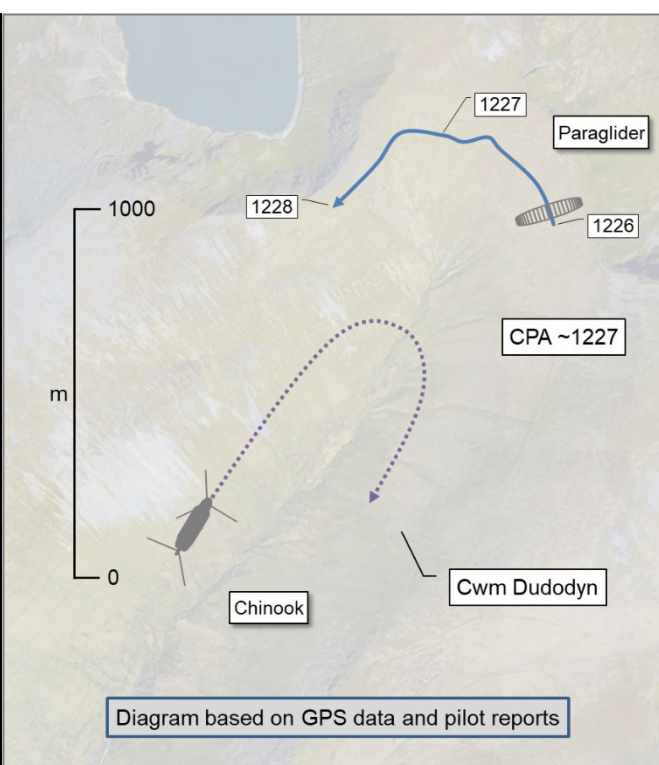


AIRPROX REPORT No 2022246

Date: 13 Oct 2022 Time: 1227Z Position: 5308N 00404W Location: Cwm Dudodyn

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Paraglider	Chinook
Operator	Civ Hang	HQ JHC
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Valley
Altitude/FL	2430ft	NK
Transponder	Not fitted	A, C, S+
Reported		
Colours	Orange	Green
Lighting	Not fitted	HISL, position
Conditions	VMC	NR ¹
Visibility	>10km	NR
Altitude/FL	725m asl	NR
Altimeter	NK	NR
Heading	NK	NR
Speed	NK	NR
ACAS/TAS	Not fitted	TAS
Alert	N/A	None
Separation at CPA		
Reported	200ft V/1000m H	200ft V/300m H
Recorded	Not recorded	



THE PARAGLIDER PILOT reports conducting a cross-country flight on which they had a close encounter with a Chinook helicopter. They were at the col between Mynydd Perfedd and Foel Goch when the Chinook suddenly appeared (from being out of sight), flying low up the very tight and narrow valley below Elidir Fawr (Cwm Dudodyn). Luckily they spotted the paraglider and made quite an exciting 180° turn, which looked quite tight and unlikely in the narrow valley below. They were thankful for the quick reaction of the pilot/crew as even a slight delay would have made the situation more serious than it actually turned out to be. They took avoiding action by heading back in the direction of Y Garn (southeast) to avoid any turbulence being blown up the valley towards the col. The paraglider pilot noted that the proximity was possibly not the main issue but when they spotted the Chinook they were concerned that the Chinook had limited options in such a narrow valley and thought it was committed to its course up the valley and over the col. They were relieved when it took avoiding action and impressed that it had managed to do so in such a tight spot. Being spotted and reacting to their position at the col even seconds later would have been much more serious. They may have had time to clear the col but seriously doubt they would have got far enough away to avoid the Chinook's turbulence.

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

THE CHINOOK PILOT reports that, on arrival at the Mountain Flying Training Area (MFTA), the crew contacted RAF Valley on the published low-level frequency and reported routing to area X-ray with the intention to use a valley near Elidir Fawr to conduct a valley turnback exercise for the student pilot in the right-hand seat. The student set up on the west side of the valley, due to the prevailing wind, and routed into the valley at approximately 1800ft AMSL. On nearing the end of the valley, the student turned right to route round the back and out of the valley at approximately 60kts IAS. Shortly after initiating the turn, the crew saw a paraglider in the 12 o'clock position, approximately 100-200ft above,

¹ Although the Chinook pilot did not report the meteorological conditions, they did report operating under VFR and hence it is considered most likely that the Chinook was also in VMC.

on the ridge line and about 300-400m away laterally. The captain decided the safest course of action was to continue the turn back out of the valley and directed the student accordingly. The aircraft was routed out of the valley and repositioned to area Yankee in order to remain well clear of the paraglider.

