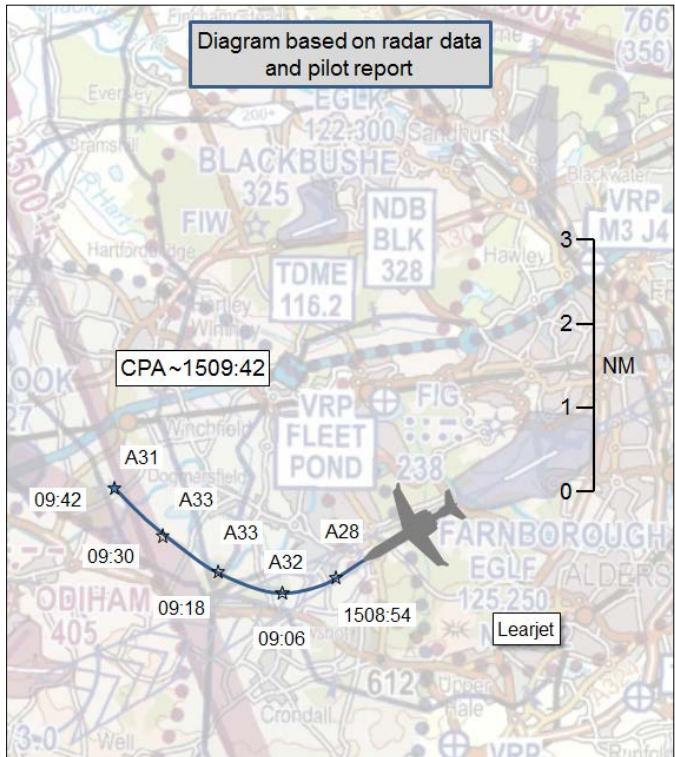


AIRPROX REPORT No 2017065

Date: 11 Apr 2017 Time: 1510Z Position: 5116N 00054W Location: 5nm west Farnborough

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Learjet	Paragliders
Operator	Civ Pte	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	(Basic)	None
Provider	London	N/A
Altitude/FL	3300ft	NK
Transponder	A, C, S	Not fitted
Reported	Not reported	
Colours	White, red, grey	
Lighting	Strobes, anti-coll, recognition	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	3400ft	
Altimeter	QNH (1017hPa)	
Heading	Northerly	
Speed	250kt	
ACAS/TAS	TCAS II	Not fitted
Alert	None	N/A
Separation		
Reported	200ft V/200m H	NK
Recorded	NK	



THE LEARJET PILOT reports departing from Farnborough, under a Basic Service from London Control, he thought. Initial Farnborough clearance was to climb to 2400ft, fly runway heading [RW24] to 2nm and then turn right on to 285°. On handover to Farnborough Radar he was cleared to route direct to the CPT VOR [310°/21nm from Farnborough] and climb to 3400ft. After he had completed the right turn, and as the aircraft rolled wings level, he saw 3 paragliders at a range of 2-400m in the 12 o'clock at the same level. He disconnected the autopilot, descended, turned away from the paragliders and informed London and Farnborough of the incident.

He assessed the risk of collision as 'High'.

THE PARAGLIDER PILOTS could not be traced.

THE FARNBOROUGH APPROACH CONTROLLER reports that the Learjet departed Farnborough en-route towards the CPT VOR. The aircraft came on frequency, was identified, given a climb and a turn towards CPT. There was nothing observed on radar and the controller then cancelled the Deconfliction Service, told the Learjet pilot to remain outside Controlled Airspace and to contact London Control. A short while later, TC SW called to say that the pilot had informed them that he had seen some paragliders as they were about 3 miles north of ROVUS. The Approach controller informed the Tower, who told him that the pilot had also just notified them. The information was then passed onto the incoming ATCO (OJTI) and Trainee.

THE LONDON TC SW DEPS CONTROLLER did not submit a report to the UK Airprox Board.

