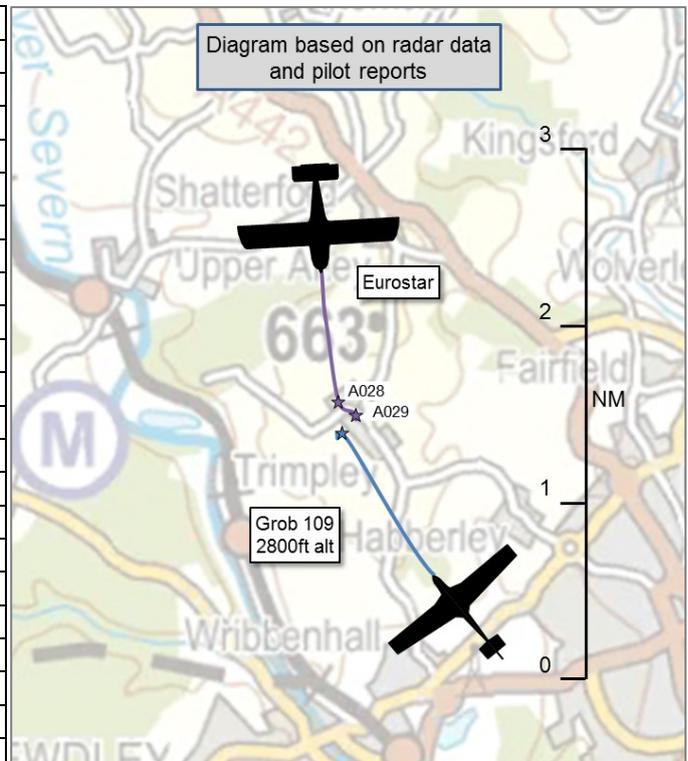


AIRPROX REPORT No 2020066

Date: 12 Jul 2020 Time: 0924Z Position: 5223N 00218W Location: 2NM NW Kidderminster

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Grob 109	Eurostar
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	Halfpenny Green	Halfpenny Green
Altitude/FL	2800ft	2900ft
Transponder	A, C, S	A, C
Reported		
Colours	White, Blue	Silver
Lighting	Strobe, Landing	Strobe
Conditions	VMC	VMC
Visibility	CAVOK	>10km
Altitude/FL	2800ft	2900ft
Altimeter	QNH (1029hPa)	QNH (1029hPa)
Heading	325°	170°
Speed	80kt	75kt
ACAS/TAS	PowerFLARM	Not fitted
Alert	Information	N/A
Separation		
Reported	100ft V/200m H	100ft V/0.5NM H
Recorded	100ft V/0.1NM H	



THE GROB 109 PILOT reports that the weather was clear, and they were clear of cloud. They were alerted to the threat of traffic, between Kidderminster and Pound Green, by a ring of red dots on the LXNAV LX8000 [UKAB note: the LX8000 can display transponder-equipped targets when coupled with a PowerFLARM unit]. No threat aircraft symbol was displayed on SkyDemon which was running on their iPad. Despite visual scans they did not see the threat traffic until it was uncomfortably close. In hindsight they believe it was likely to have been obscured at some point by the right side of their canopy frame. When they saw the threat aircraft it was on a converging course from the right, slightly higher than them. At its closest point it banked to the left away from the Grob 109.

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

THE EUROSTAR PILOT reports that they were about 20 minutes into the flight, approximately abeam Kidderminster, when both they both noticed an approaching aircraft slightly below and, from memory, approximately in their 11 o'clock position. The aircraft passed in front and slightly below. They saw the aircraft very late, and they were able to initiate a slight left turn and climb, but had they taken no action there would have been no collision. They watched the other aircraft over their right shoulder, and neither of them saw the other aircraft take any avoiding action, and they both commented that they thought the pilot hadn't seen them at all. It is difficult to remember whether there were any distraction factors, but they do remember discussing the sun being very bright, and in fact the passenger reaching for a hat (perspex canopy) & glasses as they were squinting. They were also discussing options if they were refused a transit of Brize, but these options were planned beforehand. Although difficult to remember, they would likely to have still been monitoring Halfpenny Green radio.

