AIRPROX REPORT No 2022216

Date: 17 Sep 2022 Time: 1237Z Position: 5048N 00213W Location: Winterborne Whitechurch

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Paraglider	Mooney M20
Operator	Civ Hang	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	IFR
Service	None	Traffic
Provider		Bournemouth
Altitude/FL	~3100ft	3000ft
Transponder	Not fitted	A, C, S
Reported		
Colours	Multicoloured	White, Grey
Lighting	None	Landing, Taxy, Anti-cols, Strobes, Beacon
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2600ft	3000ft
Altimeter	QNH	QNH
Heading	140°	090°
Speed	15kt	140kt
ACAS/TAS	FLARM	PilotAware
Alert	None	None
Separation at CPA		
Reported	0ft V/50m H	0ft V/2NM H
Recorded	~100ft V/<0.1NM H	

THE PARAGLIDER PILOT reports that they had completed a climb and were on glide heading towards Swanage. They were trying to establish the best route approaching Wareham with airspace and danger area considerations. They first heard the aircraft, then turned to look over their right shoulder and first saw it as it passed behind 50 or 60m away at the same altitude. They then looked over their left shoulder and noticed it was not a Cessna but something more substantial with more or bigger windows (they recalled it had 3 or 4 windows). The incident was over in a matter of seconds and their immediate concern was wake turbulence, so close was the encounter. There was no wake to deal with, happily. The aircraft was travelling from west to east and they believed it was heading for Bournemouth airport. Shortly afterwards they noted the time, altitude and rough position. They noted that they could only record this information once landed but believed it to be accurate.

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

THE M20 PILOT reports that they were flying the M20 for its annual maintenance, initially a VFR flight, and had taken-off and climbed straight to 3000ft, heading south. Minutes after take-off, they contacted Bournemouth Radar to request a vectored ILS approach for RW26. ATC provided a squawk and asked the pilot to maintain 3000ft. They turned them initially south [they recalled] and then gave vectors to turn eastbound. On turning eastbound the pilot became visual with the paraglider. They reported to ATC that they were on a possible collision heading and were asked to turn right or left to avoid, so they turned left towards northeast. ATC came back saying that they could not see anything on the radar. After that incident, they were vectored for the ILS approach and landed. They noted that although they were aware of the microlight sites in the area, they wouldn't have expected to see a paraglider at 3000ft.

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

THE BOURNEMOUTH CONTROLLER reports that they were operating as the Bournemouth APS controller. The aircraft was on a Basic Service out to the NW of Bournemouth. The pilot reported seeing a paraglider, in response they informed the pilot that Eyres field gliding site (15NM W of Bournemouth) was NOTAM'd as active but that they could not see any radar returns near the aircraft's position. The pilot did not inform them that they would be filing an Airprox.

Factual Background

The weather at Bournemouth was recorded as follows:

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METAR EGHH 171220Z 34007KT 270V040 9999 SCT045 16/05 Q102
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Analysis and Investigation

Bournemouth Occurrence Investigation

The recordings available commence at 1236 at which time [M20 C/S] could be seen 15NM west of Bournemouth outside controlled airspace. At this time, the controller commenced vectoring [M20 C/S] for an approach to RW26. At 1237 the pilot reported that "*there's a paraglider just in front of me*". The screenshot below (Figure 1) shows the position of the aircraft at the time. The controller told the pilot that nothing was showing on the radar and that they could turn left or right off the vector heading to avoid. The pilot responded that they had "just avoided". There is no evidence on the radar replay of deviation from the assigned heading of 090° or altitude of 3000ft. The response from the pilot was not entirely clear but the investigator believes the pilot said the paraglider was now behind them.

Figure 1

The radar display did not depict any contacts ahead of the aircraft and would not be expected to produce a radar return for a paraglider. There were a number of PSR[1] contacts around Eyres Field gliding, which was active at the time, but none which would be considered as relevant Traffic Information. The site is not used by paragliders to the best of the investigator's knowledge. The controller would have had no way of knowing that there was paragliding activity in this location which is situated in Class G airspace.

