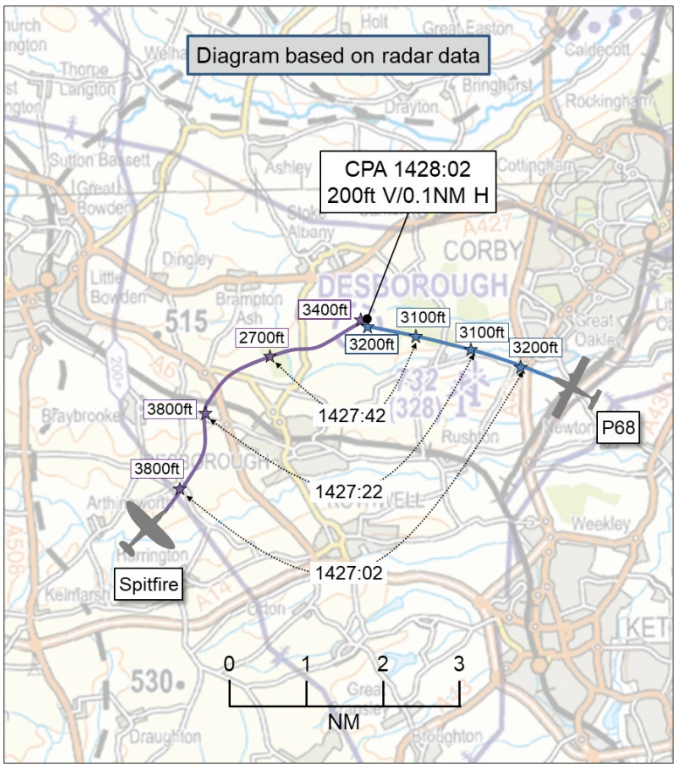
AIRPROX REPORT No 2025130

Date: 18 Jun 2025 Time: 1428Z Position: 5228N 00047W Location: Desborough

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	P68	Spitfire
Operator	Civ Comm	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	Listening Out
Provider	East Midlands Rdr	Sywell Radio
Altitude	3400ft	3200ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White	Camouflage green
Lighting	Anti-colls & nav	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	3500ft	NK
Altimeter	QNH (1024hPa)	QNH
Heading	280°	NK
Speed	140kt	NK
ACAS/TAS	SkyEcho	SkyEcho
Alert	None	None
Separation at CPA		
Reported	100ft V/<1NM H	Not seen
Recorded	200ft V/0.1NM H	



THE P68 PILOT reports that they had a Traffic Service with [East Midlands Radar]. They were called traffic, 6NM at 3 o'clock and 600ft below [they thought]. P1 and P2 kept a good lookout. There were no further updates on the traffic. The traffic then appeared to climb through their level, manoeuvring to their one o'clock position, at a range of less than 1NM. The traffic was a Spitfire, that had been maintaining level until it appeared to turn towards them and climb (verified after speaking to the controller). The aircraft did not show up on their Traffic Advisory System. They turned away from the traffic and monitored their movements very closely. The manoeuvring aircraft was not on frequency. The crew was concerned by the event and believed that safety was compromised.

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

THE SPITFIRE PILOT reports that they were not aware of any conflicting traffic and had no recollection of any unusual events. It was possible that they saw other traffic, which either they did not consider a threat or took action to avoid.

THE EAST MIDLANDS CONTROLLER reports that they were operating as combined RAD and LARS. [The P68 pilot] had free-called East Midlands over St. Ives at 2500ft requesting a Traffic Service, routeing from [departure to destination]. The pilot was instructed to squawk 4552 but was not within the displayed range in use. [The P68 pilot] was placed under a Basic Service and told that would be improved upon. [The P68] then appeared on the display and was placed under a Traffic Service with reduced Traffic Information due to radar suppression, which the pilot acknowledged. Traffic was then called to [the P68 pilot] in their 10 o'clock at 4NM and 500ft above. The pilot replied *'traffic not sighted'.* The ATCO then handed over the position to another ATCO. [The P68 pilot] then asked the Radar controller (RAD) if they had a Spitfire on frequency, which there was not. The pilot then reported a very close encounter with a Spitfire at the same level, 3min ago. The controller asked [the P68 pilot] if that was the traffic which had been called to them, but the pilot replied *'negative'*. The controller then asked

if they wished to file an official report, but the pilot declined. The pilot was further offered the chance to discuss it on the phone after landing.