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

Factual Background

The weather at Birmingham was recorded as follows:

METAR EGBB 120920Z VRB03KT CAVOK 16/06 Q1029

Analysis and Investigation

Both aircraft are indicating 2800ft prior to CPA. Just before CPA the Eurostar climbs to 2900ft and turns left. The Grob 109 turns slightly left at CPA.

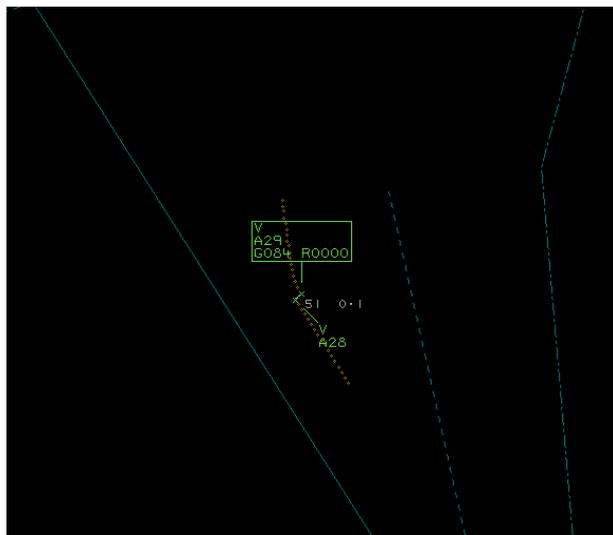


Figure 1: CPA 0924:15

UKAB Secretariat

The Grob 109 and Eurostar 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 Grob 109 and a Eurostar flew into proximity 2NM NW of Kidderminster at 0924Z on Sunday 12th July 2020. Both pilots were operating under VFR in VMC, and both pilots listening out on Halfpenny Green.

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. 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided dial-in/VTC comments.

The Board began by discussing the actions of the Grob 109 pilot. A Board member, who was familiar with the aircraft, said that the canopy layout obscured the pilot's view quite significantly; the general practice was to weave the aircraft during flight to try to increase the visibility and ensure the best

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(1) Approaching head-on.

available lookout. It was because of this that the Eurostar was probably obscured until the aircraft were too close for the Grob 109 pilot to materially increase the separation between the aircraft (**CF5**). The aircraft was fitted with PowerFLARM linked to SkyDemon, but the pilot did not receive any threat indications although they did have information on other aircraft in their vicinity. (**CF2**), the Board agreed that this demonstrated the importance of a good lookout. The BGA member reminded the Board that PowerFLARM can provide vertical information derived from MODE C interactions but cannot give positional information as this is not encoded within the MODE C transmissions, as such it can trigger an enhanced lookout scan, as it did in this case. Even though lookout was augmented due to the presence of other aircraft, the pilot acquired the conflicting aircraft late. Although not related to this Airprox the Board agreed that fully compatible EC equipment would likely have provided an earlier and directed warning.

Turning to the actions of the Eurostar pilot the Board agreed that the pilot also saw the Grob 109 late and carried out a turn and climb to increase separation. The Board noted the Eurostar pilot's observation that the sun and reaching for sunglasses had unfortunately distracted them at a time when they may have seen the Grob 109 earlier than they did (**CF3**).

Both pilots were listening out on the Halfpenny Green frequency but had not spoken or relayed any information about their intentions. Board members agreed that this does nothing to increase either their situational awareness or any other pilots. Members opined that if either pilot had spoken to Halfpenny Green the other pilot would have had increased situational awareness and this may have prevented this Airprox (**CF1**).

Turning to the risk, the Board agreed that both pilots had seen the other aircraft later than desirable and it was the slightly earlier sighting and action by the Eurostar pilot that had prevented the aircraft getting closer than they did. The Board agreed that the safety of the aircraft had not been assured (**CF4**), a Risk Category B.