Factual Background

The weather at Farnborough was recorded as follows:

METAR EGLF 111520Z 27009KT 240V340 9999 FEW042 14/05 Q1026=

Analysis and Investigation

CAA ATSI

The Learjet pilot reported 3 paragliders in proximity after contacting London Control and prior to entering controlled airspace. There was no evidence of the 3 paragliders on the Swanwick radar recording reviewed by ATSI, nor on the Farnborough radar that Farnborough reviewed as part of their investigation. Consequently it was not possible to determine separation at CPA and it would not have been possible for the controller to provide any information to achieve deconfliction minima.

UKAB Secretariat

The Learjet and paraglider pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right². If the incident geometry is considered as converging then the Learjet pilot was required to give way to the paragliders³.

Occurrence Report

The NATS Farnborough Unit Investigation Report found the following:

Description:

At 15:08:22 [the Learjet pilot] called on Approach Radar having departed [Farnborough]. The controller asked [him] to squawk ident and to climb to 3.4A

At 15:08:44 the controller issued a Deconfliction Service with reduced traffic information due radar performance to [the Learjet pilot], and told [him] to resume own navigation to CPT.

At 15:09:07 Radar service was terminated, the [pilot] was instructed to remain outside controlled airspace and was transferred to London Control.

At 15:09:45 [the Learjet] was observed squawking ident and then descended sharply as it approached the M3, dropping to 2.9A, before climbing into controlled airspace. The [radar replay] did not [show the aircraft] change course.

At 15:10:48 Approach received a call from TC SW Deps stating that the pilot of [the Learjet] reported seeing a couple of paragliders close to the climb out, just north of ROVUS, and wanted to pass the information on to [Tower] for further departures.

Investigation:

Radar replays and [controller reports] have been reviewed. Radar replays showed no signs of the motor gliders [sic], and [the Tower controller] was not visual with the gliders either. [The Learjet

¹ SERA.3205 Proximity.

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

³ SERA.3210 Right-of-way (c)(2) Converging.

pilot] was transferred to London Radar as per standard procedures and took his own action to avoid the gliders after leaving the frequency. No tracing action was possible.

Conclusions:

After leaving Farnborough's frequency [the Learjet pilot] reported that there were 'a couple of paragliders' close to climb-out. [The Learjet pilot] appeared to take his own action to avoid the paragliders shortly after leaving Farnborough's frequency, before informing London Radar of the paraglider activity and asking it to be passed on to Farnborough. [Farnborough] ATC had no prior knowledge of the paragliders, or any paragliding activity, and there was no radar evidence, nor did any of the paragliders call on any of Farnborough's frequencies when airborne.

Other than a brief call from London Radar at 15:10:48 regarding [the Learjet pilot's] report of paragliders, no further information was given.

Without further information regarding the paragliders, and because the Airprox was reported after the outbound left Farnborough's frequency, no further investigation is practicable and the investigation will be closed.

Summary

An Airprox was reported when a Learjet and 3 paragliders flew into proximity at about 1510 on Tuesday 11th April 2017. All the pilots were operating in VMC, the Learjet pilot under IFR and most likely in the process of obtaining a Radar Control Service from London Control, and the paraglider pilots under VFR, not in receipt of a Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the Learjet pilot, radar photographs/video recordings, a report from the Farnborough air traffic controller and reports from the appropriate ATC authorities.

Members first discussed the use of paragliders and noted that although there was no regulatory requirement for licensing, the sport was afforded a high degree of oversight by the British Hang Gliding and Paragliding Association (BHPA). Turning to the paragliders themselves, members noted that, depending on the circumstances, a canopy was often visually significant, brightly coloured and had good contrast; indeed, the Learjet pilot had seen the paragliders and taken avoiding action. Some members commented that although the rules in Class G were clear, the Learjet pilot's lack of situational awareness about the paragliders was sub-optimal; given their lack of electronic conspicuity, they wondered whether paraglider pilots might do more to notify busy airfields should they be planning to operate or transit nearby. Although other members agreed that it was a fundamental requirement not to operate in such proximity to other aircraft as to create a collision hazard, they pointed out that the rules associated with Class G airspace were such that it was the responsibility of all pilots to see and avoid, that priority of flight path was clear, and that commercial or IFR operation had no intrinsic priority over any other type of operation. All members agreed that the route of paraglider flight, by its nature, could not be predicted with certainty, and that it was not a practical proposition to expect all paraglider pilots to notify every airfield to which they may transit in proximity. Nevertheless, it was felt that a timely reminder to the paragliding community could do no harm and so the Board resolved to recommend that 'The BHPA publicises the greater mid-air collision risk associated with transiting close to busy airfields, especially within climb-out lanes'.

