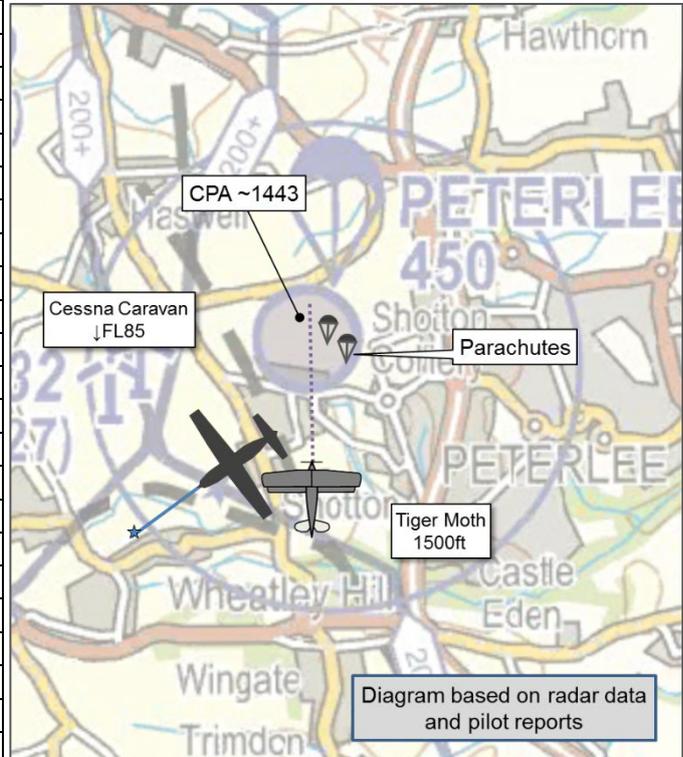


AIRPROX REPORT No 2019032

Date: 22 Feb 2019 Time: 1443Z Position: 5445N 00123W Location: Peterlee Airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Parachutists	Tiger Moth
Operator	Civ Para	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules		VFR
Service		None
Provider		
Altitude/FL		
Transponder		Not Fitted
Reported		
Colours		Silver
Lighting		Nil
Conditions		VMC
Visibility		
Altitude/FL		2000ft
Altimeter		QNH (1027hPa)
Heading		045°
Speed		80kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	NR	NK
Recorded	NK	



A C208 CARAVAN PILOT reports that he was carrying out a routine parachute operation at Peterlee. The airfield had been declared operational up to FL150 at 0930 that morning and at no point had closed down. He had run in on a heading of 215° and had been given approval to drop the parachutists. As the canopies opened at their designated heights an unknown aircraft approached from the south, flew through the dropping zone and directly overhead the parachute landing area at approximately 1500ft and climbing. The aircraft was not in communication and did not respond to calls from the Ground Radio. After contacting Newcastle ATC to report the ‘infringement’, Newcastle also confirmed that they were not in communication with the other aircraft, but agreed to track it through the airspace.

He assessed the risk of collision as ‘High’.

THE TIGER MOTH PILOT reports that he was flying the Tiger Moth to Scotland following completion of a service. He made a planned refuelling stop at Fishburn. On completing pre-flight checks, the pilot noticed that that front-port door had been left open by a photographer so he taxied away from the threshold and back to the apron, unlatched his harness, secured the door, re-fixed his harness and taxied back to the RW08 threshold. He made blind calls on frequency and was aware that there was joining traffic, one from the north and one from the south. Having made his intentions clear, he departed, climbing to 2000ft on a heading of 045°, and became aware that the joining aircraft were on conflicting approach patterns. He had been intending to fly east of the Peterlee zone and then on a more northerly heading to remain clear of the Newcastle zone, transiting below their eastern stub at 1500ft. However, remaining clear of the conflicting joining traffic was his first priority. On clearing the circuit pattern he switched frequency to Newcastle Approach. He was navigating using an up-to-date 1:500,000 map and a SkyDemon system on his iPad, although at the time of climb-out this was not being closely monitored. The combination of the requirement to look for the joining traffic, and a strong tailwind meant that he inadvertently flew through Peterlee airfield and he was unaware of any conflicting traffic. He was not aware of the Airprox until notified 4 days later.

