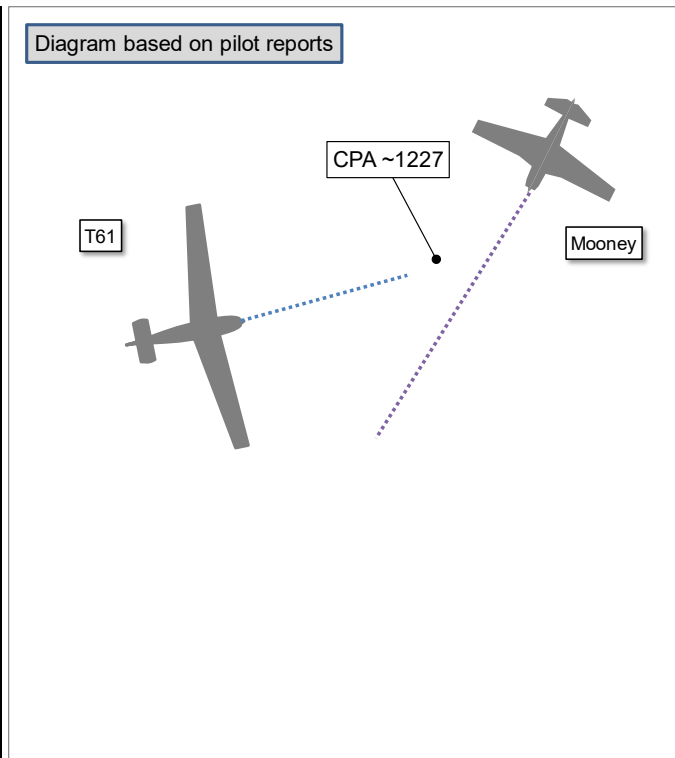


AIRPROX REPORT No 2024006

Date: 16 Jan 2024 Time: ~1227Z Position: 5227N 00109E Location: Tibenham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	T61 Venture	Mooney
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	Tibenham	Tibenham
Altitude/FL	NK	NK
Transponder	Not fitted	A, C, S ¹
Reported		
Colours	Blue, White	NR
Lighting	Strobe	Beacon, Strobe, Landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	800ft	NR
Altimeter	QFE (1006hPa)	NK
Heading	090°	SW
Speed	50kt	NK
ACAS/TAS	Not fitted	SkyEcho
Alert	N/A	None
Separation at CPA		
Reported	100ft V/100m H	NR
Recorded	NK	



THE T61 VENTURE PILOT reports that they were carrying out circuits at Tibenham Airfield on a bright clear day on RW26RH. The wind was about 260°, 14kt. They were transmitting their intentions, blind, on the Tibenham (common gliding) frequency. There were no other aircraft in the circuit at the time. On the second circuit, under power, they were climbing, at about 2kts, through approximately 800ft on the downwind leg, well within the airfield ATZ [sic].² They saw a light aircraft approaching from their 11 o'clock on a track only just to the right of their own track, estimated to be 100ft above and only a few hundred metres away. They felt it would pass down their starboard side. It was travelling quickly at cruise speed. Another pilot with whom they later discussed the incident told them, unprompted, that they estimated the height as 900ft. They immediately executed a medium rate (perhaps up to 45°) descending turn to clear the oncoming aircraft. As they have a bubble canopy, they were able to maintain visual contact. They reversed the turn after turning only about 20° to maintain visual contact until the aircraft had passed abeam their aircraft to starboard. They then turned back though about 30° to 40° and were by then 200-300ft below the other aircraft. They identified it as a Mooney. They switched frequency to Norwich Radar and asked if they had the other aircraft on frequency. They did not, but identified an aircraft travelling south west, not squawking.³ They felt the other aircraft would also cross the Priory Farm ATZ [sic].⁴ Subsequently Norwich Radar provided a callsign to Tibenham staff. The rest of their flight was uneventful.

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

¹ SSR modes not detected at the time of the Airprox.
² Tibenham does not have an ATZ.
³ The Mooney was squawking 7000.
⁴ Priory Farm does not have an ATZ.

