turned south. The Low Level ATCO advised there was a Shawbury Juno requesting an IF pick-up and, with the intention for Director to act as an overload, this free-call was directed to Stud 11, with the Director ATCO briefed that this track was to be No5. They could not recall whether they advised the RA ATCO of this pick up of the free-calling Shawbury low-level aircraft. The situation with the VOR aircraft was complicated, with the 2nd VOR track requesting on 2 occasions to be ready for the procedure, to be told they could be offered vectors but, due to other tracks, if they wanted the VOR/DME procedure that more holds were required. When Director picked up the free-calling Shawbury aircraft, they instructed the pilot to climb to the terrain safe height of 2600ft QFE, and informed [the Supervisor] that they were climbing the aircraft. [The Supervisor] understood this message to be a consideration if the 1st VOR (Juno(B)) pilot was under Deconfliction Service, as the controller would have to respond to maintain separation; they [the Supervisor] replied by saying the VOR track was under Traffic Service. Their other consideration was that the VOR track would be turning left to sequence No2 to the Brize aircraft. Whilst monitoring Approach's other aircraft, and the RA ATCO speaking to the 2nd VOR track, the LARS/Low Level ATCO pointed out to [the Supervisor] that the 1st VOR (Juno(A)) aircraft and the free-calling aircraft were climbing to the same height, and that a risk of collision was now apparent. The RA ATCO was speaking to another pilot, and [the Supervisor] was waiting for a break in RT to direct input for the [Juno(B)] track to climb, however the situation itself took over, with [Juno(B)] pilot being passed an updated Traffic Information call from the RA ATCO, not being visual, and requesting deconfliction advice. The RA ATCO responded to this request with a heading of 270° immediately.

Factual Background

The weather at Shawbury was recorded as follows:

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METAR EGOS 191020Z 32006KT 9999 7000N -DZ SCT006 BKN008 13/12 Q1028 BECMG BKN012 RMK  
YL01 BECMG GRN=
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Analysis and Investigation

Military ATM

An Airprox occurred on 19th May 23 at approximately 1039, within the RAF Shawbury Radar Training Circuit. Juno(A) was conducting an instrument recovery in receipt of a Traffic Service from the Shawbury Director controller. Juno(B) was also conducting an instrument recovery in receipt of a Traffic Service but from the Shawbury Approach controller.

Utilising occurrence reports and information from the local investigation, outlined below are the key events that preceded the Airprox. Where available, they are supported by screenshots to indicate the positions of the relevant aircraft at each stage. The screenshots are taken from a combination of replays, using both Unit and NATS radars. As NATS radars are not available to the controllers, they may not be entirely representative of the picture available, however, the Unit radars provide the exact radar view seen by the controllers.

Prior to the Airprox, the Shawbury Approach and Director control positions were band-boxed with the Shawbury Approach controller responsible for both. Traffic on frequency at the time consisted of Juno(B) and Juno(D), both in receipt of a Traffic Service and established within the VOR hold, along with a Juno(C), in receipt of a Deconfliction Service, in the Radar Training Circuit. With a Merlin expected for recovery from the southeast, the Shawbury Supervisor elected to reopen the Shawbury Director position, to control the Merlin. This decision was made both in an attempt to manage the Shawbury Approach controller's workload, but also to prevent a geographical split of circa 30NM for the Shawbury Approach controller.

At 1035:28, the Merlin pilot checked-in on frequency with the Shawbury Director controller and was subsequently identified, applied a Deconfliction Service, and issued headings and levels for a PAR instrument recovery. The intention of the Shawbury Supervisor at this stage was that the Shawbury Director controller would control only the Merlin's recovery and then to close the Shawbury Director

position, reverting to the previous band-boxed status for the Approach and Director positions. The Shawbury Approach controller was aware of this plan.

At 1036:53, [the pilot of] Juno(A) free-called the Shawbury Director controller requesting an instrument recovery from the west. At the point of free-calling, Juno(A) was VMC at 1000ft (QNH 1028), transiting eastbound towards Shawbury. Prior to this free-call, a discussion had occurred between the Shawbury Zone who was controlling Juno(A) initially, the Shawbury Director and Shawbury Supervisor controllers, with the agreement that Juno(A) would be transferred to the Shawbury Director and not the Shawbury Approach controller.

