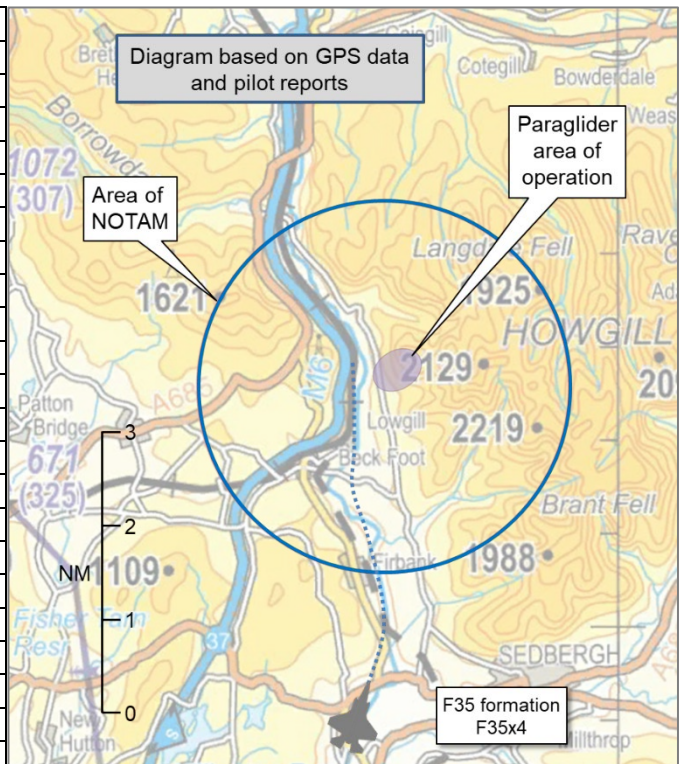


**AIRPROX REPORT No 2022049**

Date: 14 Apr 2022 Time: 1250Z Position: 5423N 00235W Location: ~3.5NM S Tebay

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	Paraglider	F35
Operator	Civ Hang	HQ Air (Ops)
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Listening Out
Provider	NA	LLC <sup>1</sup>
Altitude/FL	NK	NK
Transponder	Not fitted	A, C
Reported		
Colours	Yellow	Grey
Lighting	Nil	Nav, Strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	420m/1380ft	250ft
Altimeter	QFE (NK hPa)	agl (NK hPa)
Heading	"SW"	NR
Speed	10kt	420kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	200ft V/0m H	500ft V/0.5NM H
Recorded	NK V/NK H	



**THE PARAGLIDER PILOT** reports that they were soaring the hill known as Far Whitestones, a registered BHPA paragliding site along with 2 other pilots. They submitted a CANP for the site the previous day and have been informed that their activity had been NOTAM'd. They were directly above the recognised landing area for the site at about 420m in the process of descending to land. They were about to commence tight 360° turns when they heard the sound of a fast-jet to the south. They immediately caught sight of the lead aircraft and immediately realised that there were several more. All the fast-jets passed directly beneath them. They briefly attempted a 360° turn to increase their visibility. It was over very quickly and they watched the 4 aircraft disappear to the north along the Lune valley. [They opined that] had they entered their landing manoeuvre a minute or so earlier they would have been in direct line with the fast jets.

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

**THE F35 PILOT** reports that at approximately 1250 approaching the M6 pass, [they] called 'Paraglider high right', this call was acknowledged with '2 visual', '3 visual', '4'. [They] subsequently updated the call with 'couple of Paragliders up on the hill'. All formation members were visual multiple Paragliders and assessed no confliction.

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

**A PARAGLIDER PILOT WITNESS** reports that they were paragliding [in the vicinity] - 1km east of the M6 between junction 37 and 38. Another [paraglider] pilot was also flying further away from the hill when military aircraft flew from the south to the north, along the east side of the motorway. They [the military jets] under-flew the paraglider pilot with perhaps only with 60 -100m of separation. The paraglider was flying a green and white Advance wing and was known to some other pilots also there at the time.

<sup>1</sup> Low-Level Common VHF radio frequency.

