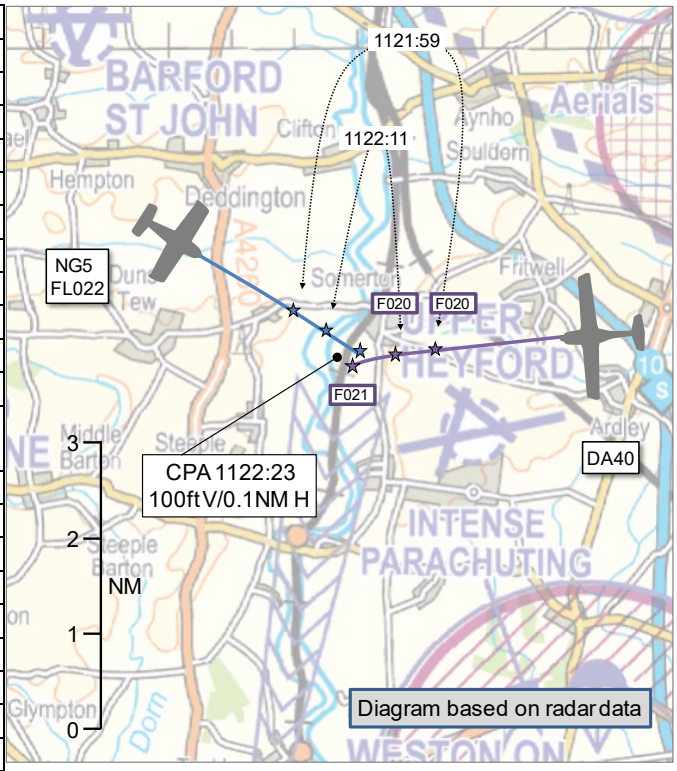
AIRPROX REPORT No 2024099

Date: 24 May 2024 Time: 1122Z Position: 5157N 00117W Location: 5NM N Weston-on-the-Green

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Bristell NG5	DA40
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Listening Out
Provider	London Info	Brize Radar
Altitude/FL	FL022	FL021
Transponder	A, C, S	A, C, S
Reported		
Colours	Blue, White	White
Lighting	Landing, Taxy, Nav, Strobe	Nav, Anti-cols, HISLs
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	2300ft	2350ft
Altimeter	QNH (1019hPa)	QNH (1018hPa)
Heading	130°	270°
Speed	110kt	117kt
ACAS/TAS	PilotAware	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	0ft V/200m H	Not Seen
Recorded	100ft V/0.1NM H	



THE NG5 PILOT reports that they were in the cruise with the autopilot engaged. The weather was good with some cloud above them. They were overhead Upper Heyford at the time and had briefly glanced down into the cockpit to check the engine instruments. When they looked up they saw the aircraft directly in front, passing left-to-right. It was approaching from their 11 o'clock, so crossing at an angle. The other aircraft passed them so quickly they did not get the chance to see the registration mark. No aircraft had appeared on their SkyDemon display linked to their TAS.

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

THE DA40 PILOT reports that this was a practise flight to [destination] for currency (previous flight 28 days prior) and in preparation for taking a friend to that destination. They took a Basic Service from Farnborough North (or possibly Luton Radar) and received squawk 4671 according to their notes. They used the autopilot for the majority of the flight. They routed north of Luton at 1900ft and once out from below the CTA, decided to practise a climb using the autopilot. They performed two climbs, first to 2300ft and then to 2700ft. The cloud ceiling was at approximately 3000ft. On completing these climbs they realised that they were closer to Enstone than expected, with extra altitude, and that they therefore needed to change radio frequencies and commence their descent. They wanted to change to Brize first to get their QNH and then to Enstone Traffic. They believed that this incident occurred while they were performing the radio changeovers and/or during the manual descent after disconnecting the autopilot, with the workload affecting their lookout.

THE LONDON INFORMATION FISO reports that at 1122 the NG5 pilot reported that they had a 'near-miss' with another aircraft. The pilot reported that the incident occurred approximately 5NM north of Weston-on-the-Green. They reported that the other aircraft had a 'T' tail and believed it to be a

Tomahawk training aircraft; it did not deviate from its route. The pilot also reported that their TAS had not alerted and that the other aircraft crossed left-to-right within 200-300ft.

Factual Background

The weather at Oxford was recorded as follows:

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METAR EGTK 241050Z 27008KT 240V300 9999 SCT025 SCT029 14/08 Q1018=
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Analysis and Investigation

NATS Investigation

The pilot of the Bristell NG5 Speed Wing checked in with the London Flight Information Service Officer (FISO) at 1047:22 routeing from [redacted] to [redacted]. The aircraft was 6NM north of Ludlow at this time at 1900ft. A Basic Service was requested and agreed with the FISO, and the pilot was issued with the London FIR SSR code of 1177. When queried regarding their precise routeing, the pilot stated they were routeing in a direct line from their present position to [destination].

