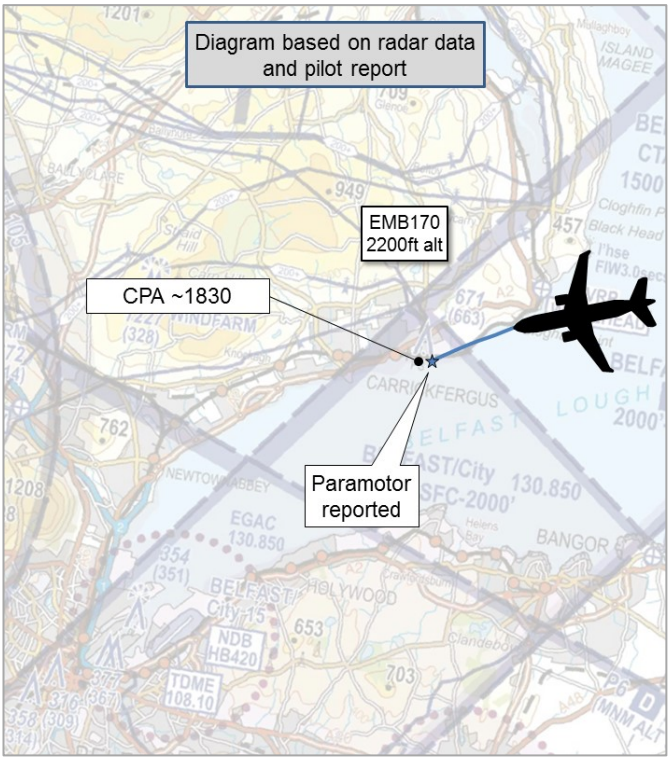
AIRPROX REPORT No 2018216

Date: 13 Aug 2018 Time: ~1830Z Position: 5443N 00545W Location: 7nm NE Belfast City Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EMB170	Paramotor
Operator	CAT	Civ Hang
Airspace	Belfast City CTR	Belfast City CTR
Class	D	D
Rules	IFR	VFR
Service	Radar Control	None
Provider	Belfast	
Altitude/FL		
Transponder	A, C, S	None
Reported		NK
Colours	Company	
Lighting	Nav, Strobe, Landing	
Conditions	VMC	
Visibility	10km	
Altitude/FL	2000ft	
Altimeter	QNH	
Heading	220°	
Speed	170kt	
ACAS/TAS	TCAS II	
Alert	None	
Separation		
Reported	100-200ft V/0nm H	NK
Recorded	NK	



THE EMB170 PILOT reports that he was about 7nm out on the ILS for RW22. A paraglider was seen moving west-to-east in front of and then past the aircraft, within 100ft to 200ft. His initial thoughts were that it was a drone, but as it got closer, a multi-coloured canopy was seen by the FO, but not the Captain (they were in the process of being transferred to the tower frequency and the Captain was head-in changing frequency). They reported the incident to both tower and approach controllers. No para activity was reported or expected by ATC, and there was no trace of the paraglider on the controller's radar. They did not carry out any avoiding action because the incident happened so quickly, and the FO first saw the paraglider only at about 0.5nm.

He assessed the risk of collision as 'High'.

THE PARAMOTOR PILOT could not be traced despite intensive help from the BHPA.

THE BELFAST CITY CONTROLLER reports that he was vectoring the EMB170 onto the ILS for RW22. The EMB170 was established on the ILS and 7nm from touchdown when its pilot reported that what looked like a paraglider had passed down their left-hand side whilst on the approach, at about 7-8nm from touchdown and at 2000ft. Nothing was seen on radar or by the tower controller, and there were no sighting reports from subsequent aircraft.

Factual Background

The weather at Belfast City was recorded as follows:

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EGAC 1820Z 27005 250V320 9999 BKN028 OVC035 18/13 1010
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Analysis and Investigation

UKAB Secretariat

The EMB170 and Paramotor pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1].

This incident occurred in Class D airspace. Class D flight is permitted for both VFR and IFR aircraft but all aircraft must obtain an ATC clearance before entering the airspace, and must comply with ATC instructions. In Class D airspace ATC separates IFR aircraft from each other but they do not separate IFR from VFR aircraft (although they must pass Traffic Information (TI) to IFR aircraft about known VFR traffic and vice-versa). Unfortunately, in this incident the paramotor was not communicating with ATC, or visible on radar, so the Belfast City controller had no opportunity to pass the relevant TI or ensure the aircraft were safely separated.