THE SYWELL AIR/GROUND OPERATOR reports that they were not informed via the radio of any issue.

Factual Background

The weather at Cranfield Aerodrome was recorded as follows:

```
METAR EGTC 181420Z 30005KT 230V010 CAVOK 26/12 Q1024
```

Analysis and Investigation

East Midlands Airport

The report included the East Midlands Radar controller's report and the following timeline:

1414:32 [the P68 pilot] free-called East Midlands Radar (RAD), reporting over St. Ives at 2500ft QNH1024, from [departure to destination] requesting a Traffic Service. RAD had instructed [the pilot] to squawk 4552.

1415:38 RAD: *"*[P68 C/S]*, still some way away so it's Basic Service only at the moment, QNH1024, I will upgrade when I can".* [The P68 pilot] read back QNH correctly and acknowledged. (They were not visible on the displayed range in use.)

1424:00 [P68 C/S] first appeared on the display 37NM southeast of East Midlands on MLAT only (Figure 1).

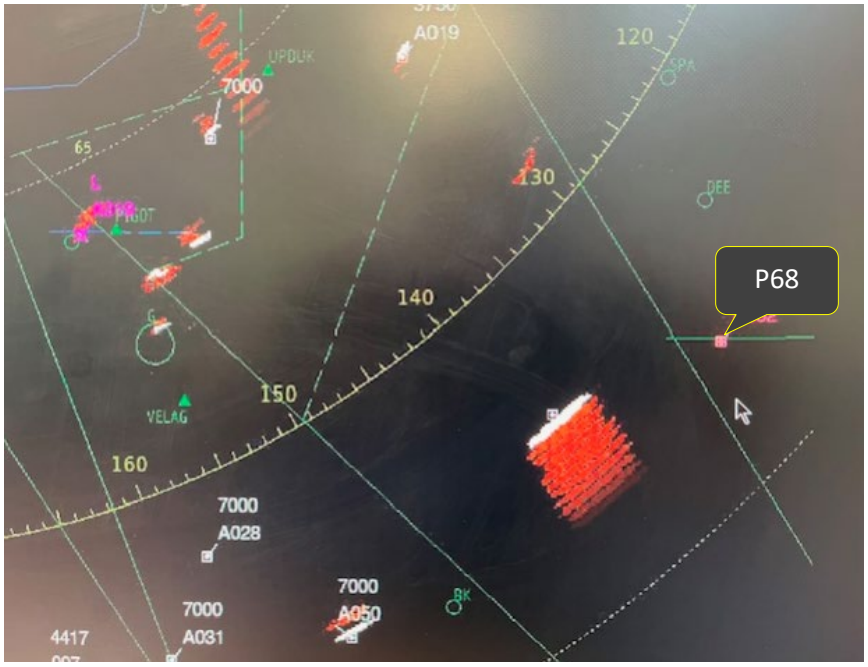


Figure 1 – 1424:00

1425:05 RAD: *"*[P68 C/S] *it's now a Traffic Service with reduced Traffic Information due to radar suppression, report leaving".* [The pilot of the P68] read back "*Traffic Service".*

1426:00 Photo below of the unknown contact which subsequently resulted in the Airprox report (Figure 2).

