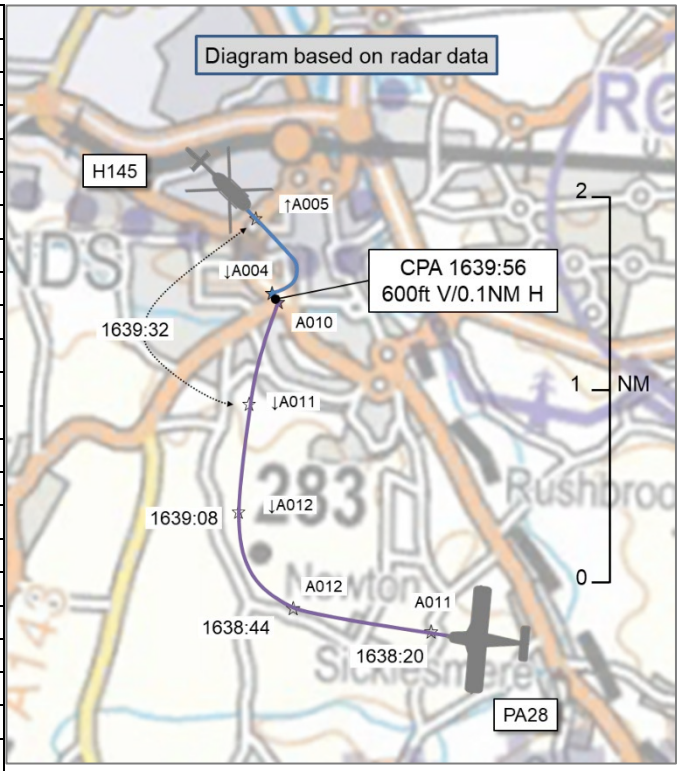
## AIRPROX REPORT No 2022096

Date: 03 Jun 2022 Time: 1640Z Position: 5214N 00042E Location: Bury St. Edmunds

## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|---|---|---|
| Aircraft | H145 | PA28 |
| Operator | HEMS | Civ FW |
| Airspace | London FIR | London FIR |
| Class | G | G |
| Rules | VFR | VFR |
| Service | None | None |
| Provider | N/A | N/A |
| Altitude/FL | 400ft | 1000ft |
| Transponder | A, C, S | A, C |
| **Reported** | | |
| Colours | Yellow | White, Blue, Red |
| Lighting | Landing, Search | Beacon |
| Conditions | VMC | VMC |
| Visibility | >10km | >10km |
| Altitude/FL | 800ft | 1000ft |
| Altimeter | QNH (1022hPa) | QFE (NK hPa) |
| Heading | 180° | 270° |
| Speed | 80kt | 90kt |
| ACAS/TAS | TCAS I | Not fitted |
| Alert | Information | N/A |
| **Separation at CPA** | | |
| Reported | 0ft V/0.5NM H | NK V/NK H |
| Recorded | 600ft V/0.1NM H | |




**THE H145 PILOT** reports that, on departure, they received a 'Traffic' aural warning and visual display on their ACAS at circa 0.5 to 1NM. The conflicting aircraft [was observed to be] flying on a trajectory approximately 150° apart from their own, (for reference, a 180° difference would imply an opposite direction trajectory) in a descent. Their aircraft was positively turned 90° to the right and a descent was started whilst PM made a call on the Rougham frequency. By the end of the evasion manoeuvre they had turned 90° to the right and descended by 400ft. After the evasion manoeuvre was complete they continued with no further events. Learning points: They had been aware of their proximity to Rougham, and had briefed in the morning about the threat of increased GA traffic due to the good weather and long weekend. [They believe that the] fact that, whilst inbound, they had heard nobody on the Rougham frequency may have led them to believe that Rougham was going to be quiet for the day. Indeed, it was quiet when they landed [on the previous sortie] but an hour later the situation had changed. The cognitive bias may have made them too relaxed for the take-off for their short repositioning flight. They did check visually for traffic behind and above prior to the departure, however, and potentially as a consequence of the previous 'learning point', they didn't check if there was any traffic on the ACAS. The position and dynamics of the later conflicting aircraft may have been such that it would have not been displayed on the ACAS, but they cannot confirm if that was the case or not.

