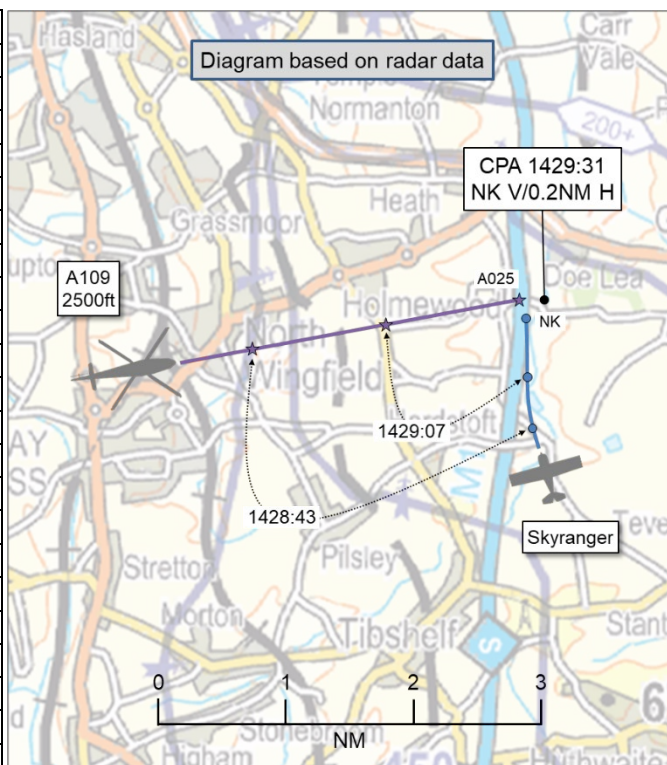


AIRPROX REPORT No 2024020

Date: 07 Feb 2024 Time: 1430Z Position: 5311N 00119W Location: 5NM SE Chesterfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Skyranger	A109
Operator	Civ FW	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	NK
Service	None	Unknown
Altitude/FL	NK	2500ft
Transponder	None	A, C, S+
Reported		
Colours	White	Silver
Lighting	None	NR
Conditions	VMC	NR
Visibility	>10km	NR
Altitude/FL	2230ft	NR
Altimeter	QNH (1006hPa)	NR
Heading	340°	NR
Speed	72kt	NR
ACAS/TAS	SkyEcho	NR
Alert	Information	NR
Separation at CPA		
Reported	700ft V/0m H	NR
Recorded	NK V/0.2NM H	



THE SKYRANGER PILOT reports that they were flying along the eastern side of the M1 over Hardwick Hall on a clear day with good visibility. They noticed on their display, which was fed by their [EC device], an aircraft approaching quickly from the west. It was depicted as 200ft above. They were on course to occupy the same vertical airspace. They acquired it visually and saw a helicopter which did not appear to change course. [The Skyranger pilot] dropped 500ft in 30sec as they felt changing course might have further challenged the separation as the helicopter was approaching quickly. It flew immediately overhead and they could see the helicopter clearly through the canopy whilst they had dropped to around 2000ft. The aircraft registration was [noted] and, on checking FlightRadar24 after landing, the flight showed them at 2675ft at 160kts as they flew overhead. After passing overhead [the helicopter pilot] started an immediate descent towards Shirebrook.

[The pilot of the Skyranger opines that] had they not taken evasive action by reducing altitude the vertical separation would have been around 400ft. They levelled out at approximately 1800ft and then climbed back to cruising height (around 2200ft) and continued their flight.

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

THE A109 PILOT declined to submit a report.

Factual Background

The weather at East Midlands was recorded as follows:

METAR EGNX 071420Z 00000KT 9999 FEW021 06/02 Q1005

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. A primary-only contact was observed which, by reference to the pilot's narrative report, was determined to have been the Skyranger. The A109 could be positively identified by Mode S data (Figure 1) and was depicted on the radar replay at a Flight Level. A suitable conversion factor was used to determine its altitude.

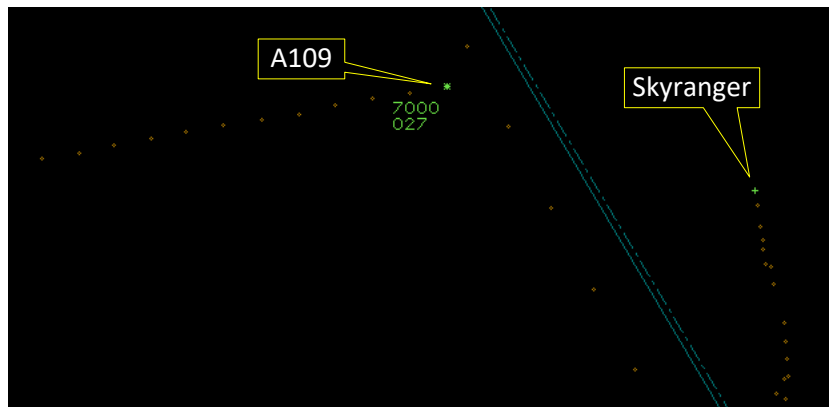


Figure 1 – 1428:59

The diagram was constructed and the horizontal separation at CPA determined from the radar data (Figure 2). The vertical separation at CPA could not be determined.