At 1037:21, Traffic Information was provided by the Shawbury Approach controller to Juno(B) pilot, on Juno(A); *“Traffic, twelve o’clock, three miles, crossing right-to-left ahead, indicating one thousand nine hundred feet below, Shawbury Rotary.”*

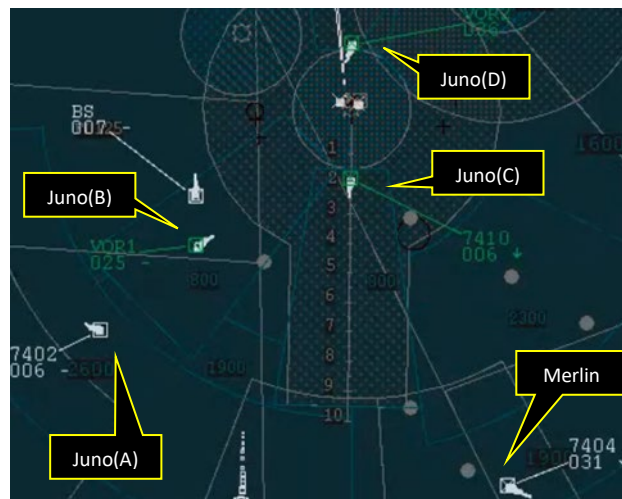


Figure 1 - (1037:21): Traffic Information provided to Juno(B) pilot on Juno(A).

At 1037:27, following identification and application of a Traffic Service, the Shawbury Director controller issued the Juno(A) [pilot] with a climb to 2600ft (QFE 1019) on their current heading of 110°. With the climb, the Shawbury Director controller also informed the Juno(A) [pilot] that they were No5 in the Radar Training Circuit, with Junos (B), (C) and (D) under Shawbury Approach and the Merlin under Shawbury Director all prioritised ahead.

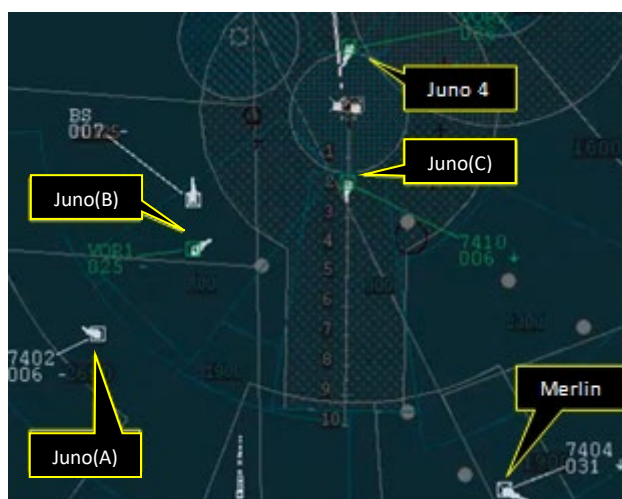


Figure 2 - (1037:27): Juno(A) pilot issued a climb by the Shawbury Director.

At 1037:56, the Shawbury Approach controller issued a turn onto 180° to [the pilot of] Juno(B), facilitating Juno(B)'s departure from the VOR hold into the Radar Training Circuit for a PAR instrument approach.



Figure 3 - (1037:56): Juno(B) issued a turn by the Shawbury Director.

At 1039:05, Traffic Information was provided by the Shawbury Director to [the pilot of] Juno(A) on Juno(B); “Traffic left nine o’clock, half a mile, converging left right, Shawbury rotary, indicating five hundred feet above, taking your own terrain clearance stop climb if required”. Juno(A) [pilot] reported “not visual, stopping climb”. Juno(A) was passing 2200ft and subsequently levelled off, before descending to 2100ft.

