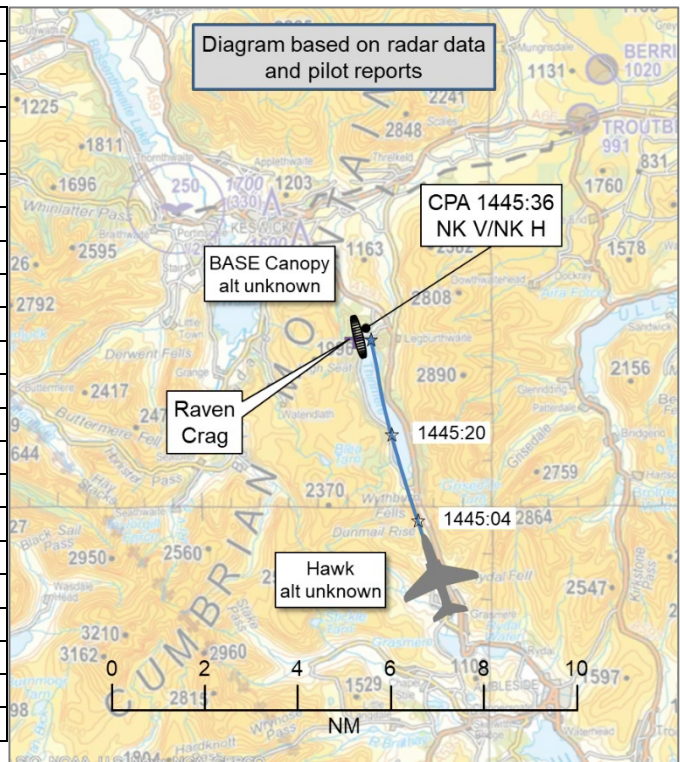


AIRPROX REPORT No 2022003

Date: 12 Jan 2022 Time: 1446Z Position: 5434N 00304W Location: 3NM SE of Keswick

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Hawk T1	BASE ¹ Canopy
Operator	HQ Air (Ops)	Civ Para
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	N/A
Service	None	None
Altitude/FL	NR	NR
Transponder	A, C	Not fitted
Reported		
Colours	Black	Green, black
Lighting	NR	Nil
Conditions	VMC	VMC
Visibility	>10km	NR
Altitude/FL	300ft	NR
Altimeter	agl	N/A
Heading	350°	NK
Speed	420kt	NK
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	200ft V/100m H	500ft V/600ft H
Recorded	NK V/NK H	



THE HAWK PILOT reports that, while conducting a low-level navigation sortie in LFA² 17 in the vicinity of the north-west corner of Thirlmere, the rear cockpit (RCP) pilot-not-flying momentarily spotted a parachute pass under their aircraft about 100ft low and 150ft offset to the left. As the pilot flying, they did not see the parachute. The RCP pilot saw this because the pilot had begun a left roll and pull for terrain clearance. As they rolled, the RCP pilot naturally looked down and left, saw the flash of an object and said “I think that was a parachute”. No evasive manoeuvres were made by the pilot flying. They climbed up and discussed what the RCP pilot saw, which they described as a green parachute passing beneath the aircraft. After further discussion, they terminated their sortie early and returned to base.

The sortie was properly planned, briefed, entered into CADS and reviewed. There were no NOTAMs in the vicinity of the Airprox. Multiple Hawks had flown the same route throughout the day, themselves included, as well as a pair of Hawks 5min earlier, and no other sightings were made by other pilots.

The pilot assessed the risk of collision as ‘Medium’.

THE BASE JUMPER reports that they and two other base jumpers hiked Raven Crag near Thirlmere. When they reached the exit point at the summit they kitted-up and, at that point, 3-4 jet aircraft passed through the valley south-to-north, so they decided to wait and make sure it remained clear. After a 10min wait all seemed clear, so the first two BASE jumpers exited the crag and landed in clear airspace. They were the last jumper to go; it was still clear at this point so they exited the crag and began their canopy descent. As they approached the road below Raven Crag they heard the roar of a jet and then saw the aircraft coming south-to-north through the valley. The aircraft was over Thirlmere about 600ft horizontally and 500ft vertically away from them. At no point did they feel any effect from the aircraft on their canopy nor did they feel any need to make any evasive manoeuvres. They have a method for submitting NOTAMs regarding their activity, but no NOTAM was submitted on this occasion.

¹ Buildings, Antennae, Spans, Earth.

² Low Flying Area.

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

Factual Background

The weather at Warton and Newcastle was recorded as follows:

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METAR EGNO 121450Z 27009KT 9999 FEW040 08/07 Q1040=
METAR EGNT 121450Z 27011KT 9999 FEW015 09/06 Q1035=
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken – the BASE Canopy was not detected by the NATS radars and the first detection of the Hawk was as it approached the southern end of Thirlmere. Mode C data from the Hawk had previously been available but had faded at the time of the Airprox. The Hawk could be seen progressing north through the Thirlmere valley and passed the reported location of the BASE Canopy at 1445:36 (CPA – see Figure 1).