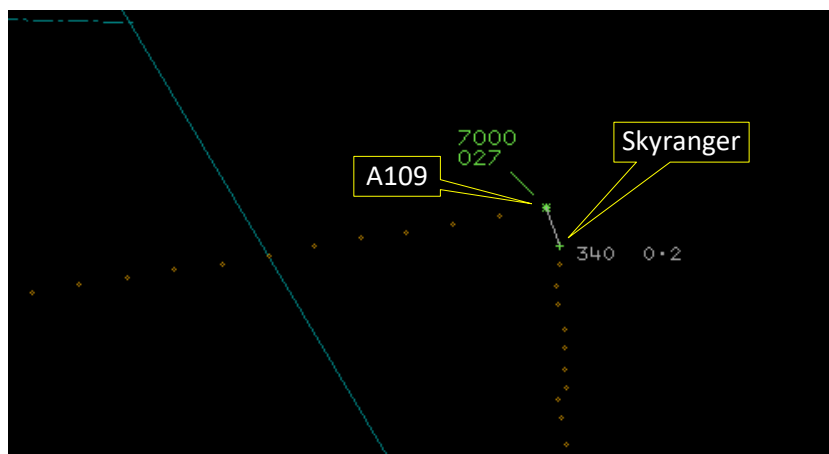


Figure 2 – CPA at 1429:31

The Skyranger and A109 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 A109 pilot was required to give way to the Skyranger.²

Summary

An Airprox was reported when a Skyranger and an A109 flew into proximity 5NM south-east of Chesterfield at 1430Z on Wednesday 7th February 2024. The Skyranger pilot was operating under VFR in VMC and not in receipt of an ATS. The flight rules under which the A109 pilot was operating could not be determined, nor if the pilot of the A109 had been in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the Skyranger pilot 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.

¹ (UK) SERA.3205 Proximity.

² (UK) SERA.3210 Right-of-way (c)(2) Converging.

The Board was disappointed that the pilot of the A109 had elected to not participate in the Airprox process. Notwithstanding, members considered the information available and noted that the Skyranger had been on a near-constant relative bearing from the A109 pilot (approaching from their right) for nearly a minute before CPA. Members appreciated the challenges that such geometry had presented but wished to emphasise the importance of a thorough and effective lookout. Given that the radar replay appeared to indicate that the A109 had remained on a steady course during the encounter, one member suggested that the pilot of the A109 may not have been aware of the presence of the Skyranger or, if it had been visually acquired, that its closing speed may have been misjudged.

Turning to the actions of the pilot of the Skyranger, members noted that they had not been in receipt of an ATS. Members agreed that it may have been prudent to have requested a service from an appropriate provider. Nevertheless, members agreed that the pilot of the Skyranger had acquired situational awareness of the A109 given that the EC device fitted to the Skyranger had detected its presence. Members noted that, upon visual acquisition of the A109, the pilot of the Skyranger had considered that the safest course of action had been to have initiated a descent. Members applauded the decision to have taken early positive action which had increased separation between the aircraft. Although the vertical separation at CPA could not be determined, members agreed that the Skyranger pilot's account of the encounter had suggested that there had not been any risk of collision and that their actions had increased separation sufficiently for normal safety margins to have pertained. The Board assigned risk Category E to this event and agreed on the following contributory factor:

CF1. The pilot of the Skyranger had been concerned by the proximity of the A109.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2024020				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• See and Avoid				
1	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: E.

Safety Barrier Assessment³

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that all barriers had functioned satisfactorily.

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

Airprox Barrier Assessment: 2024020		Outside Controlled Airspace						
Barrier	Provision	Application	Effectiveness					
			Barrier Weighting					
			0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	○	○					
	Manning & Equipment	○	○					
	Situational Awareness of the Conflicition & Action	○	○					
	Electronic Warning System Operation and Compliance	○	○					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Tactical Planning and Execution	✓	✓					
	Situational Awareness of the Conflicting Aircraft & Action	✓	✓					
	Electronic Warning System Operation and Compliance	⚠	✓					
	See & Avoid	✓	✓					
Key:								
	Full	Partial	None	Not Present/Not Assessable	Not Used			
Provision	✓	⚠	✗	○				
Application	✓	⚠	✗	○	○			
Effectiveness	■	■	■	■	□			