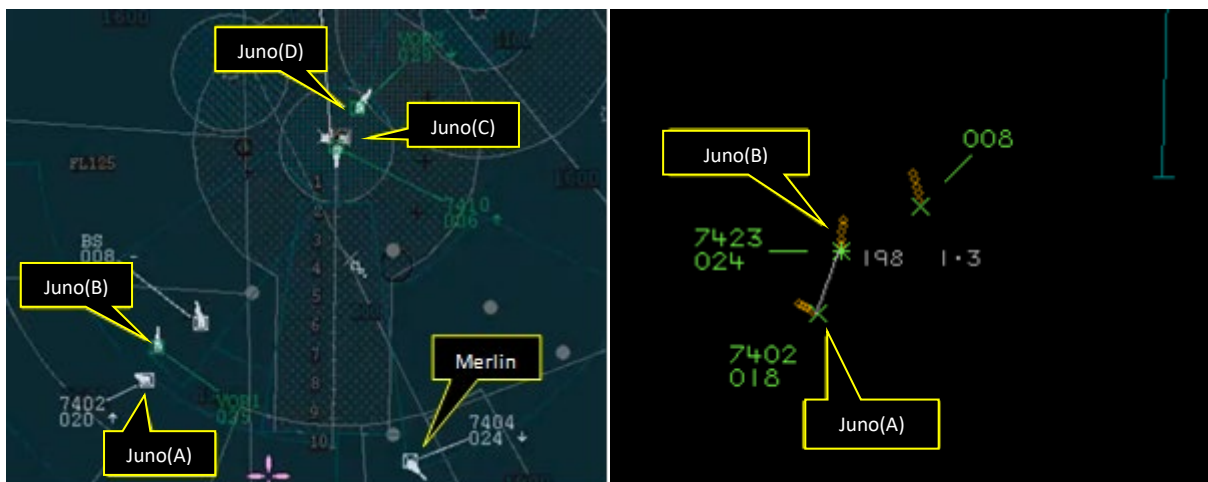


Figure 4 - (1039:05) Traffic Information provided to Juno(A) on Juno(B).

At 1039:12, both the Shawbury Director and Shawbury Approach controllers received Short Term Conflict Alerts.

At 1039:14, after incorrectly calling to Juno(C) at 1039:01, Traffic Information was provided by the Shawbury Approach controller to [the pilot of] Juno(B), on Juno(A); “Traffic twelve o’clock, one mile, crossing right-to-left ahead, indicating three hundred feet below and climbing, are you visual?” Juno(B) pilot responded “negative, not visual, request deconfliction”. The Shawbury Approach controller provided an avoiding action turn onto 270° and reissued the Traffic Information.

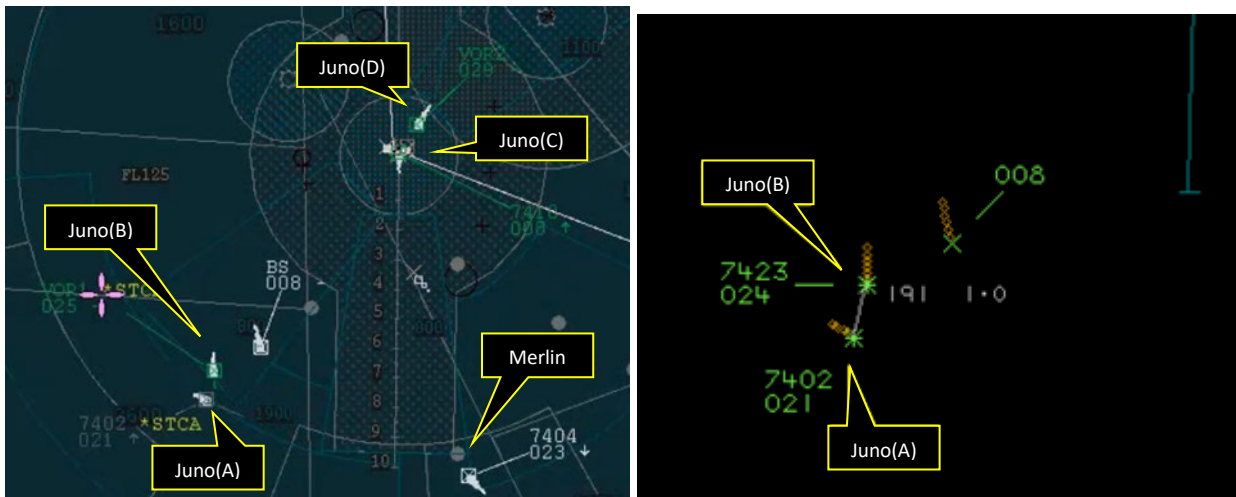


Figure 5 - (1039:14) Traffic Information provided to Juno(B) pilot on Juno(A).

