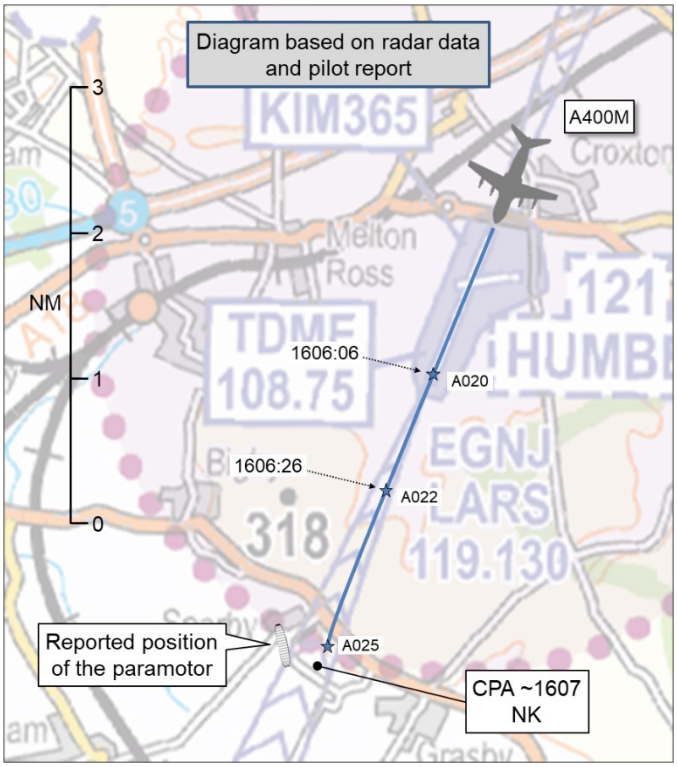
AIRPROX REPORT No 2024215

Date: 16 Aug 2024 Time: ~1607Z Position: 5332N 00023W Location: IVO Humberside Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	A400M	Paramotor
Operator	HQ Air (Ops)	Civ Hang
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	Unknown
Provider	Humberside Radar	NK
Altitude/FL	2500ft	NK
Transponder	A, C, S+	Not fitted
Reported		
Colours	Grey	Not reported
Lighting	HISLs, nav, beacon, landing.	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	3000ft	
Altimeter	NR	
Heading	200°	
Speed	NR	
ACAS/TAS	TCAS II	
Alert	None	
Separation at CPA		
Reported	0ft V/0.8NM H	NR
Recorded	NK	



THE A400M PILOT reports that they had just conducted the second of two practice approaches at Humberside Airport. They were executing a planned go-around after the approach, and were cleared for own navigation to the south, climbing to FL60. As the aircraft passed through 2500ft AMSL, the Pilot Monitoring in the right-hand seat called visual on a paramotor in the 12 to 1 o'clock position, above and on a reciprocal course. The Pilot Flying immediately sighted the paramotor, disengaged the autopilot and turned left onto approximately 160° and continued the climb away from the paramotor to avoid a confliction. The traffic was reported to Humberside Radar [as a "paraglider"], who reported no radar contacts in the vicinity. Had avoiding action not been taken, it is estimated that they would have been co-altitude with the paramotor with less than 0.5NM separation.

[The pilot of the A400M commented that] a direct collision would have obviously had disastrous consequences. However, even a near miss between a paramotor and an aircraft as large as an A400M could have led to a negative impact on the paramotor due to interaction with the aircraft wake turbulence. The only remaining barrier in this instance was lookout, which proved to be effective. This underlines the importance of good crew lookout, even when operating in an IFR or instrument environment.

The pilot perceived the severity of the incident as 'Low'.

THE PARAMOTOR PILOT could not be traced.

THE HUMBERSIDE CONTROLLER reports that they were the APS ATCO on duty at 1606, however, they have no recollection of an Airprox being filed on frequency.

Factual Background

The weather at Humberside was recorded as follows:

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METAR EGNJ 161620Z 26008KT 220V290 9999 FEW048 22/08 Q1013
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Analysis and Investigation

CAA ATSI

Whilst the pilot of [the A400M] was in receipt of a Traffic Service from Humberside ATC, no Traffic Information was passed on the paramotor as the aircraft was not detected by the controller during what appears to have been a busy period for them, in addition to also having to contend with what appears to have been the effect of [interference] on their radar screen.