The pilot did not notify the controller that they considered the encounter to have been an Airprox nor of their attention to file such a report. Weather conditions reported at the airfield at the time were good with visibility of 35km and cloud scattered at 4500ft.

[1] Primary Surveillance Radar.

CAA ATSI

The paraglider had launched from [a hill] to the west-northwest of Blandford Forum and was en-route to [destination] via Wareham VFR. The pilot was not in communication with an Air Traffic Service provider. The M20 had got airborne from [departure airfield] and was flying IFR, inbound to Bournemouth.

At 1234:30 the M20 pilot called Bournemouth Radar advising they were inbound. The Bournemouth Radar controller advised the pilot that they had their details, allocated a squawk, passed the Bournemouth QNH and a Basic Service was agreed. The pilot replied that they were requesting an ILS [approach] and so the controller then changed the squawk.

At 1235:40 the Bournemouth controller advised the M20 pilot that they were identified, that it was a Traffic Service and requested their level on the Bournemouth QNH (reported as 3000ft), Figure 2.

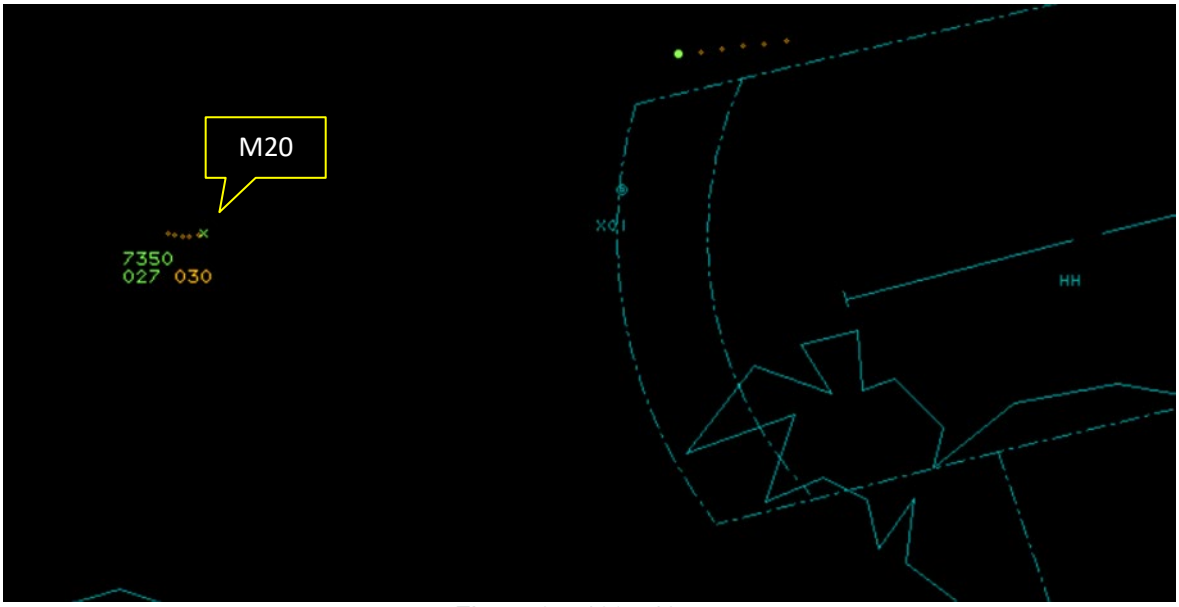


Figure 2 – 1235:40

At 1236:05 the Bournemouth controller advised the pilot of the M20 that they would provide vectors for an ILS approach to RW26 at Bournemouth and instructed them to maintain their 3000ft altitude and fly a radar heading of 090° which was readback by the pilot.

At 1237:22 the M20 pilot reported *"there's a paraglider just in front of me"* (Figures 4 & 5).