THE NEWCASTLE CONTROLLER reports that Peterlee called on the landline to advise that a light-aircraft had just flown through their overhead at about 1500ft, beneath dropping canopies. The aircraft was not on the Newcastle frequency, so a blind transmission was made, with no response. The incident was later viewed on the radar replay, the aircraft did not appear on the radar until in the Peterlee overhead, therefore no Traffic Information had been passed to the Caravan pilot.

Factual Background

The weather at Newcastle was recorded as follows:

METAR EGNT 221420Z 14006KT 080V190 CAVOK 16/07 Q1031=

The Peterlee entry in the UK AIP ENR 5.5 is as follows:

<p>PETERLEE, CO DURHAM A circle, 1.5 NM radius, centred at 544556N 0012243W</p>	<p>Upper limit: FL150 Lower limit: SFC</p>	<p>Phone: 0191-517 1234. Newcastle ATC: 0191-286 0966.</p>	<p>Activity notified on the day to Newcastle ATC. Alternative contact: 129.900 MHz. Hours: Normally during daylight hours.</p>
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Analysis and Investigation

UKAB Secretariat

Although the Tiger Moth could not be seen on the NATS radars, Newcastle reviewed their radar and were able to provide screenshots. A primary only contact, thought to be the Tiger Moth, could first be seen on the Newcastle radar at 1442:49 (Figure 1), when a primary only contact can be seen just south of the Caravan (code callsign converted as 'PARA' on the Newcastle radar). At 1444:43 the non-squawking aircraft can be seen to the north of the airfield, having flown overhead. The parachute centre called Newcastle at this time to report that a bi-plane had just flown underneath some parachutes (Figure 2).



Figure 1



Figure 2

SERA.3101 states an aircraft shall not be operated in a negligent or reckless manner so as to endanger life or property of others¹.

¹ SERA.3101 Negligent or reckless operation of aircraft

Comments

Caravan Operating Authority

Whilst the risk of collision with the Caravan was low, the risk of collision with the parachutists was extremely high. Given the circumstances and the fact that there was no communication at all from the infringing aircraft, it was sheer luck that the 'infringement' did not lead to a serious incident or fatality.

Summary

An Airprox was reported when a Tiger Moth flew into proximity with parachutists at Peterlee at 1443hrs on Friday 22nd February 2019. The Tiger Moth pilot was operating under VFR in VMC, and was in not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings and reports from the air traffic controllers involved. 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 quickly agreed that the Airprox was not between the Caravan and the Tiger Moth, but between the Tiger Moth and the Parachutists. Having established that, they also agreed that the Tiger Moth would not have been visible to the Caravan pilot prior to him dropping the parachutists and so they judged that he was not in a position to affect the outcome of the Airprox by delaying the dropping of the parachutists.

Turning to the actions of the Tiger Moth pilot, he was aware of Peterlee and had planned to route to the east of the airfield. However, he described a situation where he had returned from the holding point in order to secure an open door, which had probably meant that he was late on his take-off time, and once airborne was confronted by two joining aircraft whilst in the climb-out. Consequently, the Board thought that he had probably become distracted by these events (**CF7**). Whilst addressing the threat of the two aircraft joining from opposite directions and trying to take up a course that would keep him clear of both, he inadvertently flew through the Peterlee drop site. Notwithstanding, and noting that he had a navigation app to help him, members thought that even with the distraction of looking for the other aircraft he should have paid more attention to his position such that he remained clear of the parachute site (**CF1, CF2, CF3**). The Board also thought that he would have been better placed calling Newcastle ATC once airborne given that he was planning on routing beneath their CAS; had he done so, they would have been able to warn him about the status of Peterlee, which they knew to be active (**CF4, CF5**). Some members also commented that the Peterlee frequency was available on the SkyDemon App, and so he could have given Peterlee a call as he approached in order to establish their status and warn them that he was there; although he hadn't intended to fly the route that he eventually took, without any communication with either Newcastle or Peterlee, the Tiger Moth pilot had no situational awareness that there were parachutists in the vicinity (**CF6**).