CPA was measured at 0.4NM and 300ft separation.

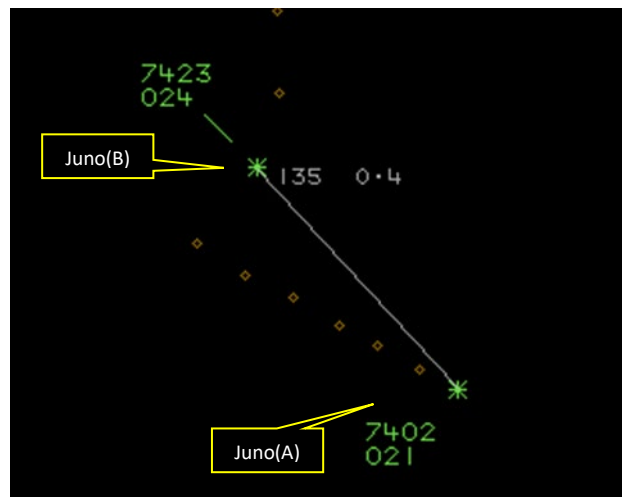


Figure 6 (1039:51): CPA.

The Airprox was subject to an Occurrence Safety Investigation by RAF Shawbury, with the findings presented to an Occurrence Review Group. The cause of the Airprox was identified as a loss of situational awareness between the Shawbury Approach and Director controllers, resulting in Juno(A) and Juno(B) being vectored into conflict. Several BM-related causal/aggravating factors were identified that were believed to have contributed to the Airprox:

- a. The re-establishment of the Shawbury Director position, to facilitate the Merlin recovery, resulted in a non-standard operating procedure. Whilst the selected operating model was communicated to the Shawbury Approach controller for the Merlin recovery, it was not updated to include Juno(A)'s recovery.
- b. The Shawbury Approach controller initially deemed Juno(A) to be maintaining low-level iaw local procedures, and was not provided further information from the Shawbury Director, or Shawbury Supervisor, to alter this presumption.

2 Gp BM Analysis

The decision to bandbox the Shawbury Approach and Shawbury Director positions was suitable at the time due to the traffic levels, and conducted iaw local procedures. Whilst the thought process regarding managing workload and geographical split for the Shawbury Approach controller through re-establishing the Shawbury Director was logical, it resulted in a non-standard operating model. This non-standard operating model was manageable, provided both

the Shawbury Approach and Shawbury Director controllers maintained a suitable level of situational awareness regarding each other's intentions. For the Merlin recovery this occurred, with the Shawbury Approach controller being informed of how the Merlin would be integrated into the established traffic pattern. However, for Juno(A), no such information was passed. The Shawbury Director's options for achieving separation were limited, due to the Terrain Safe Level in that area aligning with the Radar Training Circuit height, although early engagement would have enabled separation to be ensured through adaptation of Juno(B)'s pattern.

UKAB Secretariat

The Juno(A) and Juno(B) 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 converging then the Juno(B) pilot was required to give way to the Juno(A).²

Comments

HQ Air Command

Given that all pilots associated with this occurrence were under a radar service from the same unit, it is initially difficult to understand how the two Airprox aircraft came into such proximity. The Occurrence Safety Investigation (OSI) revealed several factors which explain why, as identified in the above narrative. Whilst under a Traffic Service, the pilots ultimately had responsibility for collision avoidance, but they would have expected to receive information on the conflicting traffic to form their own avoiding actions. From an ATC perspective, it can be seen how the management of controller workload led to miscommunication between controllers and an inadvertent collision course developed. Other factors identified in the OSI such as the lack of a dedicated radar display for the Supervisor, and the performance of the ACAS, have also been captured. The Juno Aviation Duty Holder agrees with these findings and will be overseeing the associated recommendations.

