

**AIRPROX REPORT No 2025013**

Date: 29 Jan 2025 Time: 1035Z Position: 5220N 00045W Location: Orlington, Northants

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA40	DA42
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	NK <sup>1</sup>	Basic
Provider	East Midlands	Wellesbourne
Altitude/FL	FL026	FL034
Transponder	A, C, S	A, C, S
Reported		
Colours	White	White
Lighting	Nav, Strobe, Landing, Taxi	'On'
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2950ft	NK
Altimeter	QNH	QNH
Heading	~210°	NK
Speed	110kt	120kt
ACAS/TAS	TAS	Not fitted
Alert	Information	N/A
Separation at CPA		
Reported	Not Seen	Not Seen
Recorded	800ft V/0.4NM H	



**THE DA40 PILOT** reports that on their solo nav flight, while joining back with Cranfield for a return, they started getting a TAS warning reporting that there was an aircraft above, in their 12 o'clock. There were clouds above them and they were not visual with the traffic, so they decided to descend to avoid the traffic, resulting in the 'TAS increasing' [sic]. They did get away from the unsighted traffic.

**THE DA42 PILOT** reports that they did not recall an Airprox event. They saw other aircraft during the flight, and took separation manoeuvres throughout the general handling flight, but nothing that they (student and instructor) noticed come near to being an Airprox. They believed that they conducted a decent lookout and saw other DA40s, taking separation as required, but did not come close to any other aircraft, although they accepted that they might not have seen the other aircraft.

**THE CRANFIELD CONTROLLER** reports that they were notified of the Airprox, by the UKAB Secretariat, two weeks after the event. They had no recollection of the incident.

**THE WELLESBORNE AFISO** reports that they were the duty AFISO at Wellesbourne Mountford. The DA42 departed RW18 at 1013 for a local flight. The aircraft departed to the east and was given a Basic Service on leaving the ATZ. The next call from the DA42 pilot was at approximately 1115, with a request for re-join information from the east. No reports of an Airprox were received on the Wellesbourne frequency. [The DA42] landed at 1123 and taxied to parking. The weather conditions were recorded as CAVOK, with a light south-westerly wind.

<sup>1</sup> The pilot reported receiving a Basic Service from Cranfield, but the Cranfield recording indicated that they had not yet called at the time of the Airprox. However, it later transpired that the pilot may have been receiving a service from East Midlands, unfortunately this information came too late to retrieve any data from East Midlands and the type of service could not be established.

## Factual Background

The weather at Cranfield was recorded as follows:

METAR EGTC 291020Z 23011KT CAVOK 05/04 Q1002=

## Analysis and Investigation

### Cranfield ATC Unit Investigation

The investigator listened to the recording of the Cranfield App frequency and watched the playback of ADS-B (on test at Cranfield at the time). The R/T recording indicated that neither aircraft were on the Cranfield frequency at the time of the Airprox. The DA40 pilot made their first call to Cranfield App to request a Basic Service at 1043.

### UKAB Secretariat

An analysis of the NATS radar replay was undertaken. Both aircraft could be seen and identified using Mode S data. Both aircraft were squawking 7000 and at 1034:05 were 5.4NM apart (Figure 1).

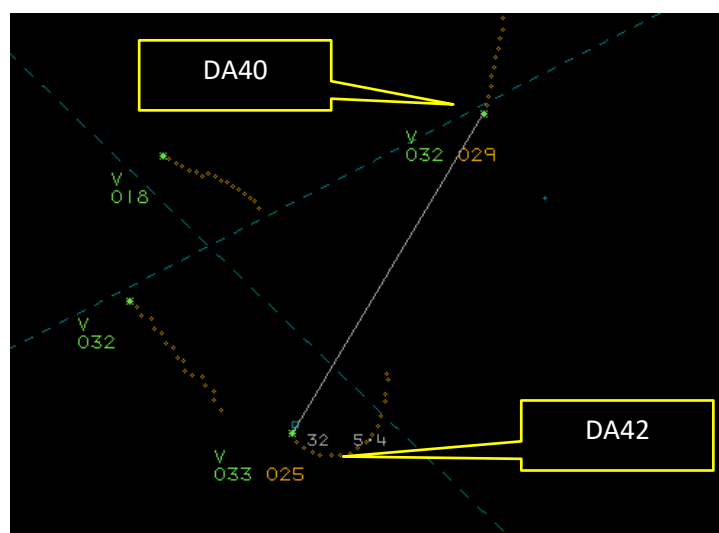


Figure 1: 1034:05

By 1034:32 the two aircraft were head to head at a range of 3.5NM, both indicating FL033.

