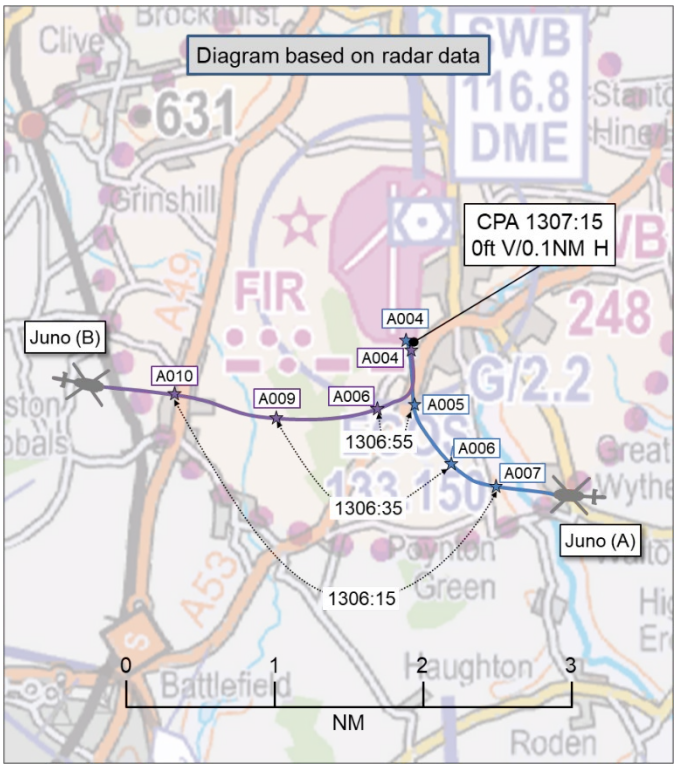
# AIRPROX REPORT No 2025010

Date: 31 Jan 2025 Time: 1307Z Position: 5247N 00240W Location: Shawbury

## 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 | Shawbury ATZ | Shawbury ATZ |
| Class | G | G |
| Rules | VFR | VFR |
| Service | ACS | ACS |
| Provider | Shawbury Tower | Shawbury Tower |
| Altitude/FL | 400ft | 400ft |
| Transponder | A, C, S | A, C, S |
| **Reported** | | |
| Colours | Black and yellow | Black and yellow |
| Lighting | Landing nav HISL | Lndg nav anti-colls |
| Conditions | VMC | VMC |
| Visibility | 5-10km | 5-10km |
| Altitude/FL | 50ft | 100ft |
| Altimeter | QNH (1024hPa) | QNH (1023hPa) |
| Heading | NR | NR |
| Speed | 65kt | 65kt |
| ACAS/TAS | TAS | TAS |
| Alert | None | None[1] |
| **Separation at CPA** | | |
| Reported | 50ft V/50m H | 50ft V/45m H |
| Recorded | 0ft V/0.1NM H | |




**THE JUNO(A) PILOT** reports they were the QHI teaching a basic rotary trainee Basic Transitions. They had just returned to Shawbury from Ternhill having joined through the southeast visual gate, High Ercall. On transit from the gate to the south of the airfield, in preparation to land at South Point, they saw two aircraft ahead of them which had joined ahead and were already on final and heard on the radio. They were visual with a [Juno(B)] callsign aircraft joining through the south-western visual gate, Pym. Because of the amount of traffic and the experience of the trainee, they took control to conduct a gate approach. As they turned on to their final approach track at approximately 300ft and reducing speed to Vy, they called *"final, visual with two ahead"* and the western joining aircraft called Tower to request 30sec to cross the runway. They were still visual with the aircraft for a moment and then turned their attention to their approach, deeming their aircraft to have enough separation and ensuring that they landed to the right of the South Point area to allow room for the following aircraft. A few moments later, they heard the [pilot of the] other aircraft call 'short final' on the Tower frequency. They became visual with the other aircraft again when they conducted their lookout turn. On return from their second sortie they were notified by the 2 MAW Duty Authoriser that the [Juno(B)] callsign had not seen or heard their aircraft at all whilst joining or until the latter stages of [Juno(B)'s] approach. They were aware of the other aircraft all the way in to the field as they had heard [the pilot of] Juno(B)'s request to cross the runway call and were already visual. They were only made aware of the Airprox when they landed post a subsequent sortie as they had a rotors running refuel and crew change in-between.