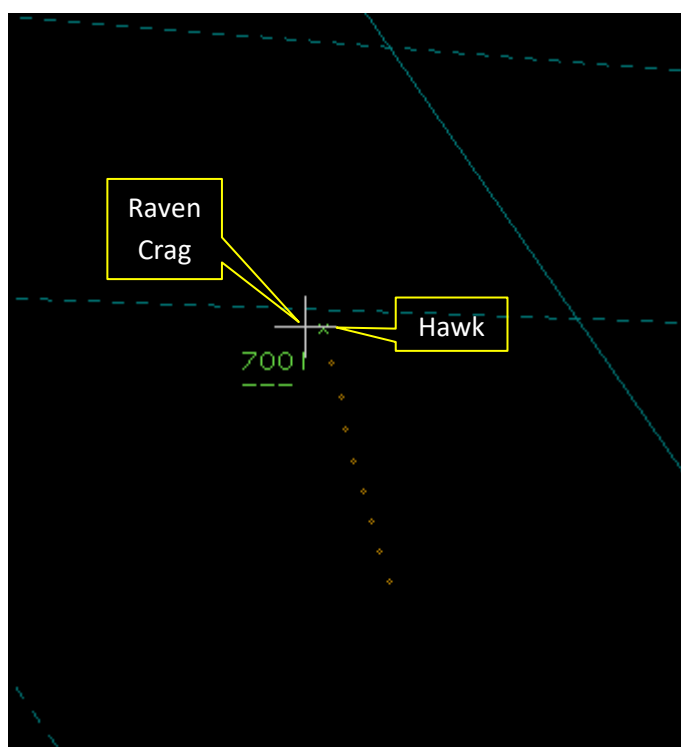


Figure 1 – CPA – 1445:36

Article 23 of The Air Navigation Order (ANO) 2016 states that 'any parachute including a parasending parachute' is exempt from the provisions of the ANO 2016, apart from the following articles:

PART 1 Interpretation and categorisation

CHAPTER 1 Interpretative matter

2 (Interpretation)

PART 5 Operations

CHAPTER 3 Specialised activities

91 (Dropping articles for purposes of agriculture etc. and grant of aerial application certificates)

CHAPTER 4 Other aerial activities

92 (Mooring, tethering, towing, use of cables, etc.)

94 (Small unmanned aircraft)

95 (Small unmanned surveillance aircraft)

PART 10 Prohibited behaviour, directives, rules, powers and penalties

CHAPTER 1 Prohibited behaviour

239 (Power to prohibit or restrict flying)

241 (Endangering safety of any person or property)

CHAPTER 4 Powers and penalties

257 (CAA's power to prevent aircraft flying) (apart from 257(2)(a))

The requirements to comply with The Rules of the Air 2015 are stated at Article 249 of the ANO 2016 and, as such, a person under a parachute, including a parascending parachute, is not required to comply with The Rules of the Air 2015. However, Article 241 of the ANO 2016 specifies that 'A person must not recklessly or negligently cause or permit an aircraft to endanger any person or property.' (UK) SERA defines an aircraft as 'any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface'. The ANO 2016 Schedule 1 defines a parascending parachute as:

"Parascending parachute" means a parachute which is towed by cable in such a manner as to cause it to ascend.'

The Hawk pilot shared a responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.³ The BASE jumper was not required to operate in accordance with The Rules of the Air 2015, as provided for under Article 23 of The Air Navigation Order 2016.

Occurrence Investigation

As evidenced during conversations with local, civilian airspace users including paragliding clubs in the area where this incident occurred, there is a perceived opinion that the amount of RAF low-level operations within LFA 17 (and the wider Low Flying System in general) has reduced dramatically over the previous 10 years. Contact has been made with local paragliding clubs to again highlight the importance of using the NOTAM system to alert military crews of paragliding activity. Good working relationships have been fostered with these civilian clubs through the Regional Airspace User Working Groups (RAUWG) held bi-annually at RAF Leeming. The BASE jumping community has been contacted and encouraged to submit NOTAM or CANP.⁴

Comments

HQ Air Command

This Airprox has highlighted the previously unidentified hazard of BASE jumping to the military aviation community, as this is possibly the first Airprox of this kind. It is unfortunate that the BASE jumpers did not NOTAM their activity; had the crew had awareness of this, mitigations could have been employed to avoid this Airprox. Whilst the bi-annual RAUWGs are the prime means for engagement with local airspace users, the BASE jumping community has not been involved. Good relationships have been established between military flying units and the paragliding clubs in the area, encouraging notification of activity, and this model will now be applied to the local BASE jumping community. It is interesting to note that the local perception is of significantly reduced low flying in the area; RAUWGs held at RAF Leeming will continue to spread the word that RAF, USAF and visiting foreign air forces continue to operate in the low-level environment. Users are reminded that they still need to be vigilant to low-flying, fast-moving military aircraft.