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

**THE PA28 PILOT'S INSTRUCTOR** reports that on the day in question they had authorised the pilot of [the PA28] (a student pilot under training) to fly a series of solo circuits at Rougham. The circuits being flown were using RW09 with a right-hand circuit, at a circuit height of 1000ft QFE (1200ft QNH). As a matter of practice, when supervising solo students flying in the circuit, they watch from a position adjacent to the runway and have with them a hand-held radio. (Although Rougham sometimes provides an A/G service, they were not performing this function – they had the hand-held merely as a means to contact the student if necessary.) During the course of one circuit, and when their student had just

turned onto the downwind leg of RW09, they observed the yellow helicopter climbing in a direction that they believed might conflict with their student. Simultaneously their student reported by RT that they were on the downwind leg. In view of the possible confliction they used their hand-held radio to advise the student of the proximity of the helicopter. Their student acknowledged the RT call and stated that they were visual with the traffic. It soon became apparent that the helicopter pilot had monitored these RT exchanges because they then called-up on the Rougham frequency. As far as the instructor was concerned, that was the end of the event but they later learned that the helicopter pilot phoned Rougham Airfield to let them know that they had reported the Airprox. The instructor's view of the matter was that there was a low risk of collision, and that interaction with HEMS activity in the vicinity of Rougham has always been favourable, and they always make timely RT calls when they need to transit nearby.

The instructor assessed the risk of collision as 'Low'.

## Factual Background

The weather at Wattisham was recorded as follows:

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METAR EGUW 031650Z AUTO 06014KT 9999 BKN 130/// 18/19 Q1018
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## Analysis and Investigation

### UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft were detected and identified. The PA28 had been visible for some time before the Airprox, and could be observed completing at least one circuit prior to the Airprox. The radar also detected one other aircraft in the vicinity at the time which also appeared to be in the Rougham circuit. The H145, however, had only been detected approximately 30sec before the event as it had been climbing out of low-level.

The H145 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] 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 an H145 and a PA28 flew into proximity at Bury St. Edmunds at 1640Z on Friday 3rd June 2022. Both pilots were operating under VFR in VMC, neither pilot in receipt of an ATS.

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

Information available consisted of reports from both pilots and radar photographs/video recordings. 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 H145 pilot and members noted that they had monitored the Rougham A/G frequency during their previous sortie. Whilst members accepted that it may have been quiet on the previous sortie, members agreed that pilots should exercise caution when making an assumption that traffic levels will not change over a period of time. A helicopter pilot member suggested, and the Board agreed, that a blind call on the Rougham frequency prior to lift could have been made by the H145 pilot (**CF2**) which would have enhanced the situation awareness of pilots in the area monitoring that frequency. Members were encouraged that the pilot had conducted a visual check of the airspace prior to becoming airborne and, noting the pilot's comment that the traffic had been on

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

their ACAS once they had become airborne (**CF5**) agreed that it may have been displayed to them on the system whilst they had still been on the ground, and that a check of that system prior to lift could have also helped build the pilot's situational awareness (**CF1**). Members next discussed the routing that the H145 pilot had chosen and appreciated that, when conducting HEMS operations, there are additional considerations for the pilot. However, it was agreed that, when practical, pilots should navigate around areas of increased aerial activity. The Board agreed that the H145 pilot had not sufficiently avoided the pattern of traffic that had been formed at Rougham by the PA28 pilot (**CF3**).

Next, members discussed the actions of the PA28 pilot and noted that they had been a solo student conducting circuit training. The Board was encouraged that there had been a mechanism in place to enable the instructor to communicate with the PA28 pilot and that the instructor had recognised that the PA28 pilot had not had any prior awareness of the H145 (**CF4**). However, at the point at which the instructor had informed the PA28 pilot of the presence of the H145 the pilot had already become visual with it and had been turning away from it on to their base-leg.

Finally, the Board considered the risk involved in this event and wished to thank the H145 pilot for reporting this Airprox and for their analysis of their own actions. Members agreed that, although the PA28 pilot had not had any prior awareness of the presence of the H145, and the H145 pilot had received a "Traffic" alert, both pilots had become visual with the other aircraft early and their actions had been such that separation remained at a safe level throughout. Members concluded that normal safety standards had pertained and that there had been no risk of collision. Consequently, the Board assigned a Risk Category E to this event.

## PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

| | 2022096 | | | |
|---|---|---|---|---|
| CF | **Factor** | **Description** | **ECCAIRS Amplification** | **UKAB Amplification** |
| | **Flight Elements** | | | |
| | **• Tactical Planning and Execution** | | | |
| 1 | Human Factors | • Action Performed Incorrectly | Events involving flight crew performing the selected action incorrectly | Incorrect or ineffective execution |
| 2 | 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 |
| 3 | Human Factors | • Monitoring of Environment | Events involving flight crew not to appropriately monitoring the environment | Did not avoid/conform with the pattern of traffic already formed |
| | **• Situational Awareness of the Conflicting Aircraft and Action** | | | |
| 4 | 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** | | | |
| 5 | Contextual | • ACAS/TCAS TA | An event involving a genuine airborne collision avoidance system/traffic alert and collision avoidance system traffic advisory warning triggered | |

Degree of Risk: E

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:

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

## Flight Elements:

**Tactical Planning and Execution** was assessed as **partially effective** because, although they had visually checked the surrounding airspace prior to lift, the H145 pilot had not checked their ACAS display. After departure they had not avoided the pattern of traffic that had been established at Rougham or called on the Rougham frequency.