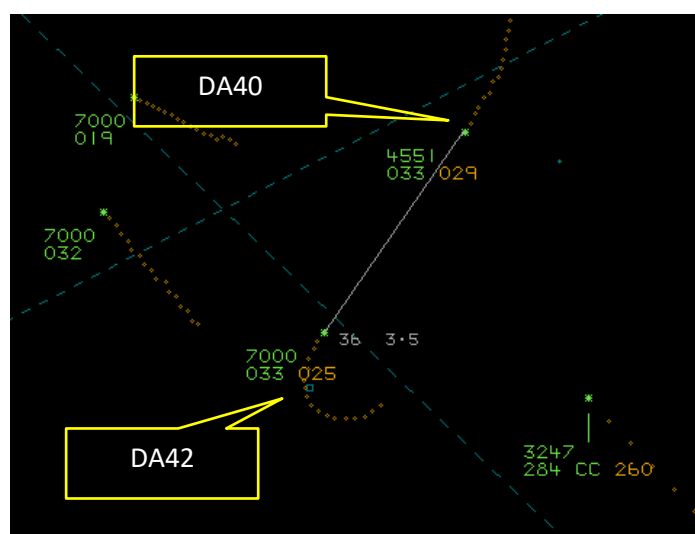


Figure 2 – 1034:32

The two aircraft continued to close, albeit slightly offset, until 1035:16 (Figure 3) when the DA40 pilot began to descend. CPA occurred at 1035:24 with radar separation measured as 0.4NM and 800ft.

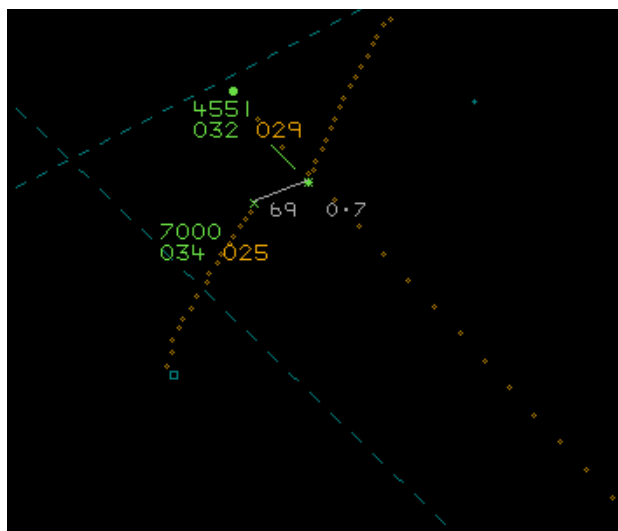


Figure 3 – 1035:16

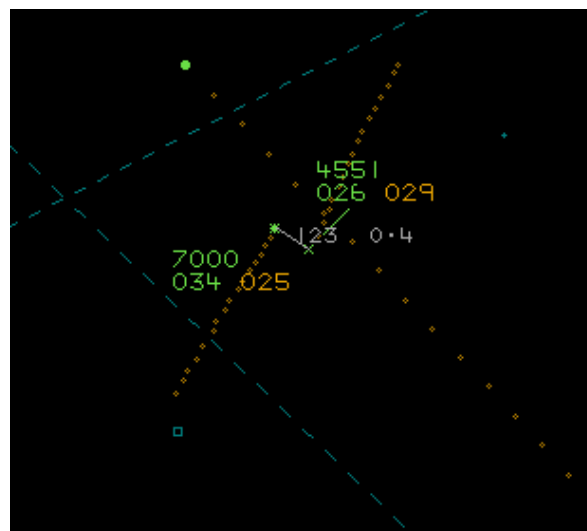


Figure 4 – 1035:24, CPA

The DA40 and DA42 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>2</sup> If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.<sup>3</sup>

## Summary

An Airprox was reported when a DA40 and a DA42 flew into proximity at Orlington at 1035Z on Wednesday 29<sup>th</sup> January 2025. The DA40 pilot was operating under VFR in VMC probably in receipt of an ATS from East Midlands and the DA42 pilot was operating under VFR in VMC in receipt of a Basic Service from Wellesborne.