At 1121:26, 7.6NM north of Oxford Airport, an aircraft squawking 7000 (identified using Mode-S data as [uninvolved C/S]) passed 0.2NM behind [NG5 C/S] (FIS in the image) at the same level, as shown in Figure 1. This aircraft was a red and white Slingsby T61F Venture, low-wing, and was not in receipt of a Service from the London FISO. Neither aircraft was observed on radar to have made an avoidance manoeuvre.

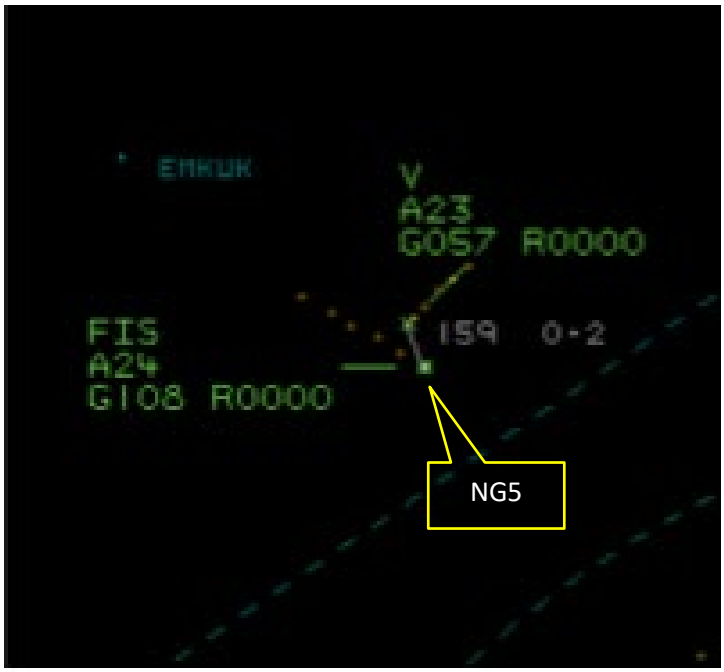


Figure 1

Shortly after this, at 1122:18 another aircraft, squawking 3727 (Brize Norton frequency monitoring code) crossed left-to-right 0.2NM ahead of [NG5 C/S] and 100ft below, 6.9NM NNE of Oxford Airport, as shown in Figure 2. This equated to a distance of around 5NM north of Weston-on-the-Green. The other aircraft was identified by Mode S as [DA40 C/S], a Diamond DA40, high t-tail prop, in white and blue. Neither aircraft was observed on radar to have made an avoidance manoeuvre.

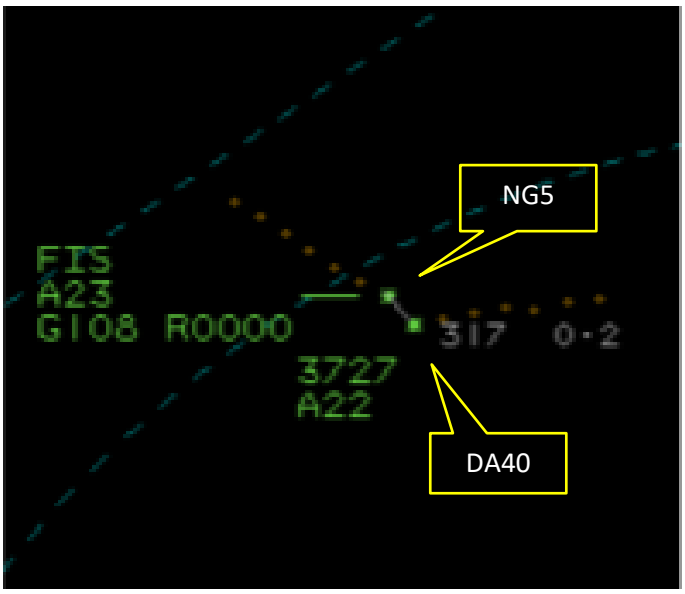


Figure 2

[DA40 C/S] which was not in receipt of a service from the London FISO, had been on a steady westerly track prior to the incident. No other potential conflictions involving [NG5 C/S] were observed on radar.

At 1123:01 the pilot of [the NG5] reported to the FISO "…*five miles North of Weston-on-the-Green at the moment, two thousand three hundred feet, one zero one nine. I've just had a fairly near miss with a, I believe, a training aircraft, crossing left-to-right about three hundred feet in front of me. Just to make you aware*".

The FISO asked for an aircraft type and the pilot responded, "*I believe it was a Tomahawk looking at the t-tail. Probably two or three hundred feet in front of me at exactly the same level and no attempt to change heading*". The pilot reported that they were using [an EC device] and the aircraft didn't show on that so, "*I'm not sure he was squawking*".

