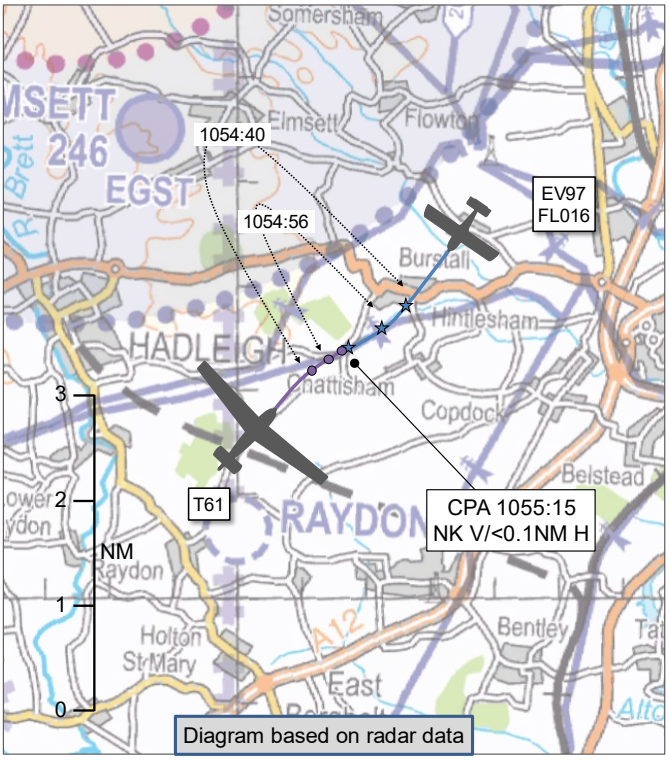
AIRPROX REPORT No 2024019

Date: 07 Feb 2024 Time: 1055Z Position: 5202N 00102E Location: 3NM SE Elmsett

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EV97	T61
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	None
Provider	Wattisham	N/A
Altitude/FL	FL016	NK
Transponder	A, C, S	Not fitted
Reported		
Colours	Silver/Black	Blue/White
Lighting	Strobes, Beacon, Landing	NR
Conditions	VMC	VMC
Visibility	5-10km	NR
Altitude/FL	1350ft	~1260ft
Altimeter	QNH (1006hPa)	NK
Heading	225°	NE
Speed	85kt	~62kt
ACAS/TAS	PilotAware	Unknown
Alert	None	Unknown
Separation at CPA		
Reported	200ft V/50m H	Not Seen
Recorded	NK V / <0.1NM H	



THE EV97 PILOT reports that on returning to Elmsett, the surface wind was light but the Wattisham METAR indicated 080/07kt. They elected to use RW05 at Elmsett, the same runway as first take-off earlier that morning. RW05 has a right-hand circuit, RW23 has a left-hand circuit, both of which go to the south of Hadleigh for noise abatement. They were making blind traffic calls on the Wattisham frequency, as they were not manned. They had the CWS linked to SkyDemon on a panel-mounted tablet. They also had FlightRadar 24 open on an iPhone because 2 other aircraft were also making blind calls on the same frequency. Their estimate was that they were to the SW of Wattisham, so of no immediate concern. Nothing showed on either the CWS or FR24 for any aircraft in the vicinity. They were on a wide downwind leg, outside the MATZ to re-join for Elmsett, so were also keeping Elmsett in view to their right. They first saw the other aircraft slightly to their right at similar altitude on a reciprocal heading. They believe that the other pilot saw them at about the same time, because they made a sharp descent. They made a sharp climb to the left. The other aircraft passed below to their right, maybe close enough to read the registration, but with not enough time. The other aircraft was blue and white, a low wing, single engine, possibly something like a motor Falke or a Vans RV. They then resumed their track to join right-base for Elmsett RW05. A further check on the CWS and FR24 still showed no other aircraft close to them.

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

THE T61 PILOT reports that they were flying with another qualified pilot. They remained outside the Wattisham MATZ at all times and neither pilot saw the other aircraft. Their SkyDemon flight profile showed that they were at 1264ft when overhead Raydon Airfield and at 1309ft when overhead Hintlesham Hall and had not descended at any point.

