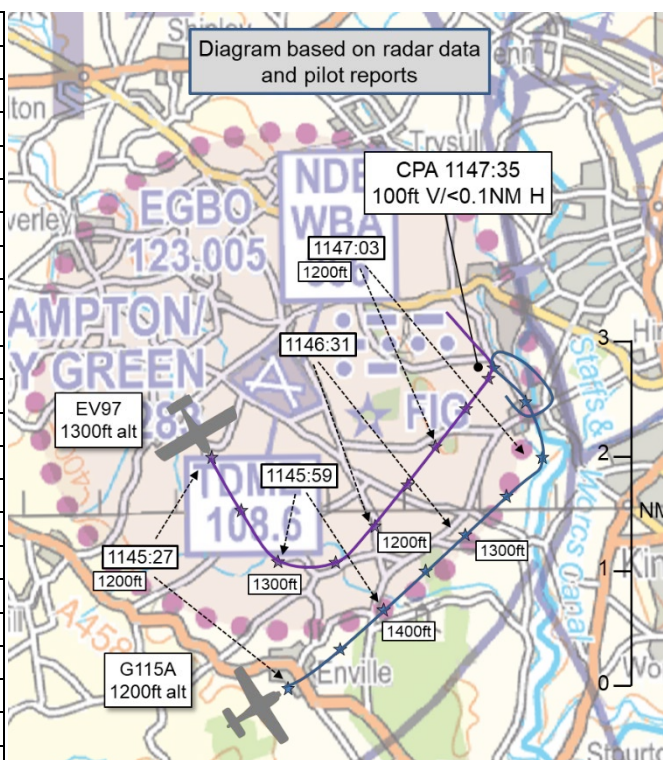


**AIRPROX REPORT No 2023147**

Date: 13 Jul 2023 Time: 1148Z Position: 5231N 00213W Location: Wolverhampton Airport ATZ

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	Grob G115A	EV97 Eurostar
Operator	Civ FW	Civ FW
Airspace	H'penny Green ATZ	H'penny Green ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Halfpenny Green	Halfpenny Green
Altitude/FL	1400ft	1300ft
Transponder	A, C, S	A, C, S
<b>Reported</b>		
Colours	White / Orange	Silver
Lighting	Nav, Landing	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1000ft	1000ft
Altimeter	QFE (1004hPa)	QFE
Heading	040°	040°
Speed	95kt	80kts
ACAS/TAS	Not fitted	Not fitted
Alert	N/A	N/A
<b>Separation at CPA</b>		
Reported	0ft V/250ft H	0ft V/500ft H
Recorded	100ft V/<0.1NM H	



**THE GROB PILOT** reports a busy circuit with 4 in. They had been instructing a student who reported downwind. The FISO didn't hear the callsign and asked "the aircraft on downwind say again callsign", the Grob pilot prompted the student to respond. [The pilot of a 3<sup>rd</sup> aircraft (uninvolved)] then reported downwind and was told "one ahead on final", the Grob pilot then reported "late downwind" as they had assumed the other traffic and FISO had lost their position. The Grob pilot then turned base leg and was asked to report position, they reported back "base leg". They then noticed the EV97 to their left, less than 250ft away and turning base leg but on a collision course with them. The pilot of the EV97 reported "turning inside the traffic, we see them on our right", still on a collision course. The Grob pilot then took control and immediately performed a steep turn to the right to position behind the EV97. Due to FISO workload and non-concise RT being used, the Grob pilot recalls that they were unable to confirm their position. The FISO then incorrectly reported the number of aircraft ahead to the EV97, who had a loss of situational awareness [they opined], did not see the aircraft ahead of them and did not give way to the aircraft on their right and caused evasive action to have to be performed. The [Grob] student is of solo standard and, in their view, if they had been flying solo a collision was more likely to have occurred.