The pilot perceived the severity of the incident as 'Low'.

**THE JUNO(B) PILOT** reports that they were a crew of 3 recovering to RAF Shawbury from Western following a 320 Confined Area sortie. The workload was low due to the relatively long transit back, with all checks and communications complete. They called for *"30 seconds to cross RW36"* and were given clearance. It was clear there were two other aircraft ahead in the vicinity of South Point, one was

[1] No alert was reported, but post-flight analysis of on-board mission recordings showed that there had been several alerts.

completing a running landing adjacent to South Point, the other was orientated north in the hover, holding short. They made a *"long final, South Point"* call. Seeing the two Juno aircraft ahead, they conducted a gate approach aiming to arrive halfway into the available landing area near South Point. This meant they were descending, decelerating down and left. Upon rolling wings level they were around 65kt, 100ft AGL. At this point, as the handling pilot, they saw a fourth aircraft in their right 2 o'clock, roughly 4-5 rotor spans, estimated 50ft below. The aircraft was in a shallow constant angle approach, South Point far right of the landing area. They called the traffic threat. They elected to steepen the approach and come left, resulting in the 10ft hover ½ distance into the South Point grassed area, left of centre. To the best of their knowledge, at no point during their recovery did any crew member hear any radio transmission, most noticeably a finals call. Despite ACAS being active, there were no ACAS indications or audio warnings.

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

**THE SHAWBURY TOWER CONTROLLER** reports that three aircraft joined via High Ercall, all on the same frequency and all aware of each other. At the same time, an aircraft joined by Pym, who was on the same frequency as the other three, so all were aware of each other. As the three from the High Ercall were getting closer to South Point, the aircraft that joined via Pym called '30 seconds to cross'. The cross was given as there was no reason not to give it. The three aircraft from High Ercall would have been aware of this, as the colour code was white or better (so good visibility) and all calls were on the same frequency. All four aircraft sequenced themselves to land at South Point (as part of the visual circuit), making blind calls as they should, then, one at a time, they air taxied to either the refuel spots or main dispersal. Nothing out of the ordinary was mentioned on frequency.

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

## Factual Background

The weather at Shawbury airfield was recorded as follows:

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METAR EGOS 311250Z 33013KT 9999 SCT018 BKN032 08/05 Q1024 BECMG SCT025 RMK BLACKWHT BECMG
BLU
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## Analysis and Investigation

### 2 Gp BM

Utilising occurrence reports and information from the local investigations, 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. Screenshots are taken from Unit radar recordings and therefore present the actual radar presentation of both Juno aircraft available to the Shawbury Tower controller.

Timeline:

At 1302:54, [the pilot of] Juno(B) requested a visual join via Pym on the Shawbury Tower frequency, "*request join via Pym for area right, 3 POB and Hotel copied*". The Shawbury Tower controller acknowledged the request and provided the surface wind along with necessary information regarding airspace on the visual join profile.

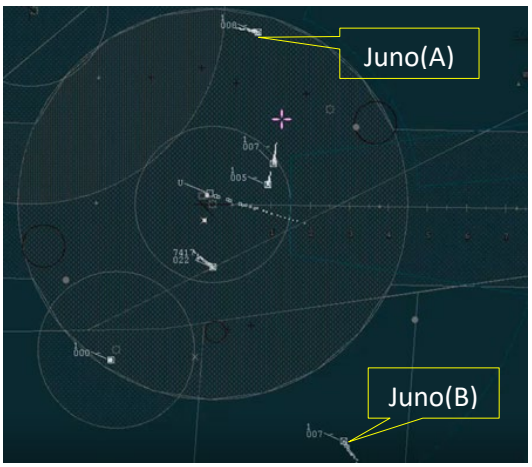



Figure 1 1303:17 - Relative positions following Juno(A) requesting join.

At 1303:17, the pilot of Juno(A) requested a visual join via High Ercall on the Shawbury Tower frequency "*High Ercall for rejoin, Hotel copied*". The Shawbury Tower controller acknowledged the request and provided the surface wind.

At 1306:15, Juno(B) pilot requested "*30 secs to cross runway 36*", a local procedure to indicate their position, and a requirement to cross the in-use runway. The Shawbury Tower controller approved the cross, to which Juno(B) pilot acknowledged.


Figure 2 Time1306:25 - Relative positions following Juno(A) positioning call.