Factual Background

The weather at Wattisham was recorded as follows:

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METAR EGUW 071050Z 11006KT 9999 FEW012 SCT150 BKN260 06/03 Q1006 NOSIG RMK BLU BLU=
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At Figure 1 is a reconstruction of a diagram (overlaid onto a VFR chart) published on the Elmsett website for the visual circuit, avoiding noise abatement areas.

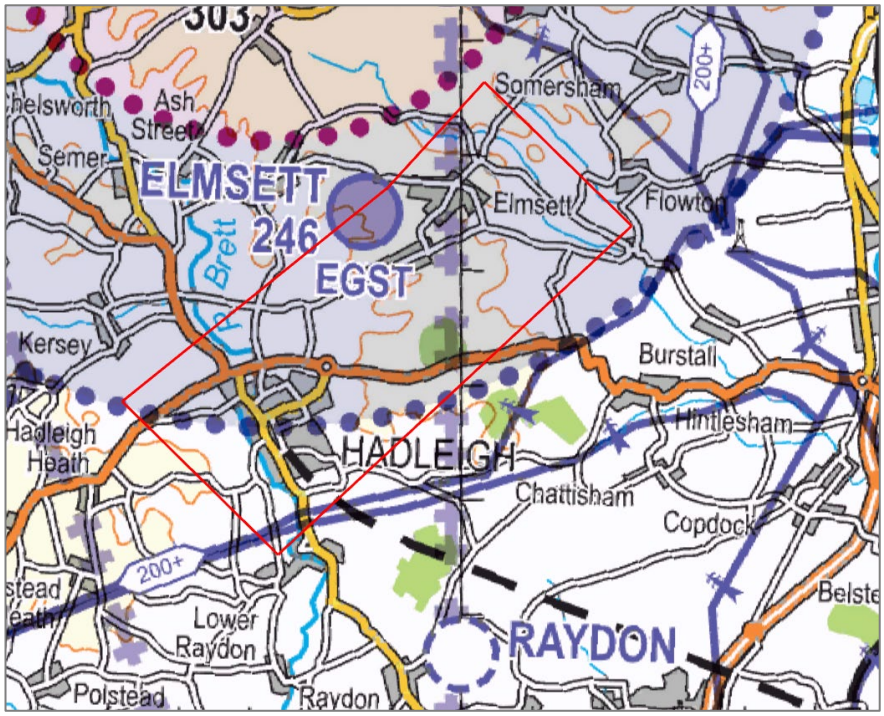


Figure 1 – Recommended Elmsett visual circuit for noise abatement

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The EV97 could be seen indicating FL016 (radar QNH 1006hPa) 3.2NM southeast of Elmsett (EGST, marked on the radar screenshot as ST). The T61 could not be positively identified, but a primary track southwest of the EV97 fitted the flight profile described by the T61 pilot, Figure 2.

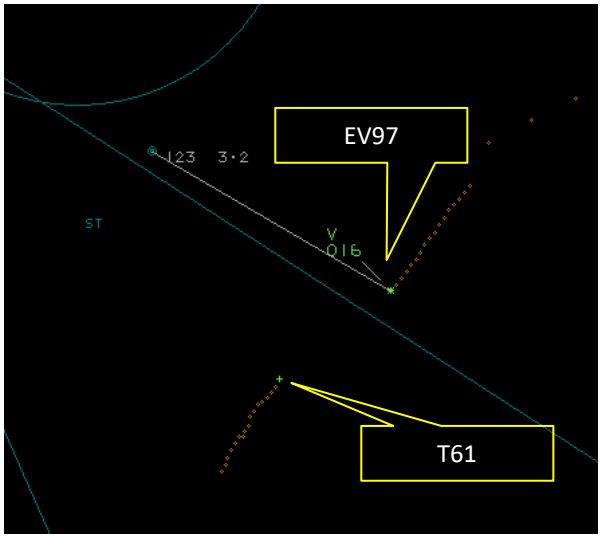


Figure 2 - 1054:35

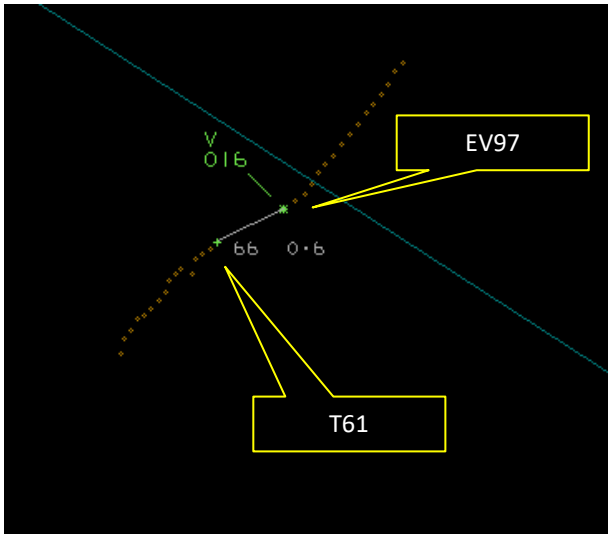


Figure 3 – 1055:06

The two aircraft continued to close with radar CPA taking place between radar sweeps, see Figures 4 and 5.

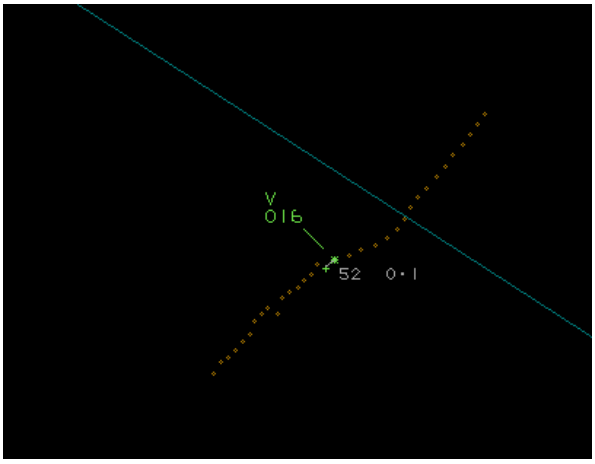


Figure 4 - 1055:15

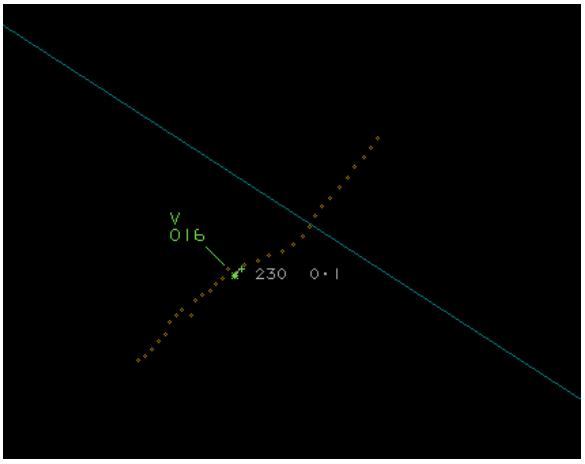


Figure 5 -1055:19

The EV97 and T61 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 EV97 and a T61 flew into proximity 3NM southeast of Elmsett at 1055Z on Wednesday 7th February 2024. Both pilots were operating under VFR in VMC, neither pilot was in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and radar photographs. 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 EV97 pilot. They noted that the pilot reported flying downwind in the Elmsett visual circuit, but members thought that, in fact the pilot had been flying wide of the circuit as published on the Elmsett website, and that given that the circuit was already a large one for noise abatement, it meant that the EV97 pilot had increased the likelihood of coming into contact with other pilots flying just outside the Wattisham MATZ. Members briefly discussed whether the EV97 pilot could have received any form of ATS, but noted that Wattisham had not been open, and were told that they opened and closed the radar controller position depending on when they had aircraft movements, so could not be relied upon to offer an ATS. Furthermore, at more than 30NM from both Norwich and Southend, the pilot had been unlikely to receive a LARS from either unit. The Board noted that the CWS carried by the EV97 could not have detected the T61, which had not been fitted with a transponder, (**CF2**) and consequently the EV97 pilot had not received any prior situational awareness that the T61 had been in the vicinity (**CF1**). The EV97 pilot had seen the T61, albeit late (**CF3**), and had taken avoiding action to increase the separation.

Turning to the actions of the T61 pilot, members were disappointed that the T61 pilot had not been able to supply a GPS track that could have enabled the exact vertical separation between the two aircraft to be calculated. The T61 pilot had planned a route that had passed just outside the Wattisham MATZ and some members opined that the position of Elmsett, which was clearly marked on VFR charts, meant that it should have been obvious that the visual circuit would have been close to their planned routing, as would any departing or joining aircraft, and that anyway skirting along the edge of a MATZ increased

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

the possibility of meeting someone routeing in the opposite direction, also planning to remain clear of the MATZ. The T61 had not been fitted with a transponder, nor had it been fitted with any form of CWS, rendering it electronically invisible to other airspace users. Therefore, the Board agreed that the pilot had not received any information that the EV97 had been in the vicinity (**CF1**) and had not seen it at all (**CF4**).

When determining the risk, the Board considered the reports from both pilots together with the radar screenshots. Some members thought that the avoiding action taken by the EV97 pilot had averted the risk of collision, however, others argued that the late nature of the avoiding action, coupled with the non-sighting by the T61 pilot, meant that safety had not been assured and that there had been a risk of collision (**CF5**). After a brief discussion, the latter view prevailed; Risk Category B.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024019			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
1	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			
2	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
	• See and Avoid			
3	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
4	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			
5	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:

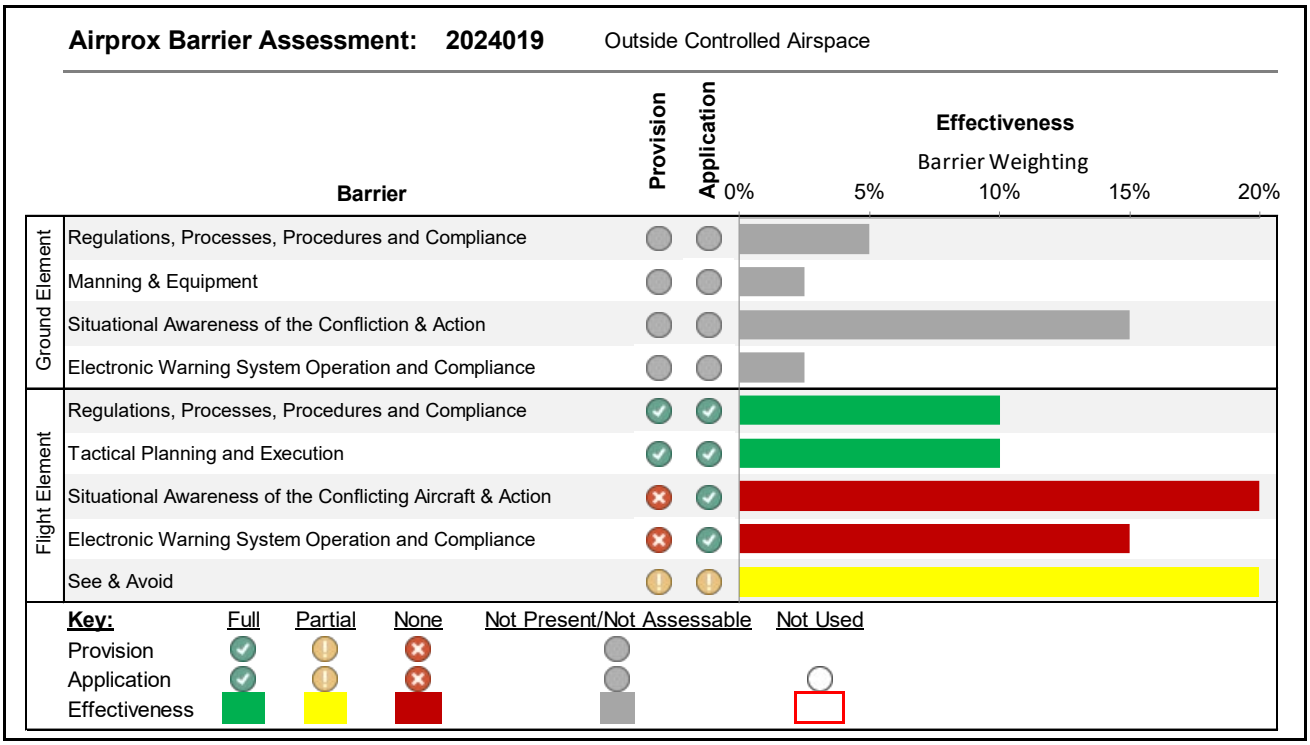
Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had received any situational awareness that the other had been in the vicinity.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the CWS on the EV97 could not detect the T61.

See and Avoid were assessed as **partially effective** because although a late sighting, the EV97 pilot managed to take 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.


Airprox Barrier Assessment: 2024019
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 Confliction & 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