## Factual Background

The weather at Teesside and was recorded as follows:

METAR EGNV 141250Z 17005KT 140V230 9999 FEW025 16/09 Q1021

Relevant CANP/NOTAM information:

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Group: RAF Swanwick /                               1/1           UTC Time: 2022.05.04-11:36:32
User: M_SWANWICK_LFBC

AFP0243 131611
GG EGXSYWYO EGXTYWYL EGXTYWYO EGXTYXYW EGXTZXAO EGXWYWYF EGXWYWYO EGXWZGZX
EGXWZXBO EGXYZGZX EGYDYWYF EGYDZGZX EGYDZXBO EGYDZXCO EGYEZGZX EGYEZXAO
EGYHYWYO EGYMYWYF EGYMZGZX EGYMZXE0 EGYMZXF0
131611 EUECYIYN
(H2044/22 NOTAMN
Q) EGTI/QWGLW/IV/M /W /000/043/5423N00234W003
A) EGTI B) 2204140511 C) 2204141911
D) SR-SS
E) CIVIL AIRCRAFT NOTIFICATION PROCEDURE - MULTIPLE PARAGLIDERS OPR
IN LOW FLYING AREA 17 WI 2NM RADIUS OF PSN 542247N 0023348W
(WHITESTONES, SEDBERGH, CUMBRIA). 2000FT AGL. CTC 07514 746197.
22/04/082/LFC
F) SFC G) 4300FT AMSL)

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## Analysis and Investigation

### F35 Operating Organisation Investigation summary.

As part of the investigation an interview with one of the element pilots was carried out who supplied an account and comments to provide a time line of the event from [formation] flight crew perspective. This investigation is in response to the Airprox raised by a paraglider pilot.

[The formation] flight saw 1 then a further 2 paragliders and avoided all with a safe margin. If the Airprox report is from a third party and unsighted paraglider, then it is likely that it was unseen and not detected by formation lookout ([who would have been] focussed on the seen conflictors) as it was probably hard to see, (lack of conspicuity), or by some other factor associated with a rapidly passing sight-line, the angle off the formation or, just unseen as paragliders can be notoriously hard to acquire in certain light conditions.

[The formation] flight was conducting pre-planned routine low-level tactical formation flying in Low Flying Area (LFA) 17 with Low-Level Booking Number [redacted]. [The formation] flight crew were aware of published NOTAM warnings and avoids for paragliding activity in both LFA 17 and the Airprox area at the time of their initial flight planning and at subsequent release, with no late warnings passed from [departure ATC unit] prior to taxi. As they flowed north in loose visual formation, with all elements inside a 0.5NM by 2.3NM range at 420 KCAS at 250ft MSD, they approached the M6 pass for entry into the Lune Valley. At **1248:50** [the formation] initially sighted a single paraglider to their right, in line with the direction to the annotated location of marked likely paraglider activity. The sighting was quickly passed, and acknowledged across the formation, with a further immediate update from [the lead aircraft pilot] on an additional sighting of a pair of paragliders as [the formation] flight closed to the Airprox location, now all pilots of the formation were visual with the 3 paragliders. The nearest of the 3 sighted paragliders was to [the formation] flight's right-hand side, not closer than an assessed 500ft vertically and 3,000ft laterally at the Closest Point of Approach. With the 3 paragliders sighted and actively avoided, [the formation] flight egressed the Airprox location and continued with scheduled activity for mission aims. [The formation] flight believed that no conflict existed and that they had remained well clear of visually sighted paraglider activity detected early enough to adequately avoid by a safe margin of separation.

## Findings

- [The formation pilots] were all in sight of seen paraglider(s) prior to passing at CPA and an assessed safe separation existed.
- Formation visually acquired and remained clear of sighted paragliders after detecting them from normal lookout scanning and relaying of SA across the formation.
- The paragliders were detected early by routine lookout and formation elements were informed to ensure all were visual with the sighted traffic and maintenance of an assessed safe separation.