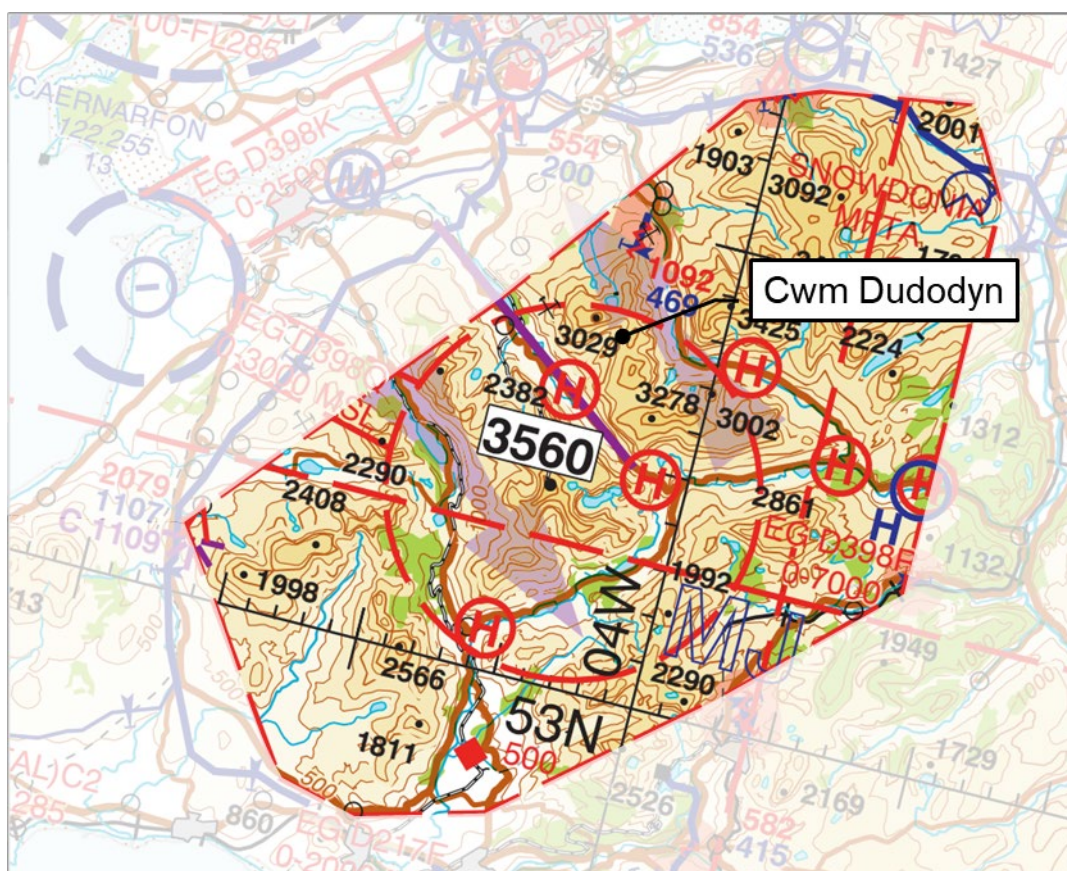
The pilot assessed the risk of collision as 'Low'.

Factual Background

The weather at Valley was recorded as follows:

METAR EGOV 131220Z 18011KT 9999 FEW020 15/08 Q1014 TEMPO SCT020 RMK BLU TEMPO WHT=

The Snowdonia Dedicated Helicopter Mountain Flying Training Area (MFTA). The MFTA is a dedicated helicopter training area that extends from ground level to 500ft AGL. RW aircrew should listen out on Valley Low Level frequency [...] and UKLFS Safety Frequency whenever possible when operating in the MFTA. FW aircrew should blind call their intentions to enter the A5 Pass or A4085 Pass to Valley Low Level.²



Snowdonia Dedicated Helicopter Mountain Flying Training Area (MFTA)

Analysis and Investigation

UKAB Secretariat

The Paraglider and Chinook pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.³

The Chinook was being operated below the base of radar cover and as such did not appear on the NATS Ltd radar replay. The Chinook track shown on the diagram is included to illustrate the reported

² UK Military Low Flying Handbook, Section 2, Low Flying Area 7, para 7.

³ (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

right turn, is purely speculative based on the pilot reports and Paraglider pilot GPS track, and does not necessarily depict the actual track flown.

Comments

JHC

This is a great example of honest reporting and the safe use of shared airspace. The paraglider pilot spotted the Chinook and realised there was very little they could do other than keep going forward and, although the Chinook had already started their turn, the Captain spotted the paraglider early as well. It is somewhat fortuitous that the crew was conducting valley turnback exercises on this day, however, it would have resulted in the same conclusion, a safe turn conducted early enough to avoid any turbulence for the paraglider.

BHPA

The BHPA is relieved that this Airprox did not have more serious consequences, notably from the Chinook's rotor downwash. Although the Chinook was conducting a narrow valley tight-turning manoeuvre, we commend the crew's continued observation during the manoeuvre in spotting the paraglider and their subsequent timely action in completing the turn and returning back down the valley. Although a paraglider is limited in its speed and manoeuvrability, the paraglider pilot's good lookout is also to be commended.

Summary

An Airprox was reported when a Paraglider and a Chinook flew into proximity near the head of Cwm Dudodyn at about 1227Z on Thursday 13th October 2022. Both pilots were operating under VFR in VMC, the Chinook pilot in receipt of a Basic Service from RAF Valley and the Paraglider pilot not in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and GPS data. 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 agreed that the paraglider pilot had been concerned by the proximity of the Chinook but that this was more due to the threat of downwash than of a mid-air collision. Each pilot had seen the other aircraft in time to take mitigating action and in this case normal procedures and safety parameters had applied, risk E. The following Contributory Factors were felt to be relevant:

CF1: The ATCO was not required to monitor the Chinook flight and could not do so anyway due to terrain masking.

CF2: Neither pilot had situational awareness concerning the location and proximity of the other aircraft.

CF3: The paraglider pilot was not equipped with EC and could not be detected by the Chinook TAS.

CF4: The paraglider pilot was concerned by the proximity of the Chinook.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**Contributory Factors:**

	2022246			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Situational Awareness and Action				
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
2	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
• Electronic Warning System Operation and Compliance				
3	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
• See and Avoid				
4	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: E.

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:

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **not used** because the Valley controller was not required to monitor the Chinook flight, and could not do so due to terrain masking.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had situational awareness concerning the location and proximity of the other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the paraglider pilot was not equipped with EC and could not be detected by the Chinook TAS.

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

Airprox Barrier Assessment: 2022246		Outside Controlled Airspace						
Barrier		Provision	Application	Effectiveness				
				Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Conflicition & 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	✓	✓					
Key:		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	ⓘ	✗	○				
Application	✓	ⓘ	✗	○				
Effectiveness	█	█	█	█		□		