At 1306:25, Juno(A) pilot transmitted a blind positioning call of *"final South Point".*
At 1306:55, Juno(B) pilot transmitted a blind positioning call of *"long final South Point"**.***
CPA was recorded at 1307:13 with 0.1NM and 0ft separation.

**Local BM Investigation**

The investigation included interviews with both pilots, the ATC controller and Supervisor on duty, a review of the Richochet radar and playback of the Junos' Cockpit Voice and Flight Data Recorders (CVFDR).

The findings and mitigations were listed as follows:

Two Juno helicopters came within 3-4 rotor-spans laterally and 50ft vertically while returning to South Point at RAF Shawbury from opposite directions. The pilot of the aircraft joining from the west was not aware of the presence of the aircraft joining from the east. It was only when they completed their left turn onto north at 100ft that they saw the other aircraft down and right of them at a height of 50ft.

The staff pilot was to have a QHI sortie within a week [of the investigation report] and a 'Standards' flight [the following] week.

Due to the ongoing works which had taken away large areas of the airfield, there was a narrow one-way flow in place. This created a bottleneck at South Point either for arrivals or departures.

The work was briefed to all 1 FTS crews ahead of each phase of the works and the temporary procedures, such as the one-way flow, have been decided upon following a lot of [team] discussion. It was different to the norm but airmanship should ensure a smooth flow. Helicopters have always got the option to slow down, come to the hover, or even put in an orbit or a circuit if needed.

RAF Shawbury has MAA dispensation to operate with negative R/T as full R/T was deemed to make the airwaves too busy for the instructional element of the training. Full R/T may have alerted the joining aircraft of each other, and a call from ATC highlighting how many aircraft were in the area may have assisted. However, in this particular incident, extra radio calls would not have helped as the few calls that were made were all missed by the west -joining aircraft.

RAF Shawbury reverting to full R/T was discussed and there are a slowly increasing number of operators who see the advantages, especially for preparing aircrew for their next unit. However, there has been constant change at RAF Shawbury (AOS work, QNH Ops, PBN etc), so this will not be looked at again until at least 2026.

[One of the Juno's crew] was a staff pilot which means they were recently qualified and inexperienced, as well as flying [as a] single pilot. They are increasing their experience and assisting 1 FTS by flying the basic crewman sorties which allows the QHIs to fly other more complex sorties. Staff pilots are always programmed to fly with a QHCI. On this occasion, the QHCI was very experienced but had not been at RAF Shawbury long so would not have been as familiar with the airfield operations as others.

It has been stressed that joining an airfield, particularly a very busy training unit such as RAF Shawbury, is the time for the maximum attention as aircraft are naturally converging.

The inspector observed that the east-joining aircraft [Juno(A)] was visible with the west-joining aircraft [Juno(B)] and the two aircraft near South Point at all times up until [the final approach] and had heard all the radio calls. From listening to the CVFDR [it was surmised that] the west-joining aircraft crew were genuinely shocked when they eventually spotted the east-joining aircraft and had not noticed them on the way in and so were a lot closer than they felt comfortable with, hence the belated declaration of an Airprox. ATC and the other aircraft were not made aware of the Airprox until later on.

**2 Gp BM Analysis**

The actions of the Shawbury Tower controller were assessed to have been suitable and in accordance with local procedures. With both aircraft conducting standard profiles and communicating on the same frequency in VFR conditions, there was no requirement for additional activity from the Shawbury Tower controller.

**UKAB Secretariat**

An analysis or the NATS radar replay was undertaken and both aircraft were identified using Mode S data. Juno(A) had been approaching Shawbury from the east, and Juno(B) from the west. CPA was assessed to have occurred at 1307:15 with 0.1NM lateral separation and co-altitude (Figure 3).

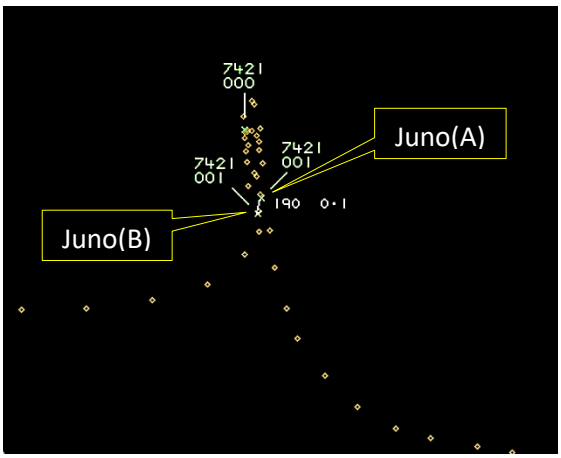



Figure 3 CPA 1307:15

It was seen, on the radar replay, that Juno(A) and Juno(B) merged again 8sec later, 100ft lower, co-altitude and 0.1NM apart, which placed them at 50ft AGL as reported by both pilots.