It is assessed that, as the other aircraft involved was described as having a t-tail by the NG5 pilot and given the location, the conflict with the [DA40 C/S] was most probable to be the one referred to by the NG5 pilot.

The FISO was providing a Basic Service to the NG5 pilot and CAP774 prescribed:

> 'Basic Service relies on the pilot avoiding other traffic, unaided by controllers/ FISOs. It is essential that a pilot receiving this ATS remains alert to the fact that, unlike a Traffic Service and a Deconfliction Service, the provider of a Basic Service is not required to monitor the flight.'

Safety Investigations contacted the pilot of [DA40 C/S] and they reported, '*I believe this incident occurred while I was performing the radio changeovers and/or during the manual descent after disconnecting the autopilot, with the workload affecting my lookout*.'

Conclusions

The Airprox occurred when [NG5 C/S] and an aircraft identified using Mode S as [DA40 C/S] came within 0.2NM and 100ft of each other, in the vicinity of Weston-on-the-Green.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be identified using Mode S information. Allowing the radar to run on one further sweep beyond that in the NATS ATC

investigation radar screenshot at Figure 2, put the two aircraft at 100ft and 0.1NM apart, although by this time the DA40 had crossed ahead of the NG5.

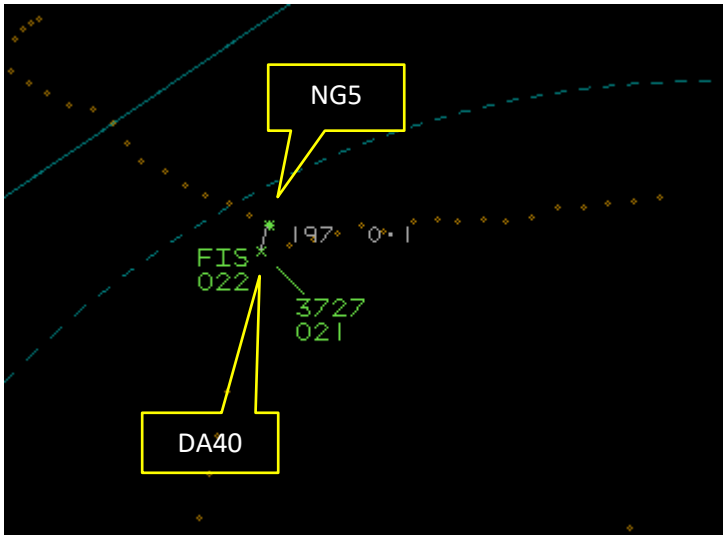


Figure 3 - 1122:23

The NG5 and DA40 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 DA40 pilot was required to give way to the NG5.[2]

Summary

An Airprox was reported when an NG5 and a DA40 flew into proximity 5NM north of Weston-on-the-Green at 1122Z on Friday 24th May 2024. Both pilots were operating under VFR in VMC, the NG5 pilot in receipt of a Basic Service from London Information and the DA40 pilot not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the FISO involved and a report from the appropriate operating authority. 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 looked at the actions of the NG5 pilot. They reported that they had been in the cruise and had looked into the cockpit to check their instruments and, when they had looked out, they had seen the DA40 200m away. Members noted that the NG5 pilot had been receiving a Basic Service from London Information and wished to highlight to pilots that, whilst receiving a service from London Information was the only option in some areas of the country, as it was a non-surveillance based ATS (ie the FISO did not use a radar to provide the service), Traffic Information could only be provided on other aircraft that were also receiving a service by the same unit. They opined that in this case, the NG5 pilot had been well within the LARS catchment for Brize Radar who could have provided a Traffic Service, under which the pilot should have been given Traffic information on the DA40 (**CF2**). However, they also noted that the position of the Airprox occurred in the vicinity of the Oxford feathers and noted that pilots are encouraged to call an ATC unit when crossing, or in close proximity to, the instrument approach feathers of an airfield. If the NG5 pilot had been receiving a service from Brize Radar, they would have been displaying a transponder code recognisable to Oxford ATC; without it, they would have been unknown traffic and could potentially have caused a problem for aircraft recovering to the airfield. The Board noted that the NG5 had been fitted with a CWS that would have been expected to alert to the transponder on the DA40, but no alert had been received (**CF4**), consequently, the NG5 pilot had received no situational awareness that the DA40 had been in the vicinity (**CF3**). Members

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(2) Converging.

opined that for both pilots, this Airprox highlighted the fallibility of lookout and emphasised the need to ensure tasks undertaken within the cockpit were inter-dispersed with lookout checks, rather than becoming distracted by prolonged periods of looking into the cockpit (**CF5**). The Board agreed that the point at which the NG5 pilot had become visual with the DA40 had been at the CPA and too late to have taken any action, making this effectively a non-sighting by the NG5 pilot (**CF6**).