Summary

An Airprox was reported when two Junos flew into proximity 5NM southwest of Shrewsbury at 1040Z on Friday 19th May 2023. Both pilots were operating under IFR in IMC, the Juno(A) pilot in receipt of a Traffic Service from Shawbury Director and the Juno(B) pilot in receipt of a Traffic Service from Shawbury Approach.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first discussed the actions of Shawbury ATC. They noted that, with a flurry of aircraft for recovery, the plan by the Supervisor to open up another position and install a Director had been a good one. However, by operating in a model that had been different to the norm, the controllers had been required to liaise closely in order to ensure that they did not unintentionally impact one another. Controller members noted that it would have been essential that the Supervisor facilitated such co-ordination, as it had been likely that they had been the only person in the Approach Control Room (ACR) that had been in possession of the full picture, given that the Approach controller had not known that Juno(A) had been going to climb into the RTC, and the Director had not known that the Approach controller had been about to turn Juno(B) onto a southerly heading. Members agreed that it had been a lack of overall supervision and co-ordination that had been contributory to the Airprox (**CF2**, **CF3**). Members heard that because Juno(A) had been displaying a low-level squawk, and that Shawbury controllers could deem that aircraft displaying that squawk to be beneath the RTC, the Approach

¹ MAA RA 2307 paragraphs 1 and 2.

² MAA RA 2307 paragraph 12.

controller had therefore assumed that Juno(A) would be remaining at low-level (**CF4**). Members wondered whether the Approach controller could have assimilated generic information from the conversations within the ACR, given that the Supervisor and Zone controller had discussed free-calling the Juno to Director, or could have heard the Director picking-up and climbing the aircraft. Certainly, members opined that this would have been the point at which they would have expected the Supervisor to have ensured everyone had been aware of the updated air-picture. However, at that point the Approach controller had had an incorrect mental model in assuming that Juno(A) had been remaining low-level (**CF5**), and so they had turned Juno(B) onto a southerly heading and into conflict with the Juno(A) which had already begun the climb (**CF1, CF6**). Members praised the Zone controller who had tried to alert the Supervisor to the unfolding situation but, unfortunately, it seemed that this had come too late for the Supervisor to have been able to act.

For their part, the Director had been placed in an invidious position, in that Juno(A) had been free-called to them and needed to be climbed to a terrain-safe level in order to be vectored into the pattern. The Director had been well aware that this aircraft needed to be positioned as No5 behind the Approach controller's traffic, but had been limited in the actions that they had been able to take, because the aircraft needed to be terrain-safe before they could have issued a turn. Nevertheless, members thought that the Director had known that they had been climbing to the height of the RTC and so could have initiated co-ordination with the Approach controller (**CF3**). The Director had been the first controller to become aware that the aircraft had been in conflict and had issued a stop-climb to the pilot of Juno(A). The Juno(A) pilot reported not visual and levelled off below Juno(B). Shortly afterwards the STCA alerted (**CF7**) at which point the Approach controller provided Traffic information to the Juno(B) pilot and subsequently, after a request from the pilot, deconfliction advice.

Turning to the actions of the pilots, the Board noted that both pilots reported being IMC, and yet both had requested, and been in receipt of, a Traffic Service. Members were told that historically the new sensors (radars) at Shawbury had been highly sensitive to atmospheric, resulting in spurious radar contacts, which were not easily distinguishable from actual radar contacts and, as a result, controllers had been required to issue more avoiding action. As a consequence, Shawbury pilots, under pressure to complete training sorties, had become accustomed to accepting a Traffic Service when in the RTC, in order to facilitate a smoother recovery. Nevertheless, members felt strongly that a Deconfliction Service would have been a more suitable service when IMC but that, at the very least, had the pilots informed ATC that they had been IMC, it may have highlighted to the controllers that deconfliction advice would have been necessary (**CF8**). Members highlighted that under a Traffic Service, the pilots had been responsible for deconfliction whether or not the traffic had been called by the controller. Furthermore, CAP774 states that under the terms of a Traffic Service:

The controller shall pass traffic information on relevant traffic, and shall update the traffic information if it continues to constitute a definite hazard, or if requested by the pilot. However, high controller workload and RTF loading may reduce the ability of the controller to pass traffic information, and the timeliness of such information.