Comments

BHPA

An aftercast obtained for the time and date of this Airprox stated that the surface wind was westerly between 5-10kt, and around 15kt at 1000ft. Therefore, it would be practical to assume that the wind at 2000ft (the incident height) would be from about 250-320º and in excess of 15kt. With a wind from this westerly/north-westerly direction, the possibility of a paraglider pilot soaring the SE facing cliffs between Carrickfergus and Whitehead is highly unlikely; this would have necessitated a SE wind direction. Therefore, we have concluded that the pilot involved was almost certainly flying a paramotor. Cloudbase was certainly high enough at that time to enable the pilot to have been at the incident altitude of 2000ft and, because the paramotorist crossed in front of the EMB170 from west to east, it was unlikely that the paramotorist was trying to fly back towards the Carrickfergus coastline because progress would have been very slow due to the headwind component at that altitude. For information, a paramotor's straight & level trim speed in nil wind is around 20-25kt depending on wing size. Perhaps the paramotor pilot was crossing Belfast Lough in a NW–SE direction towards Bangor with a very helpful tailwind. Notwithstanding the pilot's intentions, he should have been aware that he was flying in a Class D control zone without ATC clearance and it is most fortunate that a collision did not occur.

Extensive enquiries with BHPA schools, clubs and paramotor rated pilots in Northern Ireland regarding whether any paramotor (or paraglider) pilots were operating in that area on the 13th August, have drawn a complete blank. However, the BHPA would like to add that a number of non-BHPA paramotor pilots operate in Northern Ireland who may not have had the benefit of any formal training in airmanship, air law or airspace restrictions.

Summary

An Airprox was reported when an EMB170 and a paramotor flew into proximity on the approach to Belfast City Airport at about 1830hrs on Monday 13th August 2018. The EMB170 pilot was operating under IFR in VMC with a Radar Control Service from Belfast City. The paramotor pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilot of the EMB170, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

[1] SERA.3205 Proximity.

The Board began by looking at the actions of the Paramotor pilot. The BHPA member said that they had identified that the aircraft was most likely a Paramotor, rather than a Paraglider due to the weather conditions at the time of the Airprox and the flight characteristics of the different aircraft. Members quickly agreed that the paramotor pilot had entered the Class D airspace without informing Air Traffic Control, and discussed why the paramotor pilot might have done so. Noting that the pilot was probably not a BHPA member and therefore had potentially not participated in their formal training and pilot rating programme, the Board discussed how such pilots could be assured to have received appropriate instruction regarding the applicable aviation law, including airspace categorisation[2]. Not convinced that the oversight of Paramotor pilots was robust, the Board resolved to recommend that the CAA review licensing requirements for paramotor activities. Members also agreed that the increasing numbers of autonomously operated Paramotors meant that efforts to educate the associated community of pilots were likely to be somewhat haphazard. Although noting that in this case the paramotor pilot was likely not a member of the BHPA, the Board asked the BHPA representative whether they would, nonetheless, be content to feature this incident in their literature in the hope that some paramotor pilots might read the report even if they were not BHPA members. The BHPA member was content to do so, and the Board therefore agreed to recommend that the BHPA publicise this incident in order to enhance the understanding of paraglider and paramotor pilots regarding the dangers of operating close to the boundaries of controlled airspace.

The Board then looked at the actions of the Belfast City controller and the EMB170 pilots. They agreed that the Paramotor would not have been visible on the controller's radar, and that because of this the controller could not recognise the conflict and intervene to ensure the aircraft were separated. For their part, the EMB170 pilots were placed in an unenviable situation whereby they had little time to recognise and react to an unexpected threat that was not detectable using their on-board systems either. Only visually acquiring the paramotor at a late stage and at a critical point in their approach, fortunately the paramotor was sufficiently far away that a collision did not occur.

The Board then looked at the cause and members agreed that the paramotor pilot had entered controlled airspace without talking to the controlling authority. The cause was therefore determined as the paramotor pilot entered Class D airspace without clearance and flew into conflict with the EMB170. Turning to the risk, members agreed that the pilot's estimation of the proximity of the paramotor indicated that they had not had time to react in a timely manner, and that safety margins had been much reduced below the norm; accordingly, they assessed the risk as Category B.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The paramotor pilot entered Class D airspace without clearance and flew into conflict with the EMB170.

Degree of Risk: B.

Recommendation(s): 1. The CAA review licensing requirements for paramotor activities.
2. BHPA publicise this incident.

Safety Barrier Assessment[3]

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

ANSP:

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

Situational Awareness and Action were assessed as **ineffective** because the paramotor did not display on the Belfast City Controller's radar, therefore the controller could not provide any information to the EMB170.

Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the Paramotor pilot infringed Class D airspace without communicating with the controlling authority.

Tactical Planning was assessed as **ineffective** because the paramotor pilot had evidently not taken account of the Belfast Class D airspace during his planning or execution of his flight.

Situational Awareness and Action were assessed as **ineffective** because the EMB170 pilot had no knowledge of the paramotor and could therefore not act prior to visually acquiring it.

Warning System Operation and Compliance were assessed as **ineffective** because the EMB170's TCAS II could not alert on the presence of the paramotor because the paramotor was not transponding.

See and Avoid were assessed as **ineffective** because the EMB170 pilot saw the paramotor too late to carry out any avoiding action.