## UKAB Secretariat

Due to the location and low altitude of this event it was not visible on the NATS radar system however, the Paraglider pilot has been able to provide a GPS data log to the UKAB Secretariat and the NOTAM detailing the paragliding activity has been retrieved. There is no data available regarding the flight path of the F35 and so any representation of its flight path is a best estimation following advice of a military fast-jet low flying SME. As such, it has not been possible to measure a CPA or to determine whether any of the paragliders with which the F35 pilot became visual was the paraglider piloted by the individual who filed the Airprox. Figure 1 below is a 1:500,000 scale military chart extract which shows the low-level corridor in the area, Figure 2 is a 1:250,000 scale civilian chart extract covering the same area. The area covered by the NOTAM'd paraglider activity has been overlaid. Charts containing details of military low-flying activity area are available to civilian pilots in the UKAIP.<sup>2</sup>

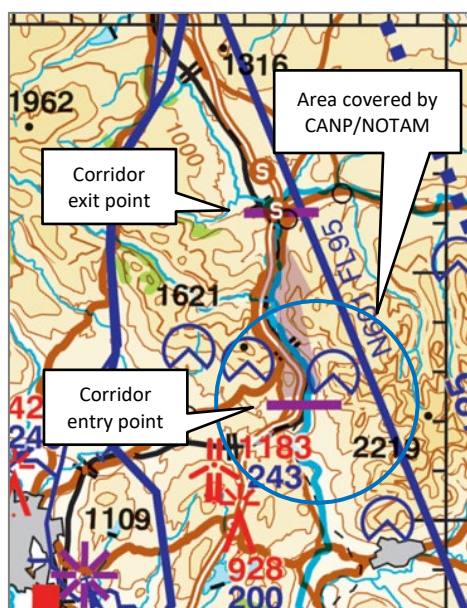


Figure 1 -  
Military low level chart extract

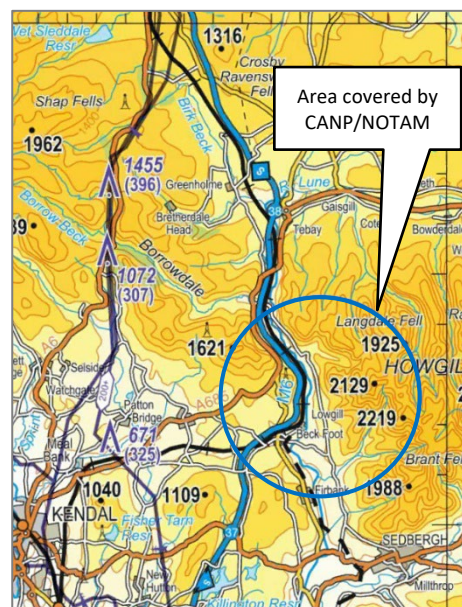


Figure 2 –  
Civilian chart extract

The Paraglider and F35 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.<sup>3</sup> If the incident geometry is considered as converging then the F35 pilot was required to give way to the Paraglider.<sup>4</sup>

<sup>2</sup> UK AIP Part 2 ENR 6-76.

<sup>3</sup> (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

<sup>4</sup> (UK) SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

## Comments

### HQ Air Command

This Airprox was subject to a Local Investigation. Paraglider pilots are advised to submit a CANP (which should result in a NOTAM) if there is paragliding activity involving 5 or more paragliders. The BHPA also advises that this will not result in an avoid and some aircraft pilots may still choose to fly through the NOTAM'd area. It is heartening and encouraging to see a NOTAM produced when flying in larger groups to help raise awareness. On this occasion, it is not surprising that an Airprox was the outcome of the decision to fly through an area of aerial activity involving multiple paragliders with all parties confined by the geography of the valley feature. The F35 formation lead visually acquired 3 paragliders in good time and relayed this to the rest of the formation who all reported visual. They believed that no conflict existed and that they had remained well clear of visually sighted paraglider activity which had been detected early enough to adequately avoid by a safe margin of separation. Mid-Air Collision would be the primary concern for the formation; the hazard of wake turbulence and its effect on a paraglider's canopy should also be considered. Whilst the paragliding NOTAM was not an avoid, the paraglider pilots were clearly unsettled and concerned by the presence of the F35 formation within the published NOTAM area.

### BHPA

The BHPA is extremely disappointed to hear that another Airprox has occurred in an area where paragliding activity had been notified.

The BHPA has spent a lot of time behind the scenes with the LFBC honing the CANP procedure and even getting the wording amended to state "paragliding activity" rather than "parachuting activity". We continue to educate our members through the schools and membership magazine to make use of the CANP procedure and instruct on its submission and to provide a point-of-contact telephone number and were encouraged to see it used by the paraglider pilots on this occasion.