THE MOONEY PILOT reports that they were flying from a private site close to the Tibenham gliding site. They were very familiar with operations at Tibenham, and had kept aircraft there in the past. As was their normal practice, they had emailed Tibenham that morning to inform them of the flight. Tibenham reported that there was no gliding that day, but that there might be powered flying, and granted PPR. The Mooney pilot also telephoned just before the flight to further confirm their intentions. The pilot then transited past as planned and made a blind call on the Tibenham frequency. They noted that they always make blind calls, but almost never receive a response and did not on this occasion. Both the pilot and the passenger saw the motor-glider, on a roughly reciprocal track, below their height. The other aircraft had its engine running and its course was steady and appeared to be in level flight. There was no risk of collision at any time and no need for avoiding action. The Mooney is equipped with a CWS, which feeds into an iPad and is connected to headphones to provide traffic call-outs, but they did not receive any information on the other aircraft.

The pilot assessed the risk of collision as 'None'.

Factual Background

The weather at Norwich was recorded as follows:

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METAR COR EGSB 161320Z 23009KT 190V270 CAVOK 03/M02 Q1005 NOSIG=
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. At 1221 the Mooney could be identified using Mode S data, approximately 5NM from Tibenham, see Figure 1. Although a number of primary-only contacts could be seen in the Tibenham area, the T61 could not be identified. The Mooney then faded from radar.

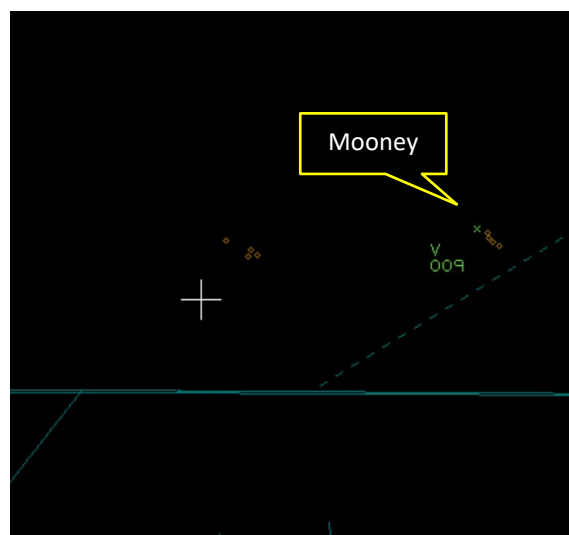


Figure 1 -1221:13 Approximate position of Tibenham marked with the white cross

At 1227:36 the Mooney reappeared on radar to the southwest of Tibenham indicating FL026 (radar QNH 1008hPa). Again, the T61 could not be seen on the radar and the exact separation could not be determined.

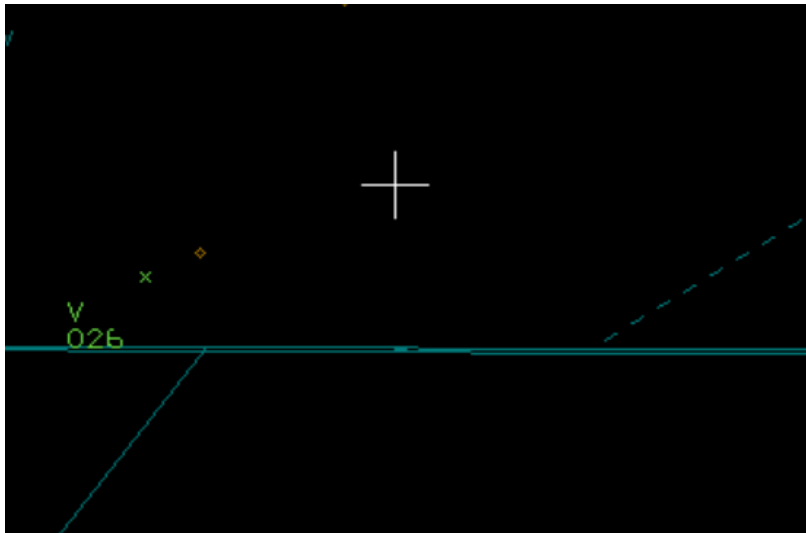


Figure 2 1227:37

The T61 and Mooney pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.⁵ An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.⁶

Summary

An Airprox was reported when a T61 Venture and a Mooney flew into proximity at Tibenham at around 1227Z on Tuesday 16th January 2024. Both pilots were operating under VFR in VMC, neither were in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and radar photographs/video recordings. 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 Mooney pilot. They had reported being familiar with Tibenham and had requested PPR prior to getting airborne because they had anticipated flying through the airfield overhead. Members noted that PPR was generally granted for aircraft landing at an airfield and not for simply flying through and wondered why the gliding club at Tibenham had granted such approval, which could have led the Mooney pilot to believe there had been nothing to affect their transit. **[UKAB Secretariat note:** The Mooney pilot has subsequently confirmed that the PPR had been obtained in case of the need to divert into Tibenham, and not for transit through.]

Some members opined that the Mooney was a capable aircraft, which could have easily climbed above the circuit height, and thought that the Mooney pilot may have been better served by simply climbing above the Tibenham circuit. It was not known at what height the Mooney pilot had flown through the overhead; the T61 pilot reported it to have been 100ft above them and the Mooney pilot reported that they had been visual throughout and that the T61 had been well below. Nevertheless, members thought that the Mooney pilot should have given the circuit a wider berth, either laterally, or by climbing well above (**CF1, CF2, CF3**). The Board agreed that the Mooney pilot had been given generic situational awareness that the circuit may have been active via the PPR approval (**CF4**), although they had not received specific information on the T61 because the CWS on the Mooney could not detect the T61, which had not been transponder-equipped, nor had it been fitted with any form of CWS. However, the Mooney pilot had reported that they had seen the T61 in plenty of time and had assessed that they had not needed to take any avoiding action.

⁵ (UK) SERA.3205 Proximity.

⁶ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

For their part, the T61 pilot had not received any situational awareness that the Mooney had been in the vicinity (**CF4**). Although the Mooney pilot had reported calling on the Tibenham frequency, the T61 pilot reported that they had not heard the call. Additionally, the T61 had not been fitted with any form of CWS that could have alerted the pilot the Mooney's presence. The Board noted that the T61 pilot had seen the Mooney late (**CF6**) and had likely been startled by its sudden appearance, which may have caused the pilot to assess it to have been closer than it actually had been. Concerned by the Mooney's proximity, the pilot had taken avoiding action to increase the separation between the two aircraft (**CF7**).

The Board then briefly discussed the action of the ground staff at Tibenham. They had received the PPR notice, and members were told that they would have distributed the information to any glider pilots, but that the information would not necessarily have been passed to any pilots intending to use the fixed-wing circuit. Members were heartened to hear that Tibenham intended to review their procedures to see how this information could be better distributed in the future.

When determining the risk, the Board had only the reports from the pilots to consider and they noted the differing assessment of the risk. Without any radar data, the actual separation could not be known, but members thought that the Mooney pilot had described a situation where they had been visual throughout the encounter and so they agreed that there had not been a risk of collision; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024006			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Regulations, Processes, Procedures and Compliance				
1	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with
• Tactical Planning and Execution				
2	Human Factors	• Aircraft Navigation	An event involving navigation of the aircraft.	Flew through promulgated and active airspace, e.g. Glider Site
3	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
• 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
• See and Avoid				
6	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
7	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk:

C.

Safety Barrier Assessment⁷

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Mooney pilot did not conform with, or avoid, the pattern of traffic at Tibenham.

Tactical Planning and Execution was assessed as **partially effective** because the Mooney pilot flew in close proximity to the circuit at Tibenham.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the Mooney pilot had generic information that the Tibenham circuit may have been active, but the T61 pilot had not received any situational awareness about the Mooney.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the CWS on the Mooney could not detect the T61, which was not fitted with any form of EC.

Airprox Barrier Assessment: 2024006		Outside Controlled Airspace		Effectiveness				
Barrier		Provision	Application	0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	○	○	[Grey bar to 5%]				
	Manning & Equipment	○	○	[Grey bar to 5%]				
	Situational Awareness of the Confliction & Action	○	○	[Grey bar to 15%]				
	Electronic Warning System Operation and Compliance	○	○	[Grey bar to 5%]				
Flight Element	Regulations, Processes, Procedures and Compliance	✓	⚠	[Yellow bar to 10%]				
	Tactical Planning and Execution	✓	⚠	[Yellow bar to 10%]				
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓	[Red bar to 20%]				
	Electronic Warning System Operation and Compliance	✗	✓	[Red bar to 15%]				
	See & Avoid	✓	✓	[Green bar to 20%]				
Key:		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	○	○			
Application	✓	⚠	✗	○	○			
Effectiveness	■	■	■	■	□			

⁷ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).