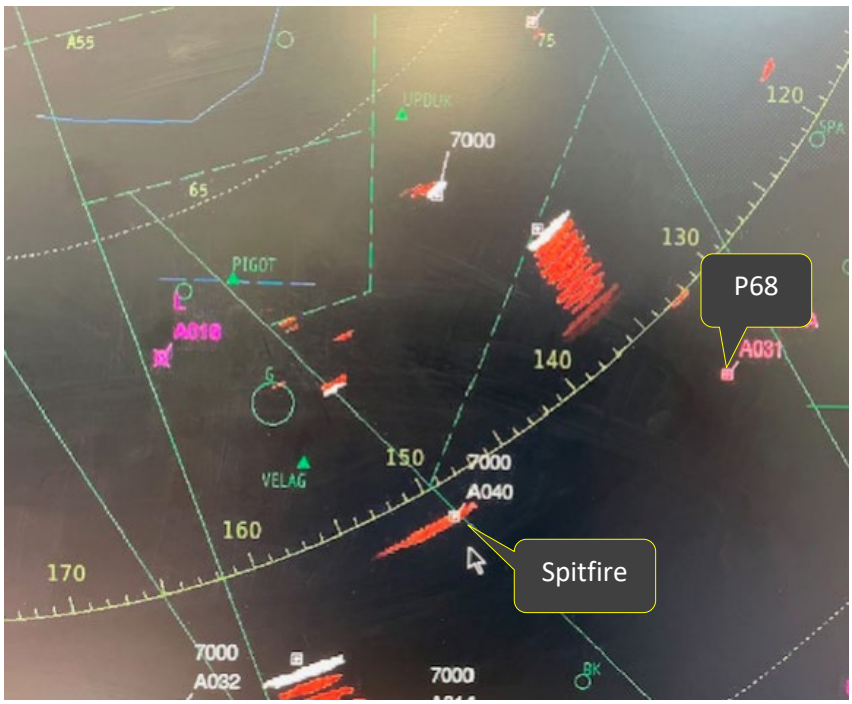


Figure 2 – Time 1426:00

1427:04 RAD: *"*[P68 C/S] *there's traffic in your left 10 o'clock, range 4 miles crossing left-to-right indicating 500ft above"*. [The P68 pilot] replied: *"Traffic not sighted".* (This was the last transmission by this ATCO who then handed over the position to another ATCO at some point).

1427:30 The unknown contact descended, turned right and then climbed towards [the P68], which resulted in the merge at 1428:01 (Figure 3).

Figure 3 – 1428:01

1428:42 A new ATCO voice had taken over RAD/LARS combined.

1429:54 RAD called possible traffic to [the P68 C/S], *"12 o'clock 3 miles, might be a glider".*

1430:20 [P68 C/S]: *"Do you have a Spitfire working frequency?"* and RAD replied *"Not at the moment".*

1430:30 [the P68 pilot] replied: *"Roger that"* and then added *"We had a very close encounter with a Spitfire, similar height and level. We were just wondering who they were speaking to"*, to which RAD replied *"Roger, how long ago?"* [P68 C/S] replied *"3 minutes ago".*

1430:54 RAD*: "Was that the traffic called to you?"* and [P68 C/S] replied: *"Not, negative,* [P68 C/S]*".*

The ATCO who took over RAD/LARS was interviewed and had clear recollections of the situation. Just before this ATCO "plugged in", the ATCO in situ called Traffic Information to [P68 C/S]. The controller handover of the RAD/LARS position then commenced, and by the time it had been completed, the unknown contact had passed [the P68]. Traffic Information had not been updated.

It was not clear from the recording as to whether the subject Airprox aircraft was the 7000 squawk on the timeline, however, given the pilot's report that the aircraft had appeared to climb on their right-hand side, and the screenshots from the radar recorder, it does seem likely that the 7000 squawk originally called by the EMA Radar controller, was the Spitfire. The 7000 squawk was observed turning rapidly, along with climbing and descending rapidly, indicating a higher performance aircraft than a standard Cessna or Cherokee. A Traffic Service was provided by EMA in accordance with UK FIS CAP774. Surveillance-based Traffic Information was passed on the unknown traffic in a timely manner. An update was not provided as it had not been requested by the pilot, nor did the controller believe that a collision risk was likely as the aircraft was observed turning away and descending. The 7000 squawk was observed manoeuvring rapidly, but the pilot had not elected to squawk 7004 to indicate aerobatics were being carried out.

Summary; RAD received a free-call from [P68 C/S] over St Ives at 2500ft requesting a Traffic Service. [The P68 pilot] was instructed to squawk 4552 but was well outside PSR & MLAT coverage as well as the published LARS area. When it entered MLAT coverage, RAD placed [P68 C/S] under a Traffic Service reduced due to suppression. However, it was only approximately 5NM from the edge of the display. [The P68] was only displayed on MLAT. [P68 C/S] only began to enter PSR cover from approximately 1430. [P68 C/S] was not verified.