Humberside Unit Investigation

An email was received on 21st August from UKAB regarding an Airprox between [the pilot of the A400M] and an unknown aircraft ([reported as a paraglider but subsequently believed to have been a paramotor]). Until that point, the Unit was unaware of the Airprox as the pilot had not reported it to the Unit either at the time or post the event verbally on the RT, via telephone or by written report. Occurrence reports were subsequently filed by the controller upon notification. As part of the investigation, a review of the FPS, ATCO break sheet and the radar log book was undertaken.

The controller had commenced duty at 1300 that day and was rostered until 2100. They were on day 5 of a 6-day cycle. A handover between controllers occurred between 1604:30 and 1605:50. At the time of the incident the controller had seven aircraft on frequency, the breakdown in services was 1x Deconfliction Service, 3x Traffic Service, 3x Basic Service. The workload was seen as high from the investigator's view due to complexity, with multiple aircraft recovering and LARS transits.

The situational display showed a large number of primary radar returns, particularly in the north-west sector of the display. There was a small, barely distinguishable return 3 miles west of Brigg at the start of the recording, slowly moving east. That return did not produce a defined trail so may have been dismissed as spurious, its movement was only noticeable if it was watched. When the situational display was moved, the return disappeared. There was also a lot of [radar interference] around 1549:50 which obscured some of the picture (Figure 1).

> At 1551, 6min after the start of the recording, the contact had moved approximately 2-3NM, and was over Brigg.

That return tracked around the edge of the ATZ, and was obscured at times by the radar map.

> At 1606, [the A400M] was climbing-out passing 2400ft as it passed the ATZ boundary and the suspect primary-only return was just outside the ATZ boundary.
>
> At 1607, [the pilot of the A400M] reported getting close to a paraglider, and had to take avoiding action.

There was no [paramotorist] on frequency with Humberside ATC at the time. The controller acknowledged [the pilot of the A400M's] report.

Figure 1 – The traffic situation at 1549:50

Figure 2 – The traffic situation at 1606

The [paramotor] was not seen on the situational display, consequently [the pilot of the A400M] could not be advised of the [paramotor]. The controller was working in a high workload environment and did not ask the pilot of the A400M about the details of the [paramotor], such as altitude/colour/direction of flight to pass on to other aircraft. The [paramotor] pilot should have advised ATC of their flight if they were non-radio.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The A400M could be identified from Mode S data (Figure 3). The paramotor was not observed. The diagram was constructed from the radar data and the position of the paramotor has been shown as reported by the pilot of the A400M. The separation at CPA could not be determined.

An analysis of the Humberside Approach RT recording was undertaken. At approximately 1607, the pilot of the A400M reported that they had "*just come fairly close to a paraglider on the climbout*" and that they had taken "*slight avoiding action to the left*". The Humberside controller replied that "*there is nothing showing on radar*" and passed Traffic Information on "*some primary contacts, left, 10 o'clock, range 2 miles, very faint, no height information*".

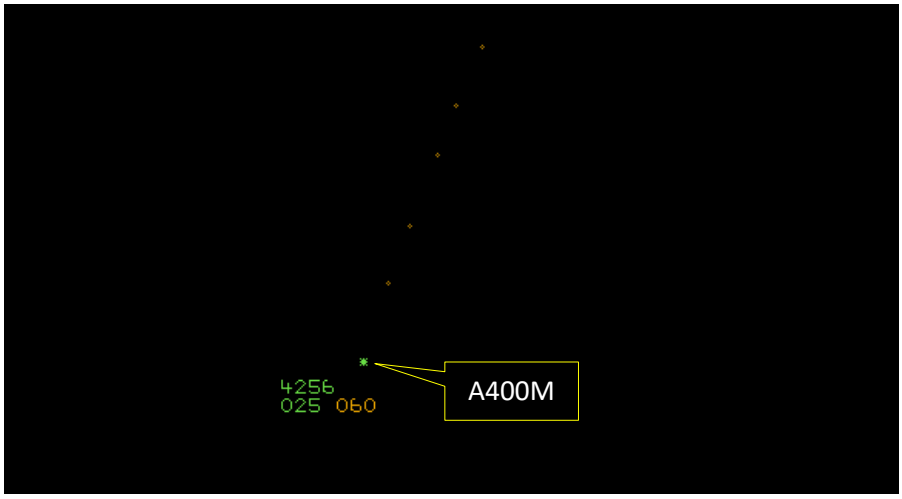

Figure 3 – 1606:46 (assessed as the approximate time of CPA)

The A400M 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] If the incident geometry is considered as converging then the A400M pilot was required to give way to the paramotor pilot.[2]

Comments

HQ Air Command

The A400M crew did well to visually acquire the paramotor and avoid it. Despite being required to give way when converging, the likelihood of the crew spotting such a small aircraft is low. The RAF reaches out to small aircraft operators to make themselves as visible as possible and avoid known areas of air traffic. This is best done through Regional Airspace Users' Working Groups, which the RAF facilitates. In this case, it's possible that the paramotor pilot was not carrying any EC, or radio, so the best line of defence would have been to have stayed away from known air traffic routes, such as the departure lane of Humberside, and not to have relied solely on 'see and avoid' principles.