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

**THE EV97 PILOT** reports that they had approached [destination airfield] using standard overhead practice i.e. at 2000ft to the overhead and in touch with ATC. The runway in use had been 22LH and the pilot informed ATC that they were overhead and descending on the deadside. The pilot had been asked to report downwind which they did when established on it. At a similar time, another aircraft, later identified as a Grob 115, also called downwind, which surprised them. The pilot scanned the sky and found it on their starboard side and outside their position in relation to the circuit pattern. Both pilots saw each other at the same time and the other aircraft took avoiding action by turning away from the circuit and the EV97 pilot turned away to port and informed ATC of the situation. [At this point] the EV97 pilot had been on base leg for RW22LH and continued flying the aircraft and landed without further

incident. As far as the EV97 pilot can estimate, the two aircraft came within about 500yds of each other but the situation was dealt with in the air by both pilots and, as ATC made no comment when the EV97 pilot paid the landing fee, they concluded that the incident was closed.

**THE HALFPENNY GREEN AFISO** reports that they had been the duty AFISO on watch at the time of the reported Airprox; they had commenced duty at 0800 with a 20min comfort break at 0952. At around the period of the incident, they recall that the ATZ was reasonably busy with an on-going circuit detail, departure into the circuit, and a number of aircraft joining to integrate, with the associated workload. Specifically, the [3<sup>rd</sup> aircraft (uninvolved)] was joining overhead from the west, the EV97 joining overhead from the south, 1 further joining from the west and 1 already in the circuit.

At the same time as the Grob departed into the circuit at 1143, the EV97 was in the overhead descending for the LH pattern. Therefore, it had been likely that the two subject aircraft were going to be in similar locations in the circuit. The AFISO reports that they would have notified the pilot of the EV97 whilst in the overhead that the circuit was active with 2 in.

They recall that the pilot of the EV97 reported downwind and that therefore they would have passed Traffic Information on the 3<sup>rd</sup> aircraft (not involved) ahead, and probably left base or finals. Approximately 1-2min later, they had started to wonder on the location of the Grob as the pilot had not reported downwind. The AFISO did not recall a 'stepped-on' transmission from the pilots of either subject aircraft and neither pilot reported that they had visual with the other.

At the point of scanning for the Grob, someone (no callsign) reported on RT 'avoiding action'. This made the AFISO scan the circuit and they noticed 2 aircraft at the end of the downwind leg, one in a RH orbit and one in a similar location continuing an approach to base leg. Using binoculars, they could see the EV97 on base leg and a Grob orbiting. They estimate that this event would have taken place at about 1147, about 2min before the EV97 landed.

At 1154, a phone call had been received in the tower from the owner of the Grob stating that an Airprox would be filed. A note to this effect was added to the watch log. The Grob continued on its circuit detail, landing at 1232.

The duty RW at the time was 22LH, having changed from RW28 at 1039, with a QFE of 1004hPa, QNH 1014hPa. The weather on opening the watch had been RW22 230/09 9999 nil wx FEW015, SCT025 (est) QNH 1015. The wind was 210V290 resulting in changes from RW22 to RW28.