³ MAA RA 2307 paragraphs 1 and 2.

⁴ Civil Aircraft Notification Procedure.

Summary

An Airprox was reported when a Hawk and a BASE Canopy flew into proximity 3NM SE of Keswick at approximately 1446Z on Wednesday 12th January 2022. The Hawk pilot was operating under VFR in VMC and not in receipt of an ATS; the BASE jumper was not required to operate in accordance with The Rules of the Air 2015.

PART B: SUMMARY OF THE BOARD'S DELIBERATIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the Hawk operating authority. 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 discussed this event and concluded that normal safety standards and parameters had pertained and that that had been no risk of collision. Accordingly, the Board assigned a Risk Category E to this Airprox. However, members agreed that the following factors (detailed in Part C) had contributed to this Airprox:

- CF1.** The Hawk pilot had not had any situational awareness of the presence of the BASE Canopy, and the BASE jumper had not had any situational awareness of the presence of the Hawk.
- CF2.** The BASE jumper saw the Hawk after they had launched and so there was little that they could have done to increase separation, should it have been necessary.
- CF3.** By the time the Hawk crew sighted the BASE Canopy, there was no opportunity for them to manoeuvre to increase separation.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022003			
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
	• See and Avoid			
2	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
3	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

Degree of Risk: E

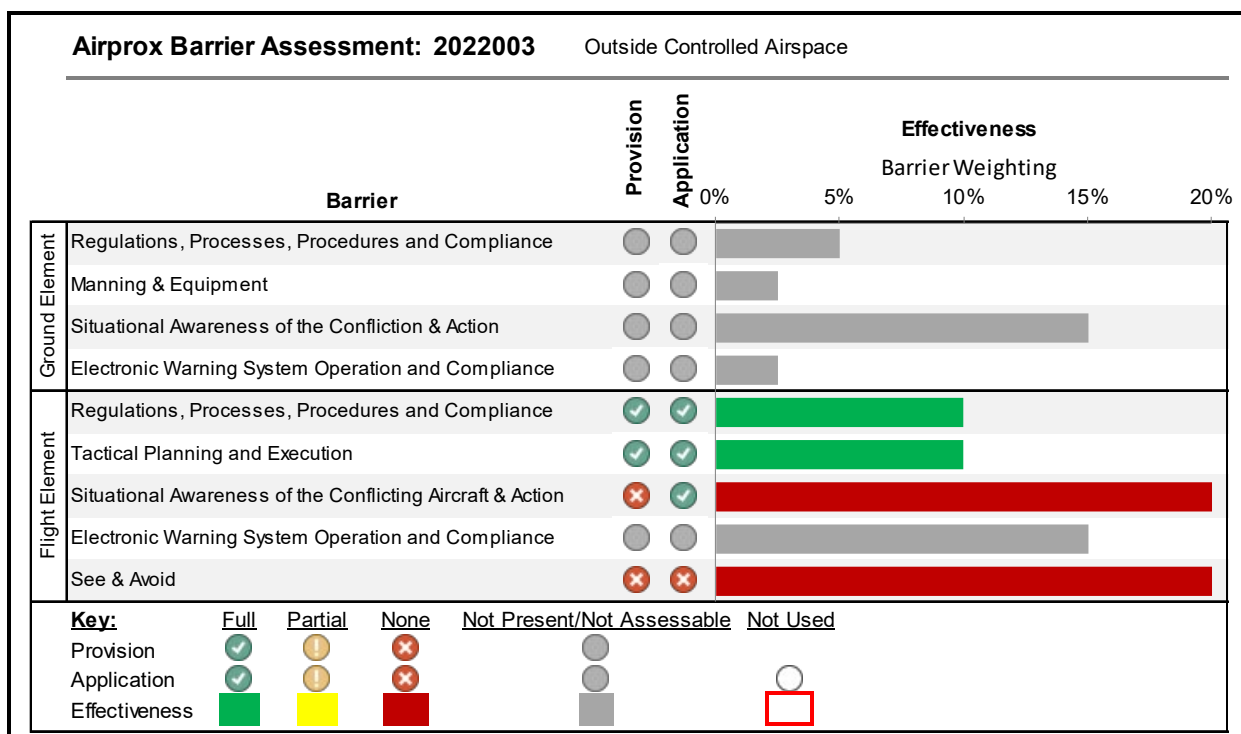
Safety Barrier Assessment⁵

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 any situational awareness of the presence of the other aircraft/parachute.

See and Avoid were assessed as **ineffective** because the BASE jumper sighted the Hawk late, and the Hawk crew did not sight the BASE Canopy in time to increase separation.



⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).