Traffic Information was passed on the unknown contact which subsequently resulted in the Airprox report. The pilot replied *"Traffic not sighted".* Traffic Information was not updated. The controller workload was light to moderate, primarily with LARS traffic at the time of the incident. The ATCO handed over the position (to rostered relief) sometime after the Traffic Information was passed. The contacts merged 57sec after the Traffic Information had been passed. Minimum horizontal separation was zero. The squawks garbled, but the minimum vertical separation was believed to be zero. [P68 C/S] was given the opportunity to file a report at the time of the incident, but the pilot declined. Groundspeed was not displayed on any of the 3 radar positions.

The Radar room logbook contained the following entry on the 18th of June*: "18 1430* [P68 C/S and number] *currently filing ASR, not Airprox but may change. Details saved* [on data store]*"*.

Conclusions: Correct ATC actions were followed throughout.

CAA ATSI

Having reviewed all the reports, including the East Midlands investigation report, recorded RTF and area radar, ATSI has the following comments:

The pilot of [the P68] initially received a Basic Service when they first called East Midlands Radar at 1414:30 due to their range from East Midlands (51NM). The service was then upgraded to a Traffic Service *with "reduced Traffic Information due to radar suppression"* at 1425:00. Whilst the pilot acknowledged the Traffic Service but not the reduction, according to the East Midlands Radar snapshots it appears that [the Spitfire] was visible throughout the period after initial Traffic Information was passed until CPA at approximately 1428. There was no further Traffic Information passed to the pilot of [the P68] on [the Spitfire]. It is understood that during this period there was a

controller handover. No other aircraft called during this period, and there were no transmissions heard from either controller.

The East Midlands investigation report concluded that:

"A Traffic Service was provided by EMA in accordance with UK FIS CAP774. Surveillance-based Traffic Information was passed on the unknown traffic in a timely manner. An update was not provided as it had not been requested by the pilot, nor did the controller believe that a collision risk was likely as the aircraft was observed turning away and descending."

According to the area radar replay, [the Spitfire] did turn away from [the P68] momentarily at 1427:12, but by 1427:32 had turned back onto a track that was converging with [the P68], indicating only 300ft above it.

CAP774 UK Flight Information Services, Chapter 3 states:

> Traffic information
> 3.5 The controller shall pass Traffic Information on relevant traffic and shall update the Traffic Information if it continues to constitute a definite hazard, or if requested by the pilot. However, high controller workload and RTF loading may reduce the ability of the controller to pass Traffic Information, and the timeliness of such information.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft were positively identified using Mode S data. CPA was assessed to have occurred at 1428:02 with 200ft vertical and 0.1NM lateral separation (Figure 4).

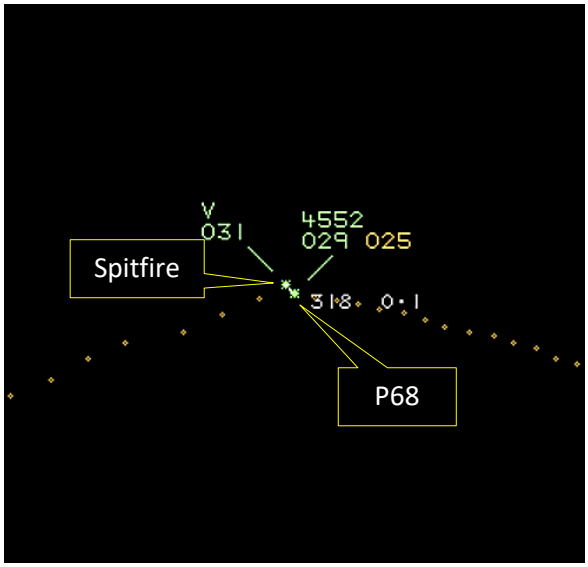


Figure 4 – Time 1428:02

The P68 and Spitfire 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] If the incident geometry is considered as converging then the Spitfire pilot was required to give way to the P68.[3]

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

Summary

An Airprox was reported when a P68 and a Spitfire flew into proximity at Desborough at 1428Z on Wednesday 18th June 2025. The P68 pilot was operating under VFR in VMC in receipt of a Traffic Service from East Midlands Radar, and the Spitfire pilot was operating under VFR in VMC and listening out on Sywell Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the air traffic controller 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 P68 pilot, and members wondered whether the pilot had either misremembered or misunderstood the position of the traffic called to them, stating that the Traffic Information passed had been in their 3 o'clock at 6NM, when the call had been "*there's traffic in your left 10 o'clock, range 4 miles crossing left-to-right indicating 500ft above"*. The Board noted that the P68 pilot reported having seen a Spitfire in their one o'clock, which the radar tracks indicated had been at or immediately after CPA. Members agreed, therefore, that the P68 pilot had had inaccurate situational awareness of the position of the Spitfire, or previously unknown traffic (**CF4**), and an effective non-sighting of it, having seen it at or after CPA (**CF6**). The Board noted that the electronic conspicuity (EC) equipment fitted in the P68 had not assisted the pilot in identifying the presence of the nearby Spitfire despite having had compatible systems, and members agreed that the P68's EC equipment had not alerted as expected (**CF5**).

