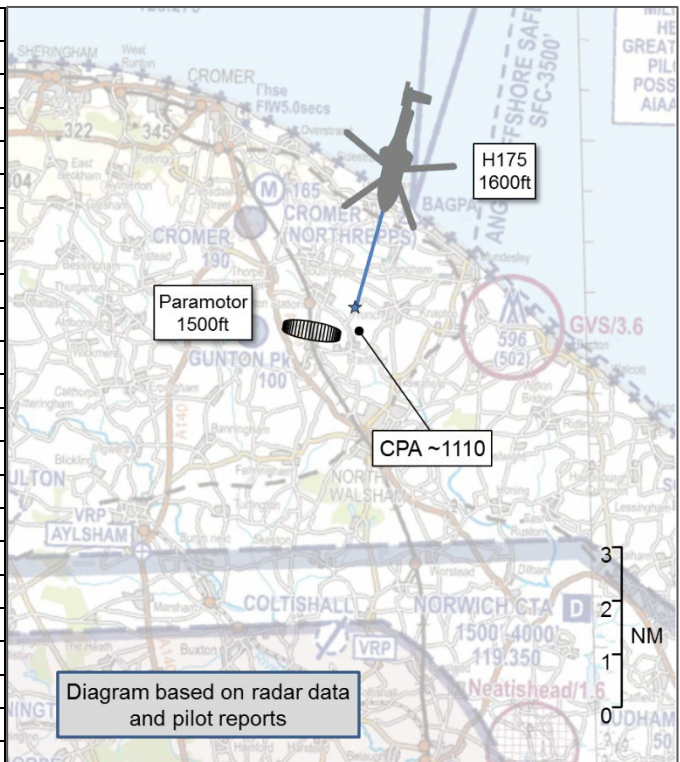


**AIRPROX REPORT No 2019021**

Date: 05 Feb 2019 Time: 1110Z Position: 5251N 00122E Location: 1.5nm SE Cromer Airfield

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	H175	Paramotor
Operator	Civ Comm	Civ Para
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	None
Provider	Norwich	
Altitude/FL	FL013	NK
Transponder	A, C, S	Not fitted
<b>Reported</b>		
Colours	Red, White, Blue	
Lighting	NR	
Conditions	VMC	VMC
Visibility	8km	
Altitude/FL	1600ft	1500ft
Altimeter	NK	NK
Heading	197°	North
Speed	145kt	25 MPH
ACAS/TAS	TCAS II	Not fitted
Alert	None	N/A
<b>Separation</b>		
Reported	0ft V/1nm H	0ft V/1-2000m H
Recorded	NK	



**THE H175 PILOT** reports that whilst inbound to Norwich from an offshore platform he encountered a paraglider directly in front at the same altitude. It was roughly 1-2nm south-east of Cromer airstrip and was at around 1600ft. It had a black chute and looked like it was fitted with an engine on the back. After they spotted it, they made an evasive manoeuvre to the left and notified ATC. A controlled turn was smoothly executed at an estimated 1nm from the paraglider. After landing he contacted ATC who confirmed they had no indication of the paraglider on radar.

He assessed the risk of collision as 'Medium'.

**THE PARAMOTOR PILOT** reports flying his paramotor in a northerly direction towards Cromer Town. He was aware that there was a NOTAM in force with an 8nm radius centred on Weybourne airfield, which took in Northrepps (Cromer) airfield so he remained clear of it. He saw the helicopter east of Cromer coming in over the sea and flying in a southerly direction, reciprocal to his track. There was no way he could turn to his right across the path of the helicopter because his airspeed was only 25mph. Therefore, he thought it prudent to keep flying straight-and-level to give the helicopter the best view of him. At no point did he think they were in any danger of colliding, the helicopter passed down his right-hand side with between 1000-2000ft separation at the same altitude. Because the helicopter pilot had reported an Airprox he assumed that it was because he thought it was too close. He was not aware of any deviation in the helicopters course beforehand, and didn't think the helicopter pilot had seen him until the last moment. He noted that he had been flying paramotors for over 5 years and was well aware of the helicopters that come and go from Norwich. With that in mind, he always scans for traffic.

**THE NORWICH CONTROLLER** reports providing a Traffic Service to the H175 at 1600ft. When 11nm NE of Norwich, the pilot reported turning left to avoid a paramotor 1nm south of him at the same level. The pilot was informed that there was nothing showing on the radar and once clear he continued with the flight as normal.

## Factual Background

The weather at Norwich was recorded as follows:

METAR COR EGSB 051050Z 19004KT 160V220 8000 NSC 05/04 Q1025 NOSIG=

## Analysis and Investigation

### UKAB Secretariat

The H175 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<sup>1</sup>. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right<sup>2</sup>.