Both 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. 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.[2]

**Summary**

An Airprox was reported when Juno(A) and Juno(B) flew into proximity at Shawbury at 1307Z on Friday 31st January 2025. Both Juno(A) and Juno(B) pilots were operating under VFR in VMC and in receipt of a Military Aerodrome Control Service from Shawbury Tower.

## PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, and reports from the air traffic controller involved and 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 discussed the actions of the pilot of Juno(A), noting that they had had full situational awareness of the opposite direction Juno(B) arriving from the west. Members agreed that, although the pilot had sighted Juno(B) to the west, once the Juno(A) pilot had situated their aircraft onto the final approach they had no longer been able to see Juno(B), therefore, the Board agreed that in the lead-up to and at the point of CPA, the pilot had been unsighted on Juno(B) (**CF7**) because Juno(B) had positioned behind them and was obscured from their view (**CF8**). Members also agreed that the pilot had not received an alert from their TAS as expected (**CF5**) and had had only generic situational awareness (**CF2**) of Juno(B) being on the approach behind them at the point of CPA, being unaware of either their proximity or that the Juno(B) pilot had not seen their aircraft, Juno(A), previously.

Turning their attention to the actions of the Juno(B) pilot, the Board was surprised that they had not heard the radio transmissions from Juno(A). However, one member was able to provide additional information and insight to the situation explaining that some R/T calls had been 'stepped on' (two people transmitting simultaneously) meaning that it had been likely that only one of the calls would have been heard. It transpired, therefore, that as a result of this having happened, the Juno(B) pilot had not heard the Juno(A) pilot's transmissions. Members further learned that, on checking the Juno(B)'s TAS, it had evidenced several alerts for this event which were not reported and had gone unnoticed by the crew of Juno(B). Members agreed that the Juno(B) pilot had not assimilated the conflict from the TAS alerts (**CF4**) having been unaware of them, nor had they monitored the R/T communications sufficiently to

[2] MAA RA 2307 paragraph 17.

have verified the complete approach scenario (**CF1**) and had therefore not understood that there had been three Junos ahead of them and not just the two they had sighted (**CF3**). Members agreed that the pilot should, under normal circumstances, have had generic situational awareness of the presence of Juno(A) ahead of them from the R/T communications but, in this case, had not had any situational awareness of it (**CF2**), and had therefore been surprised when they had seen Juno(A) at a late stage (**CF6**).

The Board then moved on to discuss the Shawbury ATC procedures, and noted that the R/T communications had been reduced to a minimum to prevent the frequency becoming too busy and allow the Juno pilots (in this case) to sequence themselves for landing. Members learned that the procedures had been regularly reviewed based on users' experiences and agreed that the controller had not been aware that the proximity of Juno(A) to Juno(B) had been of concern, until the Juno(B) pilot had spoken with them after the event, because procedures had appeared to have been followed and operations appeared to have been as usual. The Board agreed that the controller's situational awareness, in this case, was not a contributory factor as there had been no requirement for them to have sequenced the helicopters after their initial calls. The Board discussed the potential of what might have happened and recognised that Shawbury ATC had been keen to have both pilots prepare an Airprox report so that any potential for improvement to their procedures could be investigated and considered.

Bringing the discussion to a close, the Board agreed that Juno(A)'s and Juno(B)'s proximity resulted in safety margins being much reduced below the norm and that a risk of collision had been present (**CF9**). Taking into account that the Juno(B) pilot had not assimilated the TAS alerts or the radio calls from Juno(A), and had only become aware of its presence at a late stage on the approach when they had sighted it (whereupon they had manoeuvred left), the Board assigned a Risk Category B to this event.

## PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

| | **2025010** | | | |
|---|---|---|---|---|
| CF | **Factor** | **Description** | **ECCAIRS Amplification** | **UKAB Amplification** |
| | **Flight Elements** | | | |
| | **• Situational Awareness of the Conflicting Aircraft and Action** | | | |
| 1 | Human Factors | • Monitoring of Communications | Events involving flight crew that did not appropriately monitor communications | |
| 2 | 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 |
| 3 | Human Factors | • Understanding/ Comprehension | Events involving flight crew that did not understand or comprehend a situation or instruction | Pilot did not assimilate conflict information |
| | **• Electronic Warning System Operation and Compliance** | | | |
| 4 | Contextual | • Other warning system operation | An event involving a genuine warning from an airborne system other than TCAS. | |
| 5 | 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** | | | |
| 6 | Human Factors | • Identification/ Recognition | Events involving flight crew not fully identifying or recognising the reality of a situation | Late sighting by one or both pilots |
| 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 | Contextual | • Visual Impairment | Events involving impairment due to an inability to see properly | One or both aircraft were obscured from the other |
| | **• 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: B.

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:**

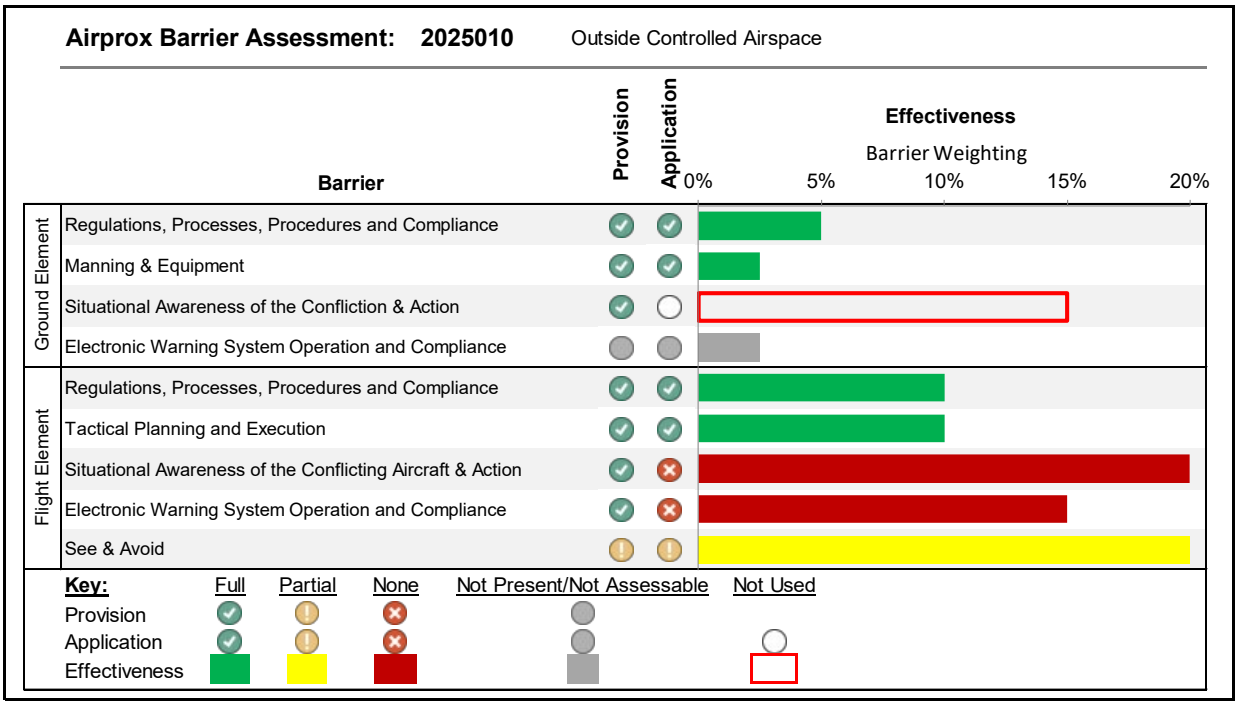
**Situational Awareness of the Confliction and Action** were assessed as **not used** because the Shawbury controller was not required to position inbound aircraft once they had made their relevant RT communications and self-positioned in accordance with the Shawbury procedures.

**Flight Elements:**

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the Juno(A) pilot had generic situational awareness of the Juno(B) aircraft positioned behind them and the Juno (B) pilot had had no situational awareness of the presence or position of Juno(A).

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because Juno(A)'s TAS had not alerted as expected and the Juno(B) pilot had not identified or assimilated alerts from their TAS.

**See and Avoid** were assessed as **partially effective** because the Juno(B) pilot had only sighted Juno(A) during the latter stages of their approach.




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