We remind all aviators of powered aircraft and helicopters that there is not only the risk of a direct collision when flying close to paragliders and hang gliders but also that wake or rotor turbulence can have serious consequences.

## Summary

An Airprox was reported when a Paraglider and an F35 flew into proximity approximately 3.5NM south of Tebay at approximately 1250Z on Thursday 14<sup>th</sup> April 2022. Both pilots were operating under VFR in VMC, neither pilot was in receipt of an ATS however the F35 pilot was listening out on the VHF Low-Level Common frequency.

### **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from both pilots, a GPS data file and reports from the appropriate operating authorities. 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 considered the actions of the Paraglider pilot and had been encouraged that a CANP had been submitted and a NOTAM generated to notify airspace users of the activity. A Paragliding pilot member commented that a lot of work had been done within the paragliding community to promote the use of the CANP procedure and specifically the inclusion of a contact telephone number for operators, and members could not understand why this had not been utilised to ascertain a more accurate picture of the NOTAM'd paragliding activity. Members agreed that as the Paraglider pilot had heard the F35 aircraft prior to sighting it, they had had generic situational awareness of its presence (**CF3**) and they had been concerned by its proximity to them once they had visually acquired it (**CF5**), especially when considering the relatively poor manoeuvrability of the paraglider in comparison with the F35.

Next, the Board discussed the actions of the F35 pilot and noted that, although they had been aware of the NOTAM'd paraglider activity, they had elected to fly through the area (**CF1**) however, members accepted that there had been no requirement for them to avoid it. A military pilot member stated that pilots do check for NOTAM'd areas and plan their sorties appropriately, being especially mindful of the type of activity that is taking place and the geography of the location however, on occasion, they will fly through these areas of activity. The funnelling effect of the valley in this area had meant that it had been highly likely that the flight path of the F35s would interact with the known paragliding activity. Members were disappointed that the sortie had been flown without further mitigations put in place and they commented pointedly that the telephone contact number was provided on NOTAMs for airspace users to directly contact paragliding pilots in order to conduct specific mitigation activity. The Board agreed that the NOTAM had provided the F35 with generic situational awareness regarding the paraglider (**CF3**) and that they had continued with the sortie as planned despite this awareness (**CF2**).

Finally, the Board considered the risk involved in this Airprox. Members noted that, although the pilots of both of the aircraft had had generic awareness of the presence of the other, for the Paraglider pilot this had been gained at a late stage. Whilst both pilots had become visual with the other aircraft the Board decided that, due to the high speed of the F35 and the manoeuvrability limitations of the paraglider, safety had been degraded however, members were satisfied that there had been no risk of collision. Consequently, the Board assigned a Risk Category C to this event.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

2022049				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Flight Elements</b>				
<b>• Tactical Planning and Execution</b>				
1	Human Factors	• Aircraft Navigation	An event involving navigation of the aircraft.	Flew through promulgated and active airspace, e.g. Glider Site
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
2	Human Factors	• Lack of Action	Events involving flight crew not taking any action at all when they should have done so	Pilot flew close enough to cause concern despite Situational Awareness
3	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
<b>• See and Avoid</b>				
4	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern
5	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 Assessment<sup>5</sup>

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 **partially effective** because the F35 formation had planned to fly through an area of NOTAM'd activity which they had been aware of.

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



**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the pilots involved had had only generic situational awareness regarding the presence of the other prior to the event.

<b>Airprox Barrier Assessment: 2022049</b>		Outside Controlled Airspace						
		Provision	Application	<b>Effectiveness</b>				
<b>Barrier</b>				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	○	○					
	Manning & Equipment	○	○					
	Situational Awareness of the Confliction & Action	○	○					
	Electronic Warning System Operation and Compliance	○	○					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Tactical Planning and Execution	✓	⚠					
	Situational Awareness of the Conflicting Aircraft & Action	⚠	✗					
	Electronic Warning System Operation and Compliance	○	○					
	See & Avoid	✓	✓					
<b>Key:</b>		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	○				
Application	✓	⚠	✗	○	○			
Effectiveness	■	■	■	■	□			