## Comments

### BHPA

The BHPA contacted the paramotor pilot who was a fully-qualified and experienced BHPA paramotor pilot. The paramotor pilot saw the helicopter in good time, was aware of its progress and course, and considered that there was little risk of collision. The BHPA agree with the paramotor pilot's decision not to bear right across the helicopter's path - even though this would have been the normal course of action as stated in the Collision Avoidance Rules for two aircraft heading towards each other on reciprocal headings. We concur that due to the paramotor's low airspeed, there would have been a greater risk of collision had the paramotor pilot flown according to the rules – especially as the helicopter pilot did not appear to have seen the paramotorist until the last moment. Although the paramotor pilot thought that "his best course of action was to continue to fly straight and level to give the helicopter pilot the best view of him", the BHPA advises in its training syllabus that the best course of action in trying to gain another aircraft's attention is to conduct a series of mini wingovers so that (a) the paraglider/paramotor is no longer perceived to be a relatively non-moving object and (b) the paraglider/paramotor will show much more of the (usually) brightly coloured top surface of the wing to the other aircraft.

Two other facts were ascertained by the BHPA's investigation into this incident. First, the Chairman of Northrepps Flying Club later queried the NOTAM with Weybourne as the usual radius of their NOTAMs was 6nm, not 8nm. Weybourne confirmed that they had made a typo and the NOTAM should indeed have had a radius of 6nm. Second, Northrepps Flying Club's rules state that all pilots should monitor the Northrepps frequency (129.830) whilst flying. However, most club pilots do not carry an airband radio capable of doing this as (a) most choose to use a Bluetooth communication system on the 2-metre waveband so that they can communicate with other paramotoring members and (b) most paramotor pilots do not have FRTOL licences and/or handheld airband radio licences. The Northrepps Chairman has stated that he is going to try and enforce the carrying of airband radios because helicopters sometimes give Northrepps a call if they're passing close by. This may benefit paramotoring members flying in the area and monitoring the frequency.

## Summary

An Airprox was reported when a H175 and a paramotor flew into proximity near Cromer at 1110hrs on Tuesday 5<sup>th</sup> February 2019. The H175 was operating under IFR in VMC, the Paramotor was VFR in VMC. The H175 pilot was in receipt of a Traffic Service from Norwich and the paramotor pilot was not in receipt of an ATS.

<sup>1</sup> SERA.3205 Proximity..

<sup>2</sup> SERA.3210 Right-of-way (c)(1) Approaching head-on.

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

Information available consisted of reports from both pilots, radar photographs/video recordings and reports from the air traffic controllers involved. 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 looked at the actions of the H175 pilot. He was receiving a Traffic Service from Norwich for his transit but the paramotor could not be seen on radar (likely due to its small radar cross-section and slow speed) and his TCAS could not detect it because it was not transponder equipped. As a result, the H175 pilot had no situational awareness of it (**CF3**) before he visually acquired it at about 1nm (**CF2**). Once he had seen the paramotor he manoeuvred to avoid it, but was still concerned by its presence (**CF4**). Members commended him for his good look-out; paramotors can be difficult to see at range and he had detected it early enough to take timely and effective avoiding action.

Turning to the paramotor pilot, the Board heard from a controller member with Norwich experience that some paramotor pilots call Norwich prior to getting airborne to warn them of their routing; this might be something to consider as a potential mitigating measure if circumstances permit. Noting then the BHPA comments about club rules for radio carriage, members wondered if the paramotor pilot had indeed carried a radio. The BHPA member commented that, notwithstanding the aspiration of the club, many paramotor pilots neither carry a radio nor have a radio licence so it was not necessarily possible for them to comply. Notwithstanding, the Board approved of the Northrepps Chairman's comments and his efforts to encourage pilots to at least carry a radio for their own situational awareness. Ultimately, without a radio or any form of electronic conspicuity, the paramotor pilot had no situational awareness about the helicopter until he saw it (**CF2** and **CF3**). Once seen, the pilot quite appropriately assessed that he could not turn right to avoid, and maintained course whilst observing the H175. In the latter respect, the Board thought that the BHPA advice to conduct 'mini wingovers' (within the bounds of safe flight) was sound in order to make themselves more visible by introducing movement to draw the other pilot's eyes to the paramotor (much as the BGA offers similar advice to glider pilots).

The Board then briefly looked at the role of the Norwich controller. Although he was providing a Traffic Service to the H175 he had no way of knowing the paramotor was there because it did not provide a radar signature (**CF1**) and so there was little more he could do, and could not provide any Traffic Information to the helicopter pilot.