Turning to the Learjet pilot, members noted that although he had completed a normal departure from Farnborough, the lack of paraglider radar conspicuity meant that neither the Farnborough nor London controllers were able to pass Traffic Information to assist him. In the event, he had seen the paragliders at close range, and had taken avoiding action; the Board agreed that this late sighting had been the cause of the Airprox. Although there was no radar information to provide an indication of separation at CPA, members concluded from the Learjet pilot's narrative and estimation of minimum separation that safety had been much reduced below the norm.

Members also remarked that the event must have been alarming for the paraglider pilots concerned and expressed their disappointment that none had chosen to report the incident through the Airprox process. As a result, it was not possible to form any conclusions as to their perspective of the incident and assessment of risk. It was hoped that the BHPA recommendation would also improve awareness of the existence and utility of the Airprox process amongst the paragliding community.

PART C: ASSESSMENT OF CAUSE, RISK AND SAFETY BARRIERS

Cause: A late sighting by the Learjet pilot.

Degree of Risk: B.

Recommendation: The BHPA publicises the greater mid-air collision risk associated with transiting close to busy airfields, especially within climb-out lanes.

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:

ANSP:

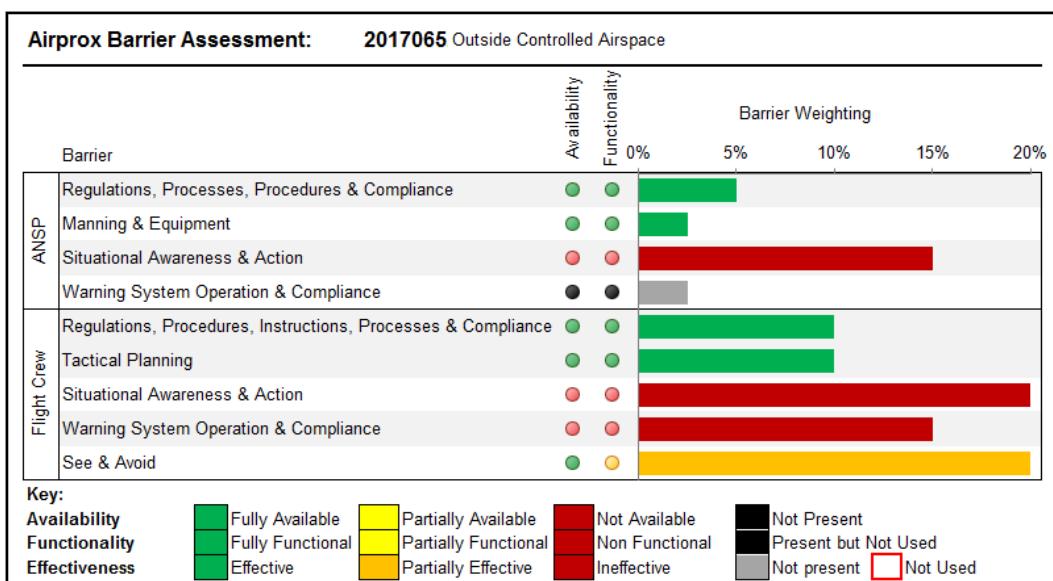
Situational Awareness and Action were assessed as **ineffective** because the paragliders did not appear on the radar displays.

Flight Crew:

Situational Awareness and Action were assessed as **ineffective** because the Learjet pilot was not previously aware of the paragliders' presence.

Warning System Operation and Compliance were assessed as **ineffective** because the paraglider pilots most likely did not carry a TAS or a means of alerting the Learjet TCAS.

See and Avoid were assessed as **partially effective** because the Learjet pilot did not see the paragliders until at a late stage.



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