## **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 DA40 pilot. They had been conducting a solo Nav flight and members were pleased to hear that they had been in receipt of an air traffic service from East Midlands. Whilst it was not known what type of service they had been receiving, the pilot had not recalled getting any Traffic Information so members thought it likely that it had been a Basic Service. However, the pilot reported that they had received an alert from their TAS (**CF5**) providing them with situational awareness on the proximity of the DA42, had become concerned that the other aircraft had been indicating at the same level as them (**CF4**) and so had descended. Members commended the pilot for taking swift action and breaking the conflict, as it had undoubtedly been solely down to their actions that the final vertical separation of 800ft had been achieved.

Turning to the DA42 pilot, the Board first commented on the type of ATS being received; whilst members were cognisant that the area was an awkward one for receiving a LARS, being on the edge of radar cover for many of the surrounding ATC units, the Board noted that the DA40 pilot had been receiving a service from East Midlands, which was promulgated as the LARS provider for the area. Some members opined that even calling London Information for a Basic Service would have been better than remaining

<sup>2</sup> (UK) SERA.3205 Proximity.

<sup>3</sup> (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

with Wellesbourne, because there would have been more chance of hearing other pilots, where only those out of or recovering to Wellesbourne would be likely to be on the Wellesbourne frequency (**CF2**). Members expressed surprise that the DA42 had not been fitted with any form of CWS, especially as it had been on a training flight. The Board agreed that, without an ATS or any form of CWS, the DA42 pilot had received no situational awareness on the DA40 (**CF3**).

Members agreed that the AFISO at Wellesbourne could not have offered any form of Traffic Information as the incident had taken place more than 30NM from Wellesbourne and there had been no way for the AFISO to have known that the DA40 had been in the area (**CF1**).

When determining the risk of the Airprox, the Board considered the reports from both pilots together with the radar screenshots. Neither pilot had seen the other aircraft, but the DA40 pilot had taken action based upon the information that they had received from the TAS. Members agreed that this had been the correct course of action which had resulted in 800ft separation and could therefore be considered to be normal operations in Class G airspace. Accordingly, they agreed that there had been no risk of collision; Risk Category E.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### **Contributory Factors:**

	2025013			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
	<b>Ground Elements</b>			
	<b>• Situational Awareness and Action</b>			
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
	<b>Flight Elements</b>			
	<b>• Tactical Planning and Execution</b>			
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
	<b>• Situational Awareness of the Conflicting Aircraft and Action</b>			
3	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
4	Human Factors	• Unnecessary Action	<del>Events involving flight crew performing an action that was not required</del>	Pilot was concerned by the proximity of the other aircraft
	<b>• Electronic Warning System Operation and Compliance</b>			
5	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	

**Degree of Risk:** E.

### **Safety Barrier Assessment<sup>4</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 **not used** because the Wellesbourne AFISO was not required to monitor the DA42 on a Basic Service.

<sup>4</sup> 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 the DA42 pilot could have called East Midlands for a LARS.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the DA42 pilot had not received any information on the presence of the DA42 and the DA40 pilot had been concerned by the proximity information that they had received from their TAS.

**See and Avoid** were assessed as **not used** because the action taken by the DA40 pilot on receiving information from their TAS prior to becoming visual meant that there had been sufficient separation at CPA so as to negate the need for further avoiding action.

Airprox Barrier Assessment: 2025013		Outside Controlled Airspace				
Barrier		Provision	Application	Effectiveness		
				0%	5%	10% 15% 20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	<div><div></div></div>		
	Manning & Equipment	✓	✓	<div><div></div></div>		
	Situational Awareness of the Confliction & Action	✓	○	<div><div></div></div>		
	Electronic Warning System Operation and Compliance	●	●	<div><div></div></div>		
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	<div><div></div></div>		
	Tactical Planning and Execution	✓	⚠	<div><div></div></div>		
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓	<div><div></div></div>		
	Electronic Warning System Operation and Compliance	⚠	✓	<div><div></div></div>		
	See & Avoid	✗	○	<div><div></div></div>		
<b>Key:</b>		Full	Partial	None	Not Present/Not Assessable	Not Used
Provision		✓	⚠	✗	●	
Application		✓	⚠	✗	●	○
Effectiveness		■	■	■	■	■