The Board then considered the actions of the Spitfire pilot and discussed the high workload that the pilots of such operations usually endure during a short flight time, typically as short as 20min. The Board noted that the Spitfire pilot's RTF selection had been with Sywell AGCS, which members felt served no purpose at this point of the flight. Members agreed that the pilot could have selected the East Midlands Radar frequency for a FIS, and improved safety despite the extra workload (**CF3**) and felt that, without that FIS, the Spitfire pilot had had no situational awareness of the presence of the P68 (**CF4**). The Board felt that, although it would not directly assist the Spitfire pilot's situational awareness, it may be helpful for such operators to squawk 7004 (for aerobatics) which would alert Radar controllers to the potential for unpredictable manoeuvres from that aircraft and improve the controller's situational awareness. Whilst on the subject of EC equipment, the Board discussed the specific EC equipment fitted in the Spitfire, and noted that the Spitfire pilot had been as equally disadvantaged as the P68 pilot had been by the lack of detection of the P68, and members agreed that the Spitfire's EC equipment had not alerted as expected (**CF5**). The Board felt that, had the Spitfire pilot been in receipt of a FIS or had received an appropriate alert from their EC, this may have made them aware of the approximate position of the P68 and assisted in their visual acquisition of it. However, as it was, members agreed that the Spitfire pilot had not seen the P68 (**CF6**).

The Board then moved their attention to the actions of the East Midlands controller and noted that they had passed Traffic information on unknown traffic (the Spitfire) to the P68 pilot, who had indicated that they had not seen the traffic. Controller members considered that, as the pilot had declared they had not seen the traffic, the controller should have continued to provide information on that traffic until such time that the pilot had seen it or any chance of confliction had passed. The Board noted that a controller handover had been initiated and that the East Midlands report stated that *'An update was not provided as it had not been requested by the pilot, nor did the controller believe that a collision risk was likely as the aircraft was observed turning away and descending.'* However, the Board noted that the apparent change in direction of the Spitfire, mentioned by the controller, had been quite brief and in the time that the handover had been completed the Airprox had already occurred. Members agreed that updated Traffic Information had not been provided by the controller to the P68 pilot (**CF1**) because the controller had been engaged in other tasks (**CF2**).

Concluding their discussion, members noted that the Spitfire pilot had had no situational awareness of the presence of the P68 and the P68 pilot had had inaccurate situational awareness of the position of

the Spitfire as 'unknown traffic'. The Board noted that the Spitfire pilot had not seen the P68, and that the P68 pilot had not seen the Spitfire until at or shortly after CPA. While some members had felt that safety had not been assured, the majority of members agreed that safety had been degraded but there had been no risk of collision and, as such, the Board assigned a Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025130			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
2	Human Factors	• Task Monitoring	~~Events involving an individual or a crew/ team not appropriately monitoring their performance of a task~~	Controller engaged in other tasks
	Flight Elements			
	• Tactical Planning and Execution			
3	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			
4	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			
5	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			
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

Degree of Risk: C.

Safety Barrier Assessment[4]

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 **partially effective** because the controllers were in the process of a handover as a conflict between the P68 and Spitfire was developing.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the Spitfire pilot could have called East Midlands Radar for a FIS.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the P68 pilot had inaccurate situational awareness of the position of the Spitfire and the Spitfire pilot had no situational awareness of the P68.

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

Electronic Warning System Operation and Compliance were assessed as **ineffective** because neither the P68 nor the Spitfire EC equipment alerted as expected.

See and Avoid were assessed as **ineffective** because the P68 pilot had not seen the Spitfire until after CPA, effectively a non-sighting, and the Spitfire pilot had not seen the P68.