Turning to the DA40 pilot, they had not been receiving an ATS at all, but instead had been monitoring the Brize Radar frequency. Again members thought that this had been an opportunity missed; had the pilot requested a Traffic Service, they should have received Traffic Information on the NG5, because both aircraft had been transponding and therefore had displayed on the radar (**CF2**). Members thought this was particularly important if pilots knew that they were likely to be spending time looking inside the cockpit. Again, if the pilot had decided not to call Brize Radar for whatever reason, members thought that a courtesy call to Oxford to let them know that the pilot had been crossing the approach lane would have been appropriate. The DA40 had not been fitted with a CWS, another missed opportunity for receiving information on the NG5, therefore, the Board agreed that the DA40 pilot had not received any situational awareness that the NG5 had been in the vicinity (**CF4**). The DA40 pilot also reported looking into the cockpit to change the frequency around the time of the Airprox, and so the advice on performing tasks inter-dispersed with lookout checks applied equally to the DA40 pilot (**CF5**). The Board noted that the DA40 pilot had not seen the NG5 at all (**CF6**).

The Board briefly looked at the role of the London Information FISO. They had been providing a service to the NG5 pilot but, as previously mentioned, the service was provided without the use of radar and the FISO had not been required, nor had they had the means, to monitor the NG5 on radar (**CF1**) and therefore could not provide any Traffic Information on traffic of which they had no knowledge.

When assessing the risk of the Airprox, the Board considered the reports from both pilots together with the radar replay. They noted that neither pilot had seen the other aircraft in time to take any action and as such agreed that there had been a risk of collision (**CF7**). They agreed that with a separation of 0.1NM, safety had been much reduced; Risk Category B.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024099			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
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
	Flight Elements			
	• Tactical Planning and 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
	• Situational Awareness of the Conflicting Aircraft and Action			
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
	• Electronic Warning System Operation and Compliance			
4	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
	• See and Avoid			
5	Human Factors	• Distraction - Job Related	Events where flight crew are distracted for job related reasons	
6	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
	• Outcome Events			

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[3]

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 London Information FISO was not required to monitor the Basic Service traffic and operates without surveillance equipment.

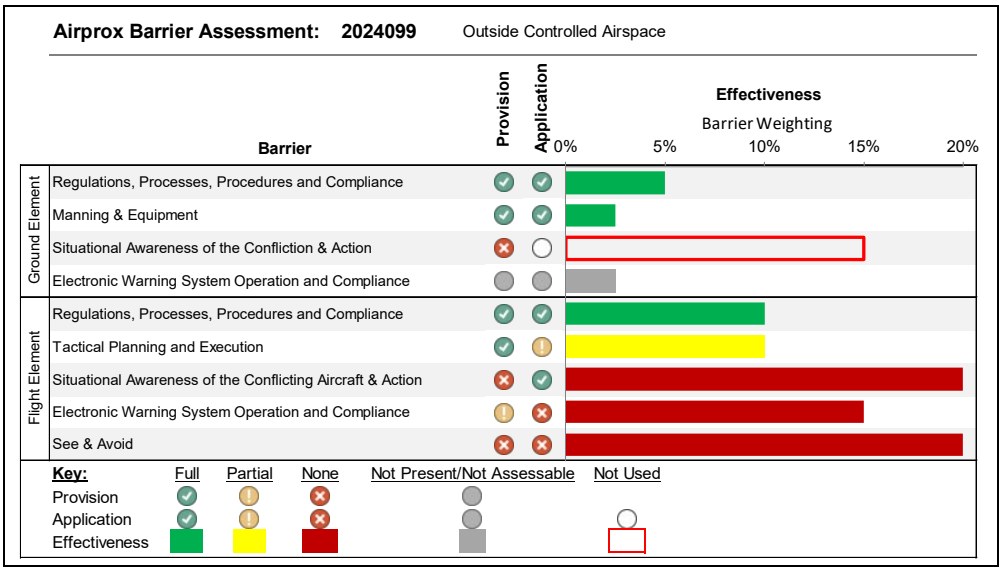
Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the DA40 pilot could have called Brize Radar for an ATS, rather than just monitor the frequency. Likewise, the NG5 pilot could also have requested a radar service from Brize Radar, which may have provided Traffic Information. Alternatively, with their relative position from the Oxford feathers and within 10NM of the airfield, both pilots could have called Oxford with their intentions.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had been aware of the other aircraft in the vicinity.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because although it would have been expected that the CWS on the NG5 would have alerted to the DA40, it had not.

See and Avoid were assessed as **ineffective** because both pilots reported being distracted by in-cockpit activities which resulted in an effective non-sighting by the NG5 pilot and a non-sighting by the DA40 pilot.



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