Finally, the Board assessed the risk of the Airprox. The H175 pilot had seen the paramotor with enough time to take avoiding action, which in Class G airspace was standard practice and so the Board agreed that normal safety standards had pertained; risk Category E.

## **PART C: ASSESSMENT OF CAUSE AND RISK**

### Contributory Factors:

C F	Factor	Description	Amplification
	<b>Ground Elements</b>		
	<b>• Situational Awareness and Action</b>		
1	Contextual	• Situational Awareness and Sensory Events	Only generic or no Situational Awareness
	<b>Flight Elements</b>		
	<b>• Situational Awareness of the Conflicting Aircraft and Action</b>		
2	Contextual	• Situational Awareness and Sensory Events	Pilot had no, or only generic, Situational Awareness
	<b>• Electronic Warning System Operation and Compliance</b>		

3	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
• See and Avoid			
4	Human Factors	• Perception of Visual Information	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: E.

Safety Barrier Assessment<sup>3</sup>

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

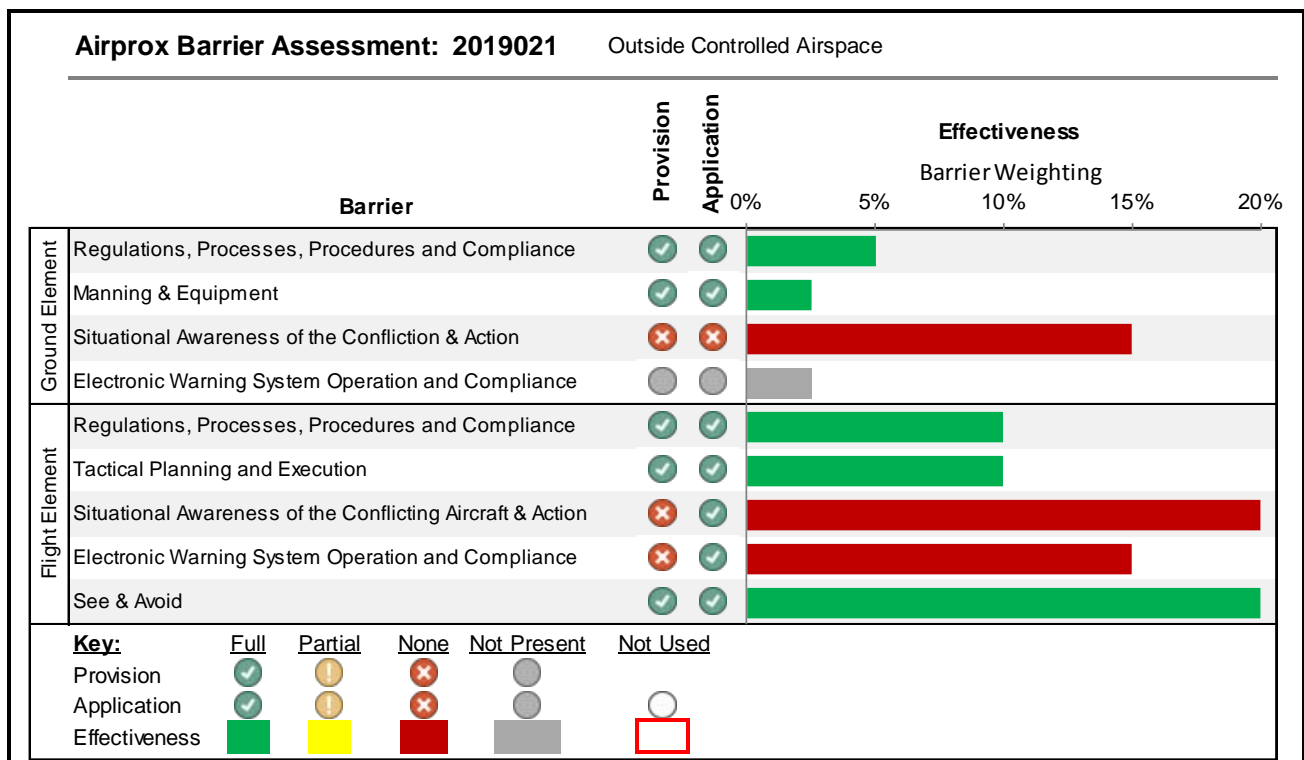
**Ground Elements:**

**Situational Awareness and Action** were assessed as **ineffective** because the Norwich controller had no way of detecting the paramotor and therefore could not provide situational awareness to the H175 pilot.

**Flight Elements:**

**Situational Awareness and Action** were assessed as **ineffective** because neither pilot had situational awareness on the other.

**Warning System Operation and Compliance** were assessed as **ineffective** because the TCAS on the H175 could not detect the paramotor.



<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).