Finally, the Board discussed the risk. The Board first noted that the Tiger Moth pilot had not seen the parachutists (or the Caravan), and members thought that this may have been either due to obscuration from the upper wing or because separation was such that the parachutists were unlikely to have been seen due to their small size before canopy opening (**CF8**). Although the Caravan operating authority had reported the risk as being high, some members thought that if it had been a very close encounter then at least one of the parachutists would have filed a report themselves. As it was, none of the parachutists had made any form of report and, with no radar data from the parachutists or separation estimate available from the Caravan pilot, the Board reluctantly decided that they were unable to come to a conclusion on risk due to lack of information. Accordingly, they assessed the risk as Category D.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

CF	Factor	Description	Amplification
Flight Elements			
• Tactical Planning and Execution			
1	Human Factors	• Insufficient Decision/Plan	Inadequate plan adaption
2	Human Factors	• Action Performed Incorrectly	Incorrect or ineffective execution
3	Human Factors	• Aircraft Navigation	Flew through promulgated and active airspace
4	Human Factors	• Communications by Flight Crew with ANS	Appropriate Surveillance-based ATS not requested by pilot
5	Human Factors	• Communications by Flight Crew with ANS	Pilot did not communicate with appropriate airspace controlling authority
• Situational Awareness of the Conflicting Aircraft and Action			
6	Contextual	• Situational Awareness and Sensory Events	Pilot had no, or only generic, or late Situational Awareness
7	Human Factors	• Distraction - Job Related	Pilot was distracted by other tasks
• See and Avoid			
8	Human Factors	• Monitoring of Other Aircraft	Non-sighting by one or both pilots

Degree of Risk: D.

Safety Barrier Assessment²

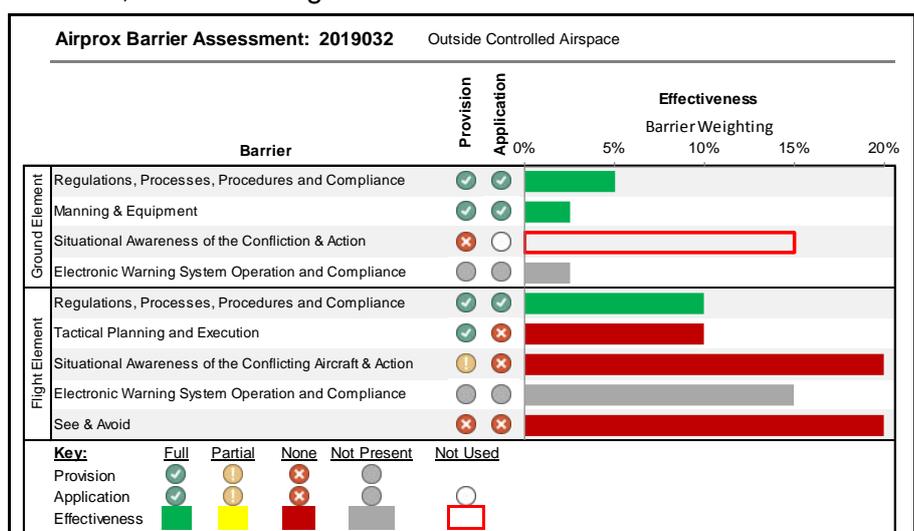
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because although the Tiger Moth pilot planned to keep clear of Peterlee, he flew through it.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the Tiger Moth pilot knew that Peterlee parachute site was there, but did not keep clear.

See and Avoid were assessed as **ineffective** because the Tiger Moth pilot did not see the parachutists.



² The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](http://www.ukab.co.uk).