## **Factual Background**

The weather at Cosford was recorded as follows:

```
METAR EGWC 131150Z 22007KT 9999 FEW025 SCT040 19/11 Q1015 RMK BLU=  
METAR EGWC 131050Z 25007KT 9999 SCT028 19/12 Q1015 RMK BLU=
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## **Analysis and Investigation**

### **CAA ATSI**

It is a great pity that the RTF for this is not available, with the Halfpenny Green recorder apparently out of service that day. The RTF would very much have cleared up the differing accounts from pilots and ATC.

The pilots' reports appear to suggest that no Traffic Information was passed to the EV97 in the overhead with regards to the circuit, but this cannot be confirmed. ATSI reading of the reports suggests that when the AFISO requested a pilot who had just called "downwind" to repeat their call, (as they had missed the callsign), that the original call had been made by the EV97 pilot (and apparently missed by the Grob pilot). However, the Grob pilot then took the call, and repeated their downwind call again although they had apparently been late downwind at this stage, and so the EV97 pilot did not get a further chance to make their own call (and enhance the Grob pilot's SA).

From the radar replay it is apparent that neither pilot had been aware of the other as they tracked downwind with the Grob turning on to base leg directly ahead of the EV97.

The ATC (AFISO) report is of limited use as they consistently report what they assumed they would have done, (i.e. they should have done) in this scenario, rather than what they actually remember doing.

### UKAB Secretariat

The Grob and EV97 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.<sup>1</sup> 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.<sup>2</sup>

### Summary

An Airprox was reported when a Grob G115A and an EV97 flew into proximity at Halfpenny Green at 1148Z on Thursday 13<sup>th</sup> July 2023. Both pilots were operating under VFR in VMC, and both in receipt of an Airfield Flight Information Service from Halfpenny Green.

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

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the AFISO involved. 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 Grob pilot, noting that they had been instructing a student in circuit flying and had commented on the confusion amongst the pilots in the circuit and the AFISO, which had led them to believe that the AFISO had lost situational awareness of relevant aircraft positions (**CF2**) with a resultant lack of appropriate Traffic Information provision (**CF1**), leading to inaccurate situational awareness for the pilots involved (**CF5**) and ultimately a late sighting of the other for both pilots (**CF6**).

Members went on to discuss the actions of the EV97 pilot, commenting that an element of any overhead join is the inherent responsibility of the pilot joining in the overhead to identify the position of others within the circuit before descending to circuit height and seamlessly joining the pattern of formed traffic. The Board agreed that this was something that the EV97 pilot had not fully achieved, resulting in their ultimate downwind position in relation to the aircraft ahead (**CF3, CF4**).

Board members noted the report submitted by the Halfpenny Green AFISO, agreeing with the comment submitted by the CAA ATS Investigator that, in light of the airfield voice recording system being unserviceable, accurate and timely note taking (particularly in light of a pilot's intention to report an Airprox) was critical in capturing actions and recollections of day-to-day operations and of any specific event.

When determining the risk of collision, the Board agreed that safety margins had been much reduced below the norm through the late-sighting by the pilots of each aircraft and that there had been emergency avoiding action taken by the Grob pilot which had materially increased separation at the last minute, but not entirely removed the risk of collision. As such, the Board assigned a Risk Category B to this Airprox (**CF7**).

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<sup>1</sup> (UK) SERA.3205 Proximity.

<sup>2</sup> (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

**PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK****Contributory Factors:**

2023147				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
<b>• Situational Awareness and Action</b>				
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
<b>Flight Elements</b>				
<b>• Tactical Planning and Execution</b>				
3	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
4	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
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
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
<b>• See and Avoid</b>				
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
<b>• Outcome Events</b>				
7	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<sup>3</sup>**

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 **ineffective** because the AFISO had not passed any Traffic Information to the pilots of the 2 conflicting aircraft.

**Flight Elements:**

**Tactical Planning and Execution** was assessed as **partially effective** because the EV97 pilot did not conform with the pattern as established by the Grob pilot ahead of them.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **partially effective** because the callsign confusion triggered by the AFISO led to both pilots developing inaccurate situational awareness within the circuit.

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

**See and Avoid** were assessed as **partially effective** because both pilots sighted the other aircraft at a later than optimum point.

<b>Airprox Barrier Assessment: 2023147</b>		Outside Controlled Airspace					
<b>Barrier</b>	<b>Provision</b>	<b>Application</b>	<b>Effectiveness</b>				
			<b>Barrier Weighting</b>				
			0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar: 0% to 5%]			
	Manning & Equipment	✓	✓	[Green bar: 0% to 2.5%]			
	Situational Awareness of the Conflicition & Action	✓	✗	[Red bar: 0% to 15%]			
	Electronic Warning System Operation and Compliance	○	○	[Grey bar: 0% to 2.5%]			
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar: 0% to 10%]			
	Tactical Planning and Execution	✓	⚠	[Yellow bar: 0% to 10%]			
	Situational Awareness of the Conflicting Aircraft & Action	⚠	⚠	[Yellow bar: 0% to 20%]			
	Electronic Warning System Operation and Compliance	○	○	[Grey bar: 0% to 15%]			
	See & Avoid	✓	⚠	[Yellow bar: 0% to 20%]			
<b>Key:</b>		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>	
Provision	✓	⚠	✗	○	○		
Application	✓	⚠	✗	○	○		
Effectiveness	[Green]	[Yellow]	[Red]	[Grey]	[Red Box]		