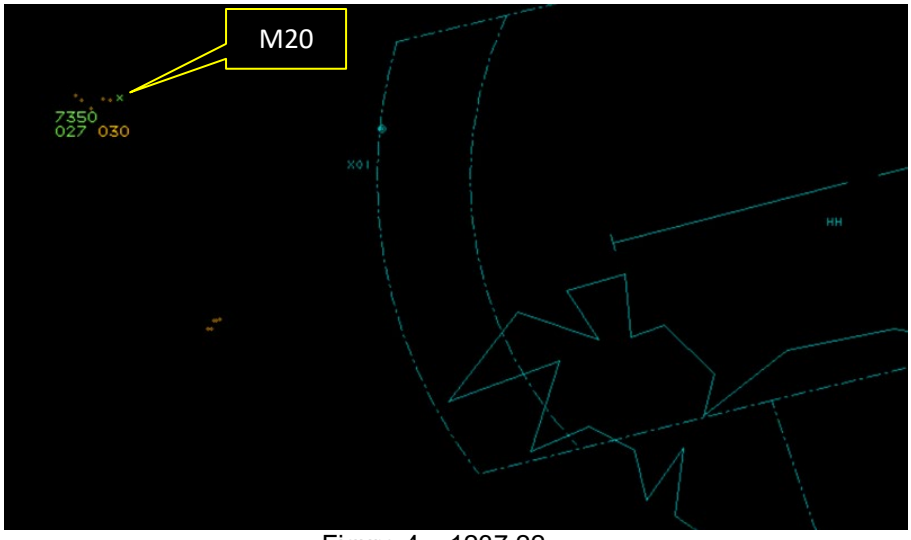


Figure 4 – 1237:22

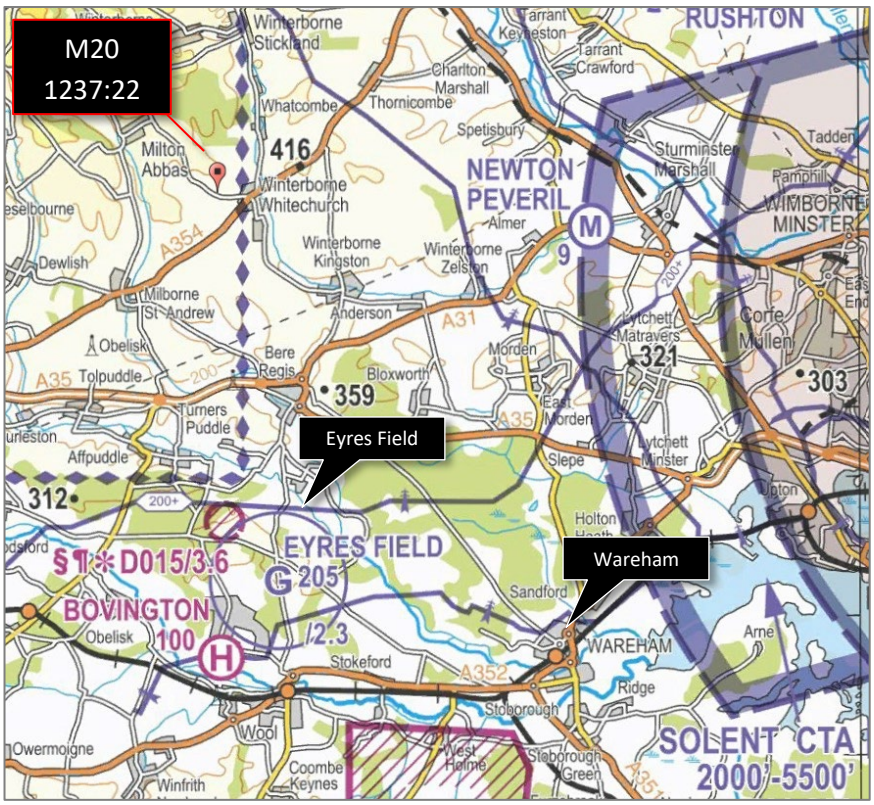


Figure 5 - 1237:22 locations

The Bournemouth controller replied: "*Roger. You are nearby Eyres Field gliding site. You can turn left or right to avoid as you wish*", to which the pilot responded: "*just avoiding*". The controller then confirmed "*there's nothing observed on radar*", to which the pilot replied "*just passing, er, just about a mile behind*".

ATSI reviewed reports from both pilots and the Bournemouth controller. Full reporting by Bournemouth ATC was only completed after a request was made to the unit by ATSI. The area radar replay was used to provide snapshots and cross-referenced with the Bournemouth Radar RTF which was provided by the unit. These snapshots are not representative of the radar picture available to the controller at the time. Bournemouth ATC subsequently provided a snapshot taken from their own radar.