PART C: ASSESSMENT OF CONTRIBUTORY FACTOR(S) AND RISK

Contributory Factor(s):

	2020066		
CF	Factor	Description	Amplification
	Flight Elements		
	• Situational Awareness of the Conflicting Aircraft and Action		
1	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance		
2	Contextual	• Other warning system operation	Warning from a system other than TCAS
	• See and Avoid		
3	Human Factors	• Distraction - Job Related	Pilot looking elsewhere
4	Contextual	• Near Airborne Collision with Aircraft, Balloon, Dirigible or Other Piloted Air Vehicle	Piloted air vehicle
5	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

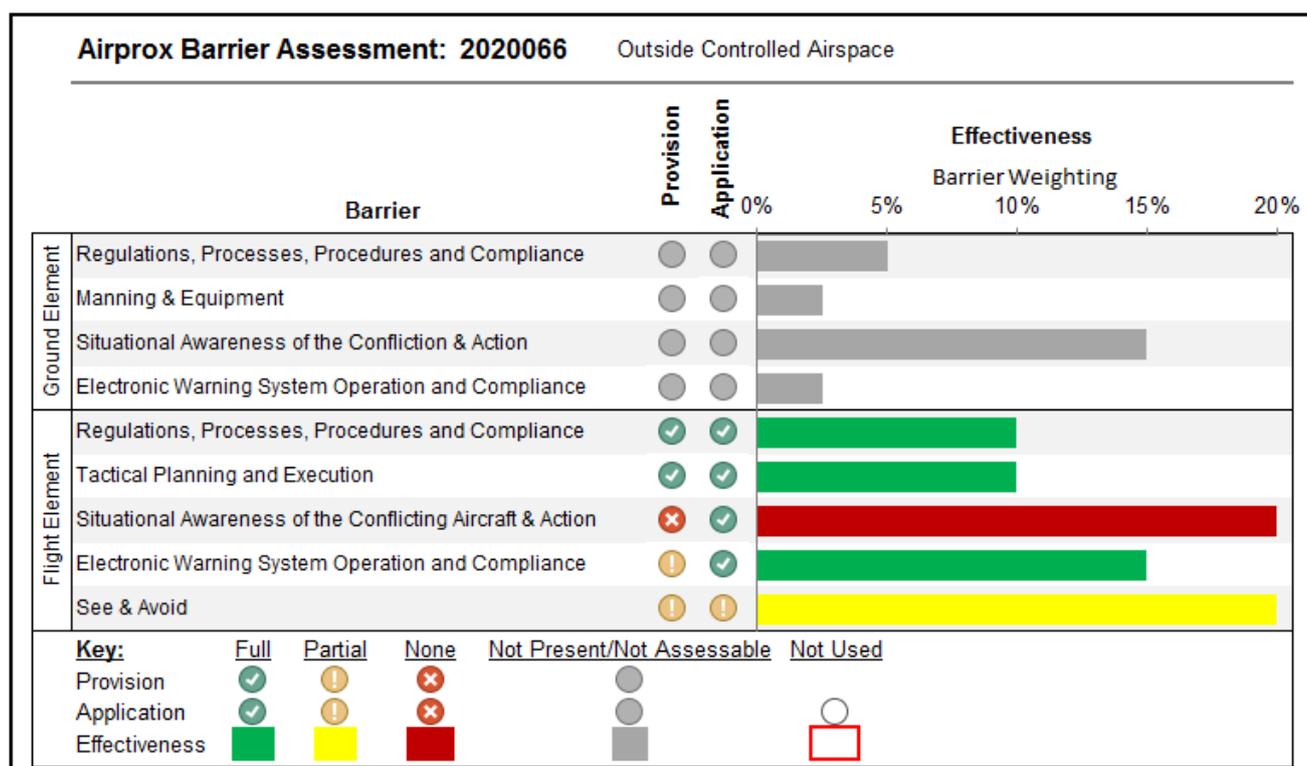
Safety Barrier Assessment³

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any information on the presence of the other aircraft.

See and Avoid were assessed as **partially effective** because both pilots saw the other aircraft late and the Eurostar pilot carried out late avoiding action.



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