Members wondered whether, in requesting a Traffic Service when IMC, pilots realised the implications that timely Traffic Information may not be forthcoming if controllers were experiencing a high workload. In the event, Juno(B) pilot had seen the other aircraft on their ACAS, and had become concerned by the proximity (**CF9**). It had been the alert by the ACAS (**CF10**) that had primed the Juno(B) pilot to the aircraft climbing towards them, so that when the Approach controller gave Traffic information, they had immediately asked for deconfliction advice. Although the Juno(A) pilot had reported that they had not had an alert, members could not be sure whether the ACAS had not alerted even though an alert would have been expected, or whether, with everything that had happened at the time, the pilot simply could not remember receiving one (**CF11**). The Board agreed that, with both pilots IMC, neither had seen the other aircraft until after the event (**CF12**).

When assessing the risk of collision, members considered the reports from both pilots and the controllers involved, together with the radar screenshots. Some members opined that, because the controllers had introduced the conflict, safety had been much reduced and there had been a risk of collision. Others countered that both controllers had provided deconfliction advice, with the Director suggesting that Juno(A) pilot stop their climb and the Approach controller giving Juno(B) pilot a turn

away. Furthermore, by that stage both pilots had become aware of the situation and Juno(A) pilot had opted to further increase the separation by descending, therefore, the risk of collision had been averted. After a vote, by a substantial majority members agreed 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:

	2023086			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Regulations, Processes, Procedures and Compliance				
1	Human Factors	• ATM Regulatory Deviation	An event involving a deviation from an Air Traffic Management Regulation.	Regulations and/or procedures not fully complied with
• Manning and Equipment				
2	Human Factors	• ATM Leadership and Supervision	An event related to the leadership and supervision of ATM activities.	
• Situational Awareness and Action				
3	Human Factors	• ATM Coordination	Coordination related issues (external as well as internal)	
4	Human Factors	• Expectation/ Assumption	Events involving an individual or a crew/ team acting on the basis of expectation or assumptions of a situation that is different from the reality	
5	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
6	Human Factors	• Traffic Management Information Provision	An event involving traffic management information provision	The ANS instructions contributed to the Airprox
• Electronic Warning System Operation and Compliance				
7	Technical	• STCA Warning	An event involving the triggering of a Short Term Conflict Alert (STCA) Warning	
Flight Elements				
• Tactical Planning and Execution				
8	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				
9	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				
10	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
11	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				
12	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 Assessment³

³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Ground Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Shawbury Approach controller vectored the two Junos into proximity.

Manning and Equipment were assessed as **partially effective** because the Shawbury Supervisor should have ensured that both controllers had full situational awareness on what the other was doing.

Situational Awareness of the Confliction and Action were assessed as **partially effective** because a lack of communication within the ACR had led to a breakdown in situational awareness between the controllers and Supervisor about the plan for the recovering aircraft.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because both pilots had requested a Traffic Service despite being IMC.

See and Avoid were assessed as **not used** because both pilots had been in cloud.

Airprox Barrier Assessment: 2023086		Outside Controlled Airspace					
Barrier	Provision	Application	Effectiveness				
			Barrier Weighting				
			0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	⚠	[Yellow bar to 5%]			
	Manning & Equipment	✓	⚠	[Yellow bar to 2.5%]			
	Situational Awareness of the Confliction & Action	✓	⚠	[Yellow bar to 15%]			
	Electronic Warning System Operation and Compliance	✓	✓	[Green bar to 2.5%]			
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 10%]			
	Tactical Planning and Execution	✓	⚠	[Yellow bar to 10%]			
	Situational Awareness of the Conflicting Aircraft & Action	✓	✓	[Green bar to 20%]			
	Electronic Warning System Operation and Compliance	✓	✓	[Green bar to 15%]			
	See & Avoid	✓	○	[Red box from 0% to 20%]			
Key:							
	Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	●	○		
Application	✓	⚠	✗	●	○		
Effectiveness	■	■	■	■	□		