The controller stated that there were no other contacts observed in the vicinity of the M20 and this was later confirmed by the ATC Manager by email and finally a snapshot included in the unit report (See Figure 1). ATSI did observe another contact on the area radar replay, primary-only, which appeared to have tracked out from the Eyres Field site, also visible in Figure 1 above (together with another primary-only contact not seen on area radar replay). However, this contact did not come into proximity with the M20, the M20 never being any closer than 6NM from Eyres Field.

CAP 774 the UK Flight Information Services states:

> *A Traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however, the controller is not required to achieve deconfliction minima, and the pilot remains responsible for collision avoidance.*

On this occasion the controller was not aware of the presence of the paraglider.

The paraglider pilot reported having completed a climb, (having launched from a site located approximately 4.5NM north-northwest of the position of the Airprox), and was in transit to [destination] via Wareham, a track which would take it to the west of Bournemouth controlled airspace. The pilot was not in communication with an ATC unit and did not indicate whether or not they had that capability. They did however report that they had [an EC device commonly used by gliders]. They reported hearing the M20 first and spotted it over their right shoulder first for 2sec, and then their left for 3sec.

The pilot of the M20 reported becoming visual with the paraglider after having turned onto the easterly heading issued by the Bournemouth controller. They also reported being given a southerly heading first by the controller which was not the case. They reported the paraglider to the controller and stated that the controller "*asked me to turn right or left to avoid*". The pilot reported making a left turn towards the northeast. They reported being "*aware of the microlight sites in the area*", but that they were at 3000ft because "*I wouldn't expect to see a paraglider that high*".

A call by the paraglider pilot, if they had been radio-equipped, to notify Bournemouth ATC of their presence might have been useful. Particularly as they had apparently climbed to 3000ft and had stated in their report that it was their intention to route to [destination] via Wareham, a track which would pass within approximately 2NM of the edge of the Bournemouth CTA.

The M20 flew into proximity with the paraglider whilst receiving vectors from Bournemouth Radar for an instrument approach. The Bournemouth Radar controller was not aware of the presence of the paraglider as it was not detected by the surveillance radar, and the paraglider pilot did not communicate their presence to the controller.

Bournemouth is reminded of its obligations under Regulation (EU) 2017/373 of 1 March 2017 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018 ATM/ANS.OR.A.065 paragraphs (a) through (e), with regards to the initial submission of a mandatory occurrence report and any follow up reports within the specified timescales as defined within Regulations (EU) 996/2010 and 376/2014.

UKAB Secretariat

The paraglider and M20 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[2] If the incident geometry is considered as converging then the M20 pilot was required to give way to the paraglider.[3]

[2] (UK) SERA.3205 Proximity.
[3] (UK) SERA.3210 Right-of-way (c)(2) Converging.

Comments

BHPA

The BHPA believes that the Mooney pilot probably didn't see the paraglider pilot until very late but is relieved that this Airprox was fortunately far enough away not to result in a collision or a collapse of the paraglider due to wake turbulence. We share the apprehension of the paraglider pilot on seeing a large aircraft in close proximity but being incapable of carrying out any evasive manoeuvres. As the paraglider pilot was on a long cross-country flight, a CANP would not have been submitted and, once again, the non-interoperability of EC [equipment] is evident in this Airprox. Of the 10% of BHPA members flying with EC, practically all of them will only have an [EC equipment commonly used by glider pilots] device.

The BHPA is surprised that an experienced GA pilot didn't expect to find a paraglider at 3000ft. On a typical good thermic day, paragliders can be found flying up to and including cloudbase altitudes and the current UK height record for a paraglider is 9078ft. There is also mention that it "may have been useful if the paraglider pilot was radio equipped." Less than 5% of paraglider pilots have a FRTOL - and those that do usually have one because they also fly GA. Furthermore, operating a VHF handheld airband radio whilst already using both hands to control a paraglider in turbulence is very impractical, notwithstanding the wind-noise factor which would affect both transmission and reception of messages. It's not quite as simple as pushing a PTT in conjunction with a noise-cancelling headset in a GA aircraft. The BHPA feels that the lesson to be learnt here is that all pilots must keep a very good lookout in uncontrolled airspace.