BHPA

It is unfortunate that the paramotor pilot was unable to be traced and it is highly probable that they were not carrying any kind of EC device which may have alerted the other pilot to their position. The BHPA commends the crew of the A400M for both their keen observation of the paramotor and the swift avoiding action they took. We completely agree that maintaining a good lookout is paramount for all pilots and in all flight environments.

Summary

An Airprox was reported when an A400M and a paramotor flew into proximity in the vicinity of Humberside Airport at approximately 1607Z on Friday 16th August 2024. The A400M pilot was operating under IFR in VMC in receipt of a Traffic Service from Humberside. The paramotor pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

[1] (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.
[2] (UK) SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

Information available consisted of a report from the pilot of the A400M, radar photographs/video recordings, a report from the air traffic controller involved and a report from the appropriate 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 first considered the actions of the pilot of the A400M. Members noted that they had been operating at Humberside airport and that it had been during the climbout from a second practice approach that the Pilot Monitoring had visually acquired a paramotor ahead of them. It was agreed by members that the TCAS fitted to the A400M would not have detected the paramotor and that the pilot of the A400M had not had situational awareness of the presence of the paramotor until it had been visually acquired.

Members considered the avoiding action taken by the pilot of the A400M and the reported separation at the moment of CPA. Although a precise measurement of the separation had not been possible, members were in agreement that it would be reasonable to conclude that the A400M had passed abeam the paramotor pilot at a comfortable distance. Nevertheless, members agreed that the sudden visual acquisition of the paramotor during their climbout had caused the A400M crew some concern. One member commented that, although it had not hampered analysis of the incident in this particular case, it had been important to have included the word 'Airprox' on the radio when the proximity of the paramotor, and description of the avoiding action taken, had been transmitted to the Humberside controller.

Members next turned their attention to the actions of the pilot of the paramotor. Agreeing that it was unfortunate that they could not be traced to have provided their perspective of the event, members suggested that the separation may have been such that the proximity of the A400M may have been noteworthy but may not have been of particular concern. Members next noted that the Airprox had occurred in Class G airspace, outside the Humberside ATZ. Notwithstanding, it was agreed that it would have been particularly prudent for the pilot of the paramotor to have called the Humberside controller and advised them of their intended route, whether that had been by radio during their flight or by telephone before their flight. Accordingly, members agreed that the pilot of the paramotor had not communicated their intentions and had not attended sufficiently to their pre-flight preparation in respect of their route, which had been, essentially, through the climbout lane of RW20 at Humberside.

Turning their attention to the actions of the Humberside controller, members noted that a primary-only radar return had been visible on their situational display. However, members agreed that the return could not have been identified and that it was reasonable that, if noticed, it may have been regarded as spurious, particularly as the return had been sporadic and had had no appreciable groundspeed. Consequently, it was agreed that the Humberside controller had not had situational awareness of the presence of the paramotor.

Concluding their discussion, members agreed that, whilst the sighting of a paramotor had caused the pilot of the A400M concern, the separation between the aircraft had been sufficient that normal safety margins had pertained. Moreover, the avoiding action taken by the pilot of the A400M had further increased the separation. Members were satisfied that there had not been a risk of collision and agreed on the following contributory factors:

CF1: The Humberside controller had not had situational awareness of the presence of the paramotor.

CF2. The pilot of the paramotor had not communicated their intended route.

CF3. The pilot of the paramotor had not sufficiently attended to their pre-flight preparation.

CF4. The pilot of the A400M had not had situational awareness of the presence of the paramotor.

CF5. The TCAS fitted to the A400M would not have been expected to have detected the paramotor.

CF6. The pilot of the A400M had been concerned by the proximity of the paramotor.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024215			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
	Flight Elements			
	• Tactical Planning and Execution			
2	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
3	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
	• Situational Awareness of the Conflicting Aircraft and Action			
4	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			
5	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			
6	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 Assessment[3]

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 **ineffective** because the Humberside controller had not had situational awareness of the presence of the paramotor.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because it may have been prudent for the pilot of the paramotor to have relayed their intended route to the Humberside controller.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the A400M had not had situational awareness of the presence of the paramotor.

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

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TCAS fitted to the A400M would not have been expected to have detected the presence of the paramotor.