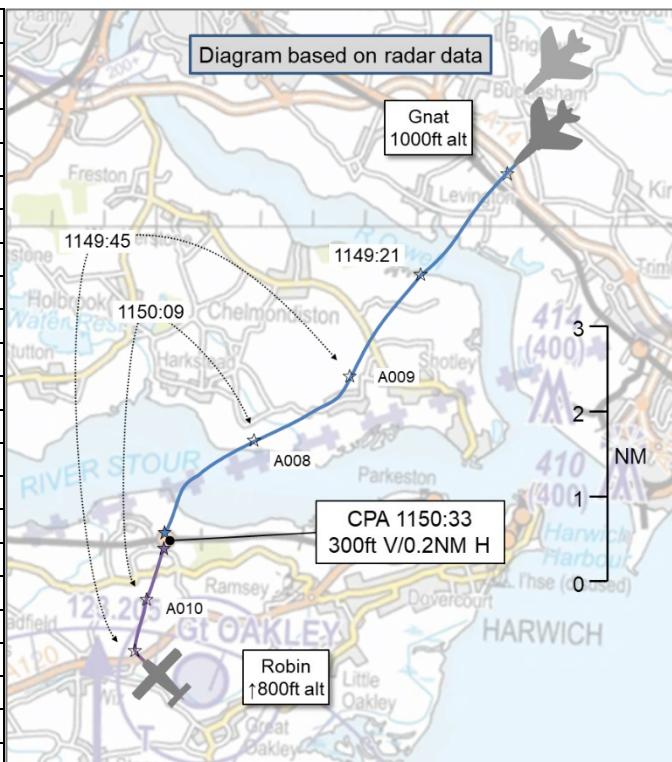


AIRPROX REPORT No 2021225

Date: 06 Nov 2021 Time: 1151Z Position: 5156N 00110W Location: 1.5NM N Great Oakley

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Gnat	Robin
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Listening Out
Provider	N/A	Gt.Oakley Radio
Altitude/FL	800ft	1100ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Yellow	Green, white
Lighting	Nose light	Nav, taxi, landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1000ft	1000ft
Altimeter	QNH (1025hPa)	QFE (NR hPa)
Heading	~200°	360°
Speed	240kt	80kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	150ft V/0.25NM H	150ft V/150m H
Recorded	300ft V/0.2NM H	



THE GNAT PILOT reports that they were leading a formation of 2 Gnats on a training sortie. They had just commenced recovery to [destination airfield] from the Bentwaters area and were heading for Abberton Reservoir. The other aircraft appeared from behind the canopy arch and passed above and to the left of the formation. It was spotted too late to take any action. No avoiding action was seen from the other aircraft pilot. On the outward transit they had had a Traffic Service from Southend but they ceased service at the limit of their radar cover. They had attempted to get a service from Lakenheath but were unable to establish two way communications.

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

THE ROBIN PILOT reports that they were doing circuits at Great Oakley on RW27RH. As they approached 1000ft on crosswind, heading 360°, they saw the 2 Gnats in about their 2 o'clock position, going from their right-to-left. The Gnats then turned onto a more southwesterly direction and they watched them until they passed out to their port side and below. During planning they did discuss the possibility of other aircraft at the airfield but [they state that] it's usually very quiet.

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

THE GREAT OAKLEY AIRFIELD OPERATOR reports that they were not aware of any incident and, although they do have a dedicated radio frequency, the radio is not manned at all times.

Factual Background

The weather at Wattisham was recorded as follows:

METAR EGUW 061150Z AUTO 24012KT 9999 FEW014/// BKN028/// 11/09 Q1023

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. Both aircraft were equipped with a transponder and were visible on the replay at the time of the Airprox. Leading up to the Airprox, the Gnat pilot was observed to have been general handling to the area to the east of Ipswich before tracking towards the southwest. The Robin pilot had routed towards Great Oakley from the north and had commenced an approach when the aircraft disappeared from radar. It then reappeared on the crosswind leg at **1149:39**, 54sec before the Airprox (Figure 1). The separation between the aircraft at this time was 4.6NM.

The Gnat pilot had been maintaining a relatively straight track which appeared to be in the direction of the Great Oakley overhead until they made a small turn to the right at **1149:51** (Figure 2). At this point the separation was 3.7NM.

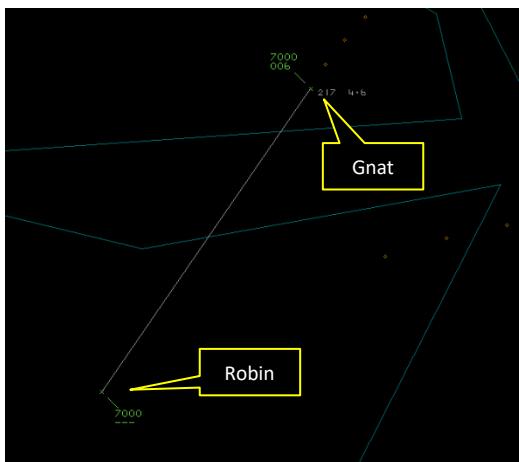


Figure 1. **1149:39** – Robin reappears

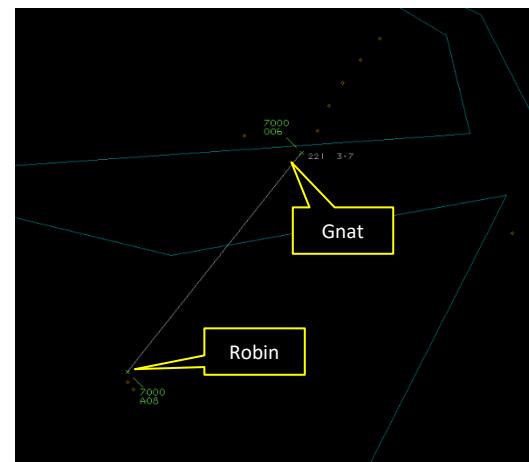


Figure 2. **1149:51** – Gnat slight right turn

At **1150:21** the Gnat pilot turned back to the left which took them towards the Robin that was on the crosswind leg for RW27RH at Great Oakley. The CPA occurred at **1150:33** with a measured separation of 300ft vertically and 0.2NM horizontally (Figure 3).

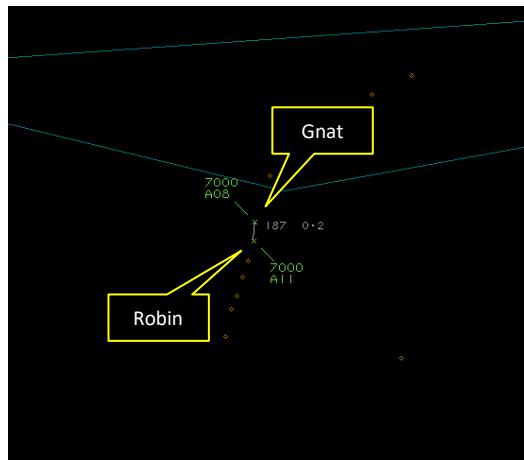


Figure 3 **1150:33** – CPA

The Gnat and Robin 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 An aircraft

¹ (UK) SERA.3205 Proximity.

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

operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.³

Summary

An Airprox was reported when a Gnat and a Robin flew into proximity at location at 1151Z on Saturday 6th November 2021. 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, along with 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.

Firstly the Board considered the actions of the Gnat pilot, noting that they had been in receipt of a Traffic Service from Southend Radar whilst on their outbound leg, which members agreed had been an appropriate service, and that this service had ceased as they had reached the limits of the radar cover. Members discussed that, on the return leg, the Gnat pilot had been unable to obtain a service from Lakenheath and a GA pilot member suggested that, given their location, a service from Southend would have once again been available and that the Gnat pilot may have benefitted from utilising this facility (**CF2**). Members agreed that, having not been in receipt of any air-traffic service and without any EC equipment, the Gnat pilot would not have had any prior awareness of the presence of the Robin (**CF4**). When examining the track that the Gnat pilot had flown, the Board felt that the pilot had attempted to avoid Great Oakley however, when considering that Great Oakley is a training airfield, combined with the high performance of the Gnat, members agreed that it would have been prudent to have allowed a wider margin (**CF1, CF3**), especially as the Gnat had been part of a formation which can make manoeuvring more difficult. The Gnat pilot had stated that they had only become visual with the Robin at a point at which it had been too late to take any action (**CF5**), which had been partly as a result of a visual obscuration caused by the canopy arch (**CF6**).

Next, the Board considered the actions of the Robin pilot and had been encouraged by the threat and error management that had been carried out when considering the traffic levels in the vicinity of Great Oakley. A GA pilot member noted that the circuit pattern which had been flown by the Robin pilot, although slightly wide, had been reasonable for a training sortie. Members agreed that they had had no prior awareness of the Gnat formation before they had become visual with it (**CF4**).

Finally, the Board considered the risk involved in this Airprox. The members noted that, although the Gnat pilot had only become visual with the Robin at a late stage, the Robin pilot had been visual with the Gnat early and that there would have been sufficient opportunity to manoeuvre to provide separation had they have deemed it necessary. The Board also considered the recorded separation and concluded that that there had been no risk of collision, although safety had been reduced. Accordingly, the Board assigned a Risk Category C to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2021225				
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				

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

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
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 or only generic, Situational Awareness
• See and Avoid				
5	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
6	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other

Degree of Risk: C

Safety Barrier Assessment⁴

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 Gnat pilot had not adequately avoided the pattern of traffic that had been formed by the Robin pilot at Great Oakley airfield.

Tactical Planning and Execution was assessed as **partially effective** because, following the unsuccessful attempt at obtaining an ATS from Lakenheath, the Gnat pilot did not seek to obtain an appropriate ATS from elsewhere.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because prior to the pilots becoming visual with one another, they had had no awareness of the presence of the other aircraft.

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