Summary

An Airprox was reported when a paraglider and a Mooney M20 flew into proximity in the vicinity of Winterborne Whitechurch at 1237Z on Saturday 17th September 2022. Both pilots were operating under VFR in VMC, the M20 pilot in receipt of a Traffic Service from Bournemouth and the paraglider pilot not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS data, a report from the air traffic controller involved 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 looked at the actions of the paraglider pilot. They had been conducting a cross-country flight at an altitude of around 3000ft. Members wondered whether the paraglider glider pilot could have made themselves more conspicuous to other pilots and ATC, given that paragliders were notoriously difficult to see. The pilot could not have submitted a CANP because they had been flying alone, and a CANP can only be published for 5 or more paragliders. The BGA member informed the Board that it was completely impractical for paraglider pilots to carry a radio, although some members wondered whether the pilot could have called Bournemouth on the telephone prior to the flight, but again were told that the pilot would have been able to provide few firm details and so a call would have been of limited use. That being said, the Board was aware from previous Airprox involving paragliders that, when provided with it, Bournemouth ATC often put such information on their ATIS to provide a warning to inbound pilots. The EC equipment carried by the paraglider pilot could not detect the M20 (**CF4**) and so there had been no prior situational awareness of the M20's presence available to the pilot (**CF3**). Some members opined that, whilst it was commendable that the pilot had carried some form of EC equipment, the one chosen was, in the main, only used by gliders and that a device with a wider audience might be one that used ADS-B. Without a warning from their EC device, the final barrier to mitigate against MAC for the paraglider pilot had been see-and-avoid. However, the paraglider pilot had not seen the M20 until it had passed behind them, too late to take any avoiding action, making this effectively a non-sighting (**CF7**).

Turning to the M20 pilot, they had called Bournemouth ATC and had been in receipt of a Traffic Service. Unfortunately, ATC could not have detected the paraglider on their radar (**CF1**) and so could not have provided any Traffic Information (**CF2**). The EC equipment on the M20 had not been compatible with that carried by the paraglider pilot (**CF4**), which resulted in the M20 pilot having no prior situational awareness that the paraglider had been in the vicinity (**CF3**). However, the M20 pilot had seen the paraglider and told ATC that it was ahead of them. By comparing when the pilot called ATC together with the radar and GPS data, the Board assessed that the M20 pilot had seen the paraglider early enough to take avoiding action that would have resulted in a greater separation than that which was eventually the case (**CF5**). Under the rules for provision of a Traffic Service, a pilot can change heading without first telling ATC if safety is likely to be compromised.[4] Members thought that, in first telling ATC about the paraglider and then waiting for their response, the M20 pilot had allowed the situation to develop into a much closer encounter (**CF6**).

When assessing the risk of the Airprox, the Board considered the reports from both pilots and ATC, together with the radar and GPS data. They discussed whether the avoiding action taken by the M20 pilot had resulted in removing the risk of collision entirely, or not. Some members thought that the nature of the paraglider flight meant that it would always have been difficult to see and that the M20 pilot had taken appropriate action to increase the separation. However, others thought that the delay in taking action had brought the two aircraft closer together and that the separation had been such that there had been a risk of collision. The discussion continued so eventually the Chair called a vote and, by a margin of just 1 vote, the Board decided safety had been much reduced and that there had been a risk of collision (**CF8**); Risk Category B.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022216			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Human Factors	• Conflict Detection - Not Detected	An event involving Air Navigation Services conflict not being detected.	
2	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			
	• Situational Awareness of the Conflicting Aircraft and Action			
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
	• Electronic Warning System Operation and Compliance			
4	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			
5	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	
6	Contextual	• Loss of Separation	An event involving a loss of separation between aircraft	Pilot flew into conflict
7	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
	• Outcome Events			
8	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

[4] CAP774 Chapter 3 Traffic Service

Degree of Risk: B.

Safety Barrier Assessment[5]

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

Ground Elements:

