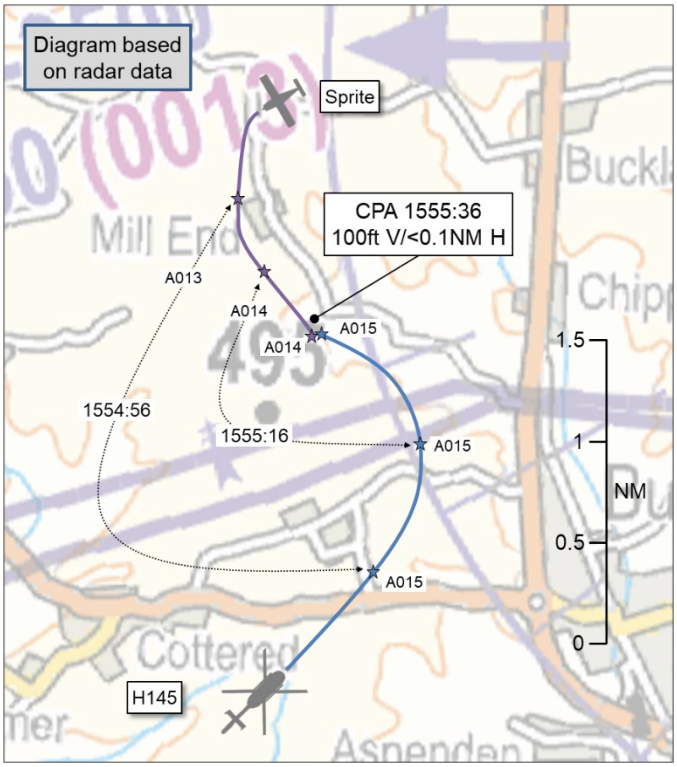
AIRPROX REPORT No 2025040

Date: 20 Mar 2025 Time: 1556Z Position: 5158N 00004W Location: 2NM NW Buntingford

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	H145	Sprite
Operator	HEMS	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Listening Out
Provider	Luton Radar	SafetyCom
Altitude/FL	1500ft	1400ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Yellow	White, blue
Lighting	Strobes, landing	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1300ft	NK
Altimeter	QNH	QNH (1019hPa)
Heading	300°	180°
Speed	100kt	85kt
ACAS/TAS	TCAS I, SkyEcho	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	50ft V/250m H	"*Not seen*"
Recorded	100ft V/<0.1NM H	



THE H145 PILOT reports that, whilst en-route to Cambridge, they were re-tasked to Stevenage, just inside the Luton Zone. They were in Class G airspace at 1300ft, approximately 6NM east of Stevenage below Class D airspace and were in receipt of a Basic Service from Luton Radar. There were no indications of traffic on ACAS or on ACANS/Airbox via [their EC device] and a good visual check was made before making a left turn back to the west. This area can tend to be a pinch-point of 'Class G traffic' below 2500ft between Stansted and Luton (which they had briefed at the start of the day and again whilst en-route) compounded by it having been a CAVOK day for GA flying with the sun fairly low in the sky as they turned back to the west. A small, two-seater fixed-wing aircraft came sweeping in, in front and below them in a right-hand turn [they recall] at, they estimate, 250m and 50ft below. [The pilot of the H145 described their avoiding action as] 'none' as they were unaware of the [Sprite] until it had passed. As a crew, they were content to continue with the task.

During the debrief, it was concluded that not only had the proximity of the aircraft been close, there had also been no way for them to have identified it with their equipment on board and, visually, they had not seen it until it had banked. [The H145] had white and red strobes as well as landing lights on. They did not hear the [pilot of the Sprite] on frequency, they were possibly in communication with Farnborough LARS North. However, based on data seen through ADS-B Exchange and FR24, the aircraft was operating out of a small airfield nearby. [The H145 crew] had discussed the option of a Traffic Service from Luton but, in that area at that time, they thought that it was not realistic, especially with their workload at the time. This incident highlights the risks of operating in Class G airspace, specifically whilst operating in pinch-points between controlled airspace.

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

THE SPRITE PILOT reports that they had carried out a local solo flight but were not aware of an Airprox until the other pilot called them on 29th March. Their only knowledge of the incident is what the other

pilot had told them on the telephone. In retrospect, they did not ask [the H145 pilot] all the questions that they should have at the time and therefore do not have as much detail of the incident as they would like.

[The pilot of the Sprite] confirmed that they had flown in that area at that time so do not question the Airprox. They had only intended to fly in the Luton/Stansted corridor for a very short period and are afraid that they did not select the listening squawk and had left their radio tuned to SafetyCom ready for a return to [their home airfield]. The log of their flight confirms that they did one left-hand orbit over [a ground feature] and then headed about a mile south before doing a right-hand turn to head north and leave the corridor. From the reported location of the Airprox, and the other pilot referring to a right turn, that must have been the point that the incident had occurred. They thought that they had kept a good lookout throughout and had seen other traffic during the flight. They also had eVFR running on their mobile phone which included other traffic on the display (via SafeSky) but it was not connected to their headset so did not provide an audible warning. Although they had looked at their phone occasionally, they had not been studying it closely and had received no warning of other traffic at the time of the Airprox. It was very sobering to have received the telephone call [from the H145 pilot] to hear about the Airprox when they had not seen anything at all. They cannot understand why they had not seen the helicopter and cannot think of anything which had distracted them from keeping a good lookout at that time.

[The pilot of the Sprite commented that,] the obvious learning points for them are to improve their lookout (and to include the eVFR screen during regular scans) and use the listening squawk and associated radio frequency whenever they are available.

THE LUTON RADAR (INT) CONTROLLER reports that they were informed, after the event, that the pilot of [the H145] had had an Airprox whilst under a Basic Service that they had been providing outside controlled airspace. They have no recollection of this event. Nothing was mentioned by the pilot at the time.

Factual Background

The weather at Luton was recorded as follows:

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METAR EGGW 201550Z AUTO 12007KT 9999 NCD 17/07 Q1017
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Analysis and Investigation

NATS Safety Investigations

Summary:

NATS Safety Investigations was informed by the UK Airprox Board of a reported Airprox between [the pilot of the H145] and [the pilot of the Sprite].

The pilot of [H145 callsign-A], operating under a Basic Service from the Luton INT controller, cancelled their request to transit the Luton Zone and advised they were returning to Cambridge as [H145 Callsign-E]. The aircraft subsequently flew into confliction with [the Sprite], squawking 7000, outside controlled airspace.

Description and Investigation:

Information available to the investigation included: CA4114 report from the Luton INT controller and [redacted] copies of the Airprox reports from [both pilots].

TC MATS Part 2 GEN 6.5.2.2.1 HEMS Categories states:

‘Category A: Applies to all HEMS flights on emergency operational tasks. Callsign "HELIMED [XX]Alpha".

Category E: Is authorised for use by an aircraft positioning for the purpose of conducting HEMS duties, e.g. returning to its base after delivering a casualty to hospital. It is afforded priority over normal flights. Callsign "HELIMED [XX] Echo".'

The pilot of [H145 callsign-A], an H145 helicopter squawking 0020, departed Cambridge and called on the Luton Radar frequency at 1549:04 (all times UTC), requested a Basic Service and to transit the south-east corner of the Luton Control Zone below Kimpton Hall. The Luton Intermediate Director (GW INT) identified the aircraft, issued the pilot a Basic Service and approved the Zone transit not above 2000ft VFR.

At 1552:37, the pilot declared they were now [H145 callsign-E] and were returning to Cambridge. The GW INT acknowledged the call and cancelled the Zone transit clearance.

CAP774 UK Flight Information Services Chapter 2.1 states that:

'A 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'.

[The pilot of the Sprite], displaying Mode A 7000 (VFR conspicuity) was operating beneath the Luton CTA-1 and was not in receipt of an Air Traffic Service from NATS at the time of the event. The aircraft subsequently flew into proximity with [H145 callsign-E].

The Closest Point of Approach occurred at 1555:36 and was recorded on the multi-track radar as 0.0NM and 100ft (Figure 1).

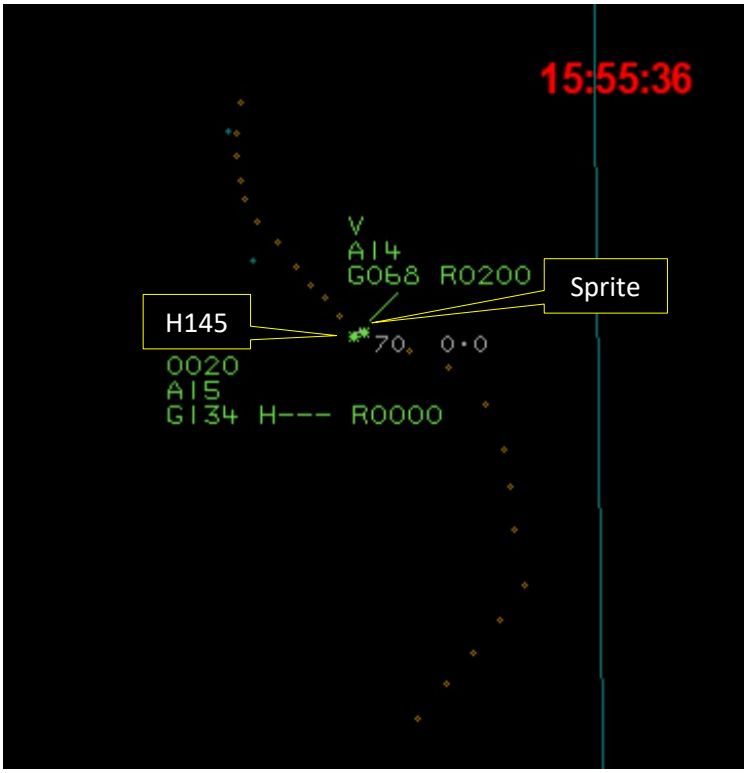


Figure 1 – CPA at 1555:36

The pilot of [H145 Callsign-E] did not report the Airprox on the Luton Radar frequency at the time of the event. The conflict was not observed by the GW INT at the time of the event, and they were not responsible for effecting any traffic avoidance between the aircraft.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data. The H145 was observed by reference to ADS-B data sources. The diagram was constructed and the separation determined from the radar data.

The H145 and Sprite 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 an H145 and a Sprite flew into proximity 2NM north-west of Buntingford at 1556Z on Thursday 20th March 2025. The H145 pilot was operating under VFR in VMC in receipt of a Basic Service from Luton Radar. The Sprite pilot was operating under VFR in VMC, listening-out on the SafetyCom frequency.

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 considered the actions of the pilot of the H145, and members pondered their opinion that a request for a Traffic Service had been 'unrealistic'. In consideration of the nature of the task being undertaken and the congested airspace in which they were operating, members appreciated that the cockpit workload had been high. However, members agreed that, as such, it may have been prudent to have requested a surveillance-based service (**CF3**) to have ameliorated the workload (with respect to the building of situational awareness).

Members next considered the matter of Electronic Conspicuity (EC). It was agreed that the TCAS fitted to the H145 would have been expected to have detected the transponder fitted to the Sprite but no alert had been reported (**CF6**). Members also agreed that the additional EC device fitted to the H145 would not have been expected to have detected the Sprite (**CF5**). Consequently, members agreed that the pilot of the H145 had not had situational awareness of the presence of the Sprite until it had been sighted at the moment of CPA (**CF4**). Members noted that the pilot of the H145 had described in their narrative report that they had not had time to have taken any avoiding action and agreed that it had, effectively, been a non-sighting (**CF7**).

Turning to the actions of the Luton controller, members agreed that they had not been required to have monitored the flight of the H145 under the terms of a Basic Service (**CF1**). Members also agreed that the transponder code selected by the H145 pilot had been outside the select frame of the Luton STCA (**CF2**). Consequently, members agreed that there had been little that the Luton controller could have done to have assisted matters.

Members next turned their attention to the actions of the pilot of the Sprite. Whilst it was appreciated that they had intended to operate in the 'corridor' between the Luton and Stansted Control Zones for a short period, members were keen to point-out that that particular area can often become rather congested with traffic. It was agreed by members that the pilot of the Sprite would not have gleaned adequate information regarding the traffic situation at that location by having monitored the SafetyCom frequency. Members agreed that it would have been prudent for the pilot of the Sprite to have requested a surveillance-based service (**CF3**). Members also noted that the Sprite had not been fitted with an additional EC device which, on this occasion, may have provided a timely alert to the presence of the H145. It was agreed that the pilot of the Sprite had not had situational awareness of the presence of

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

the H145 (**CF4**) and had not sighted it during the encounter (**CF7**). Members emphasised the imperative of maintaining a thorough and effective lookout, particularly when other safety barriers had been available but not utilised. It was noted that the pilot of the Sprite had reflected upon these points in their narrative report.

The discussion concluded and members considered the risk of collision. Some members suggested that the safety of the aircraft had not been assured, that safety margins had been reduced much below the norm but the separation between the aircraft had not reduced to the bare minimum. Other members countered that neither pilot had been able to have taken any action to have improved matters and that providence had played a major part in events. A vote was conducted and the latter view, that there had been a serious risk of collision, prevailed (**CF8**). The Board assigned Risk Category A to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025040			
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
	• Electronic Warning System Operation and Compliance			
2	Technical	• Conflict Alert System Failure	Conflict Alert System did not function as expected	The Conflict Alert system did not function or was not utilised in this situation
	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	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
6	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			
7	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			
8	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: A.

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 Luton Radar controller had not been required to have monitored the flight of the H145 under the terms of a Basic Service.

Electronic Warning System Operation and Compliance were assessed as **not used** because the transponder code selected by the pilot of the H145 had been outside the select frame of the Luton STCA.

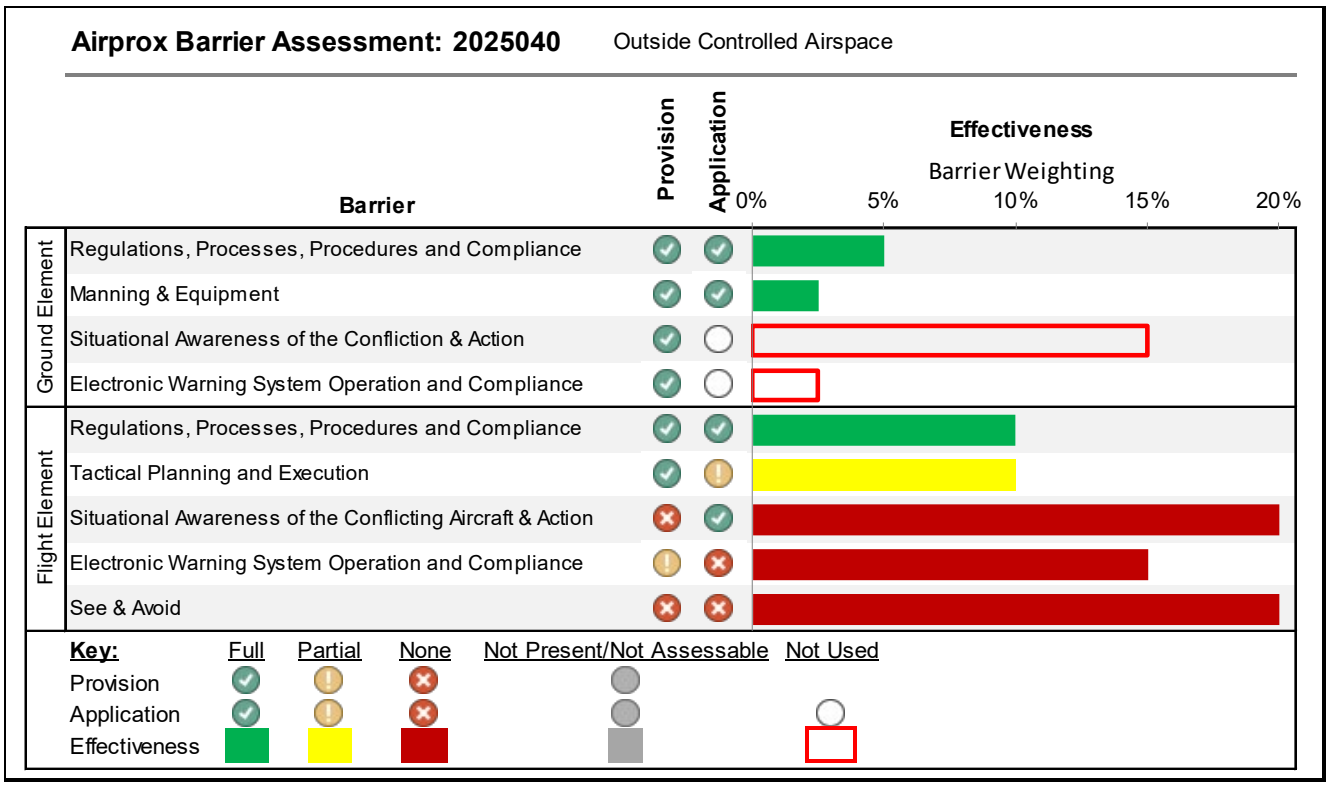
Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because it may have been prudent for the pilots of both aircraft to have requested a surveillance-based service.

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

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TCAS fitted to the H145 would have been expected to have detected the Sprite but no alert was reported.

See and Avoid were assessed as **ineffective** because the pilot of the Sprite had not sighted the H145 and the pilot of the H145 had not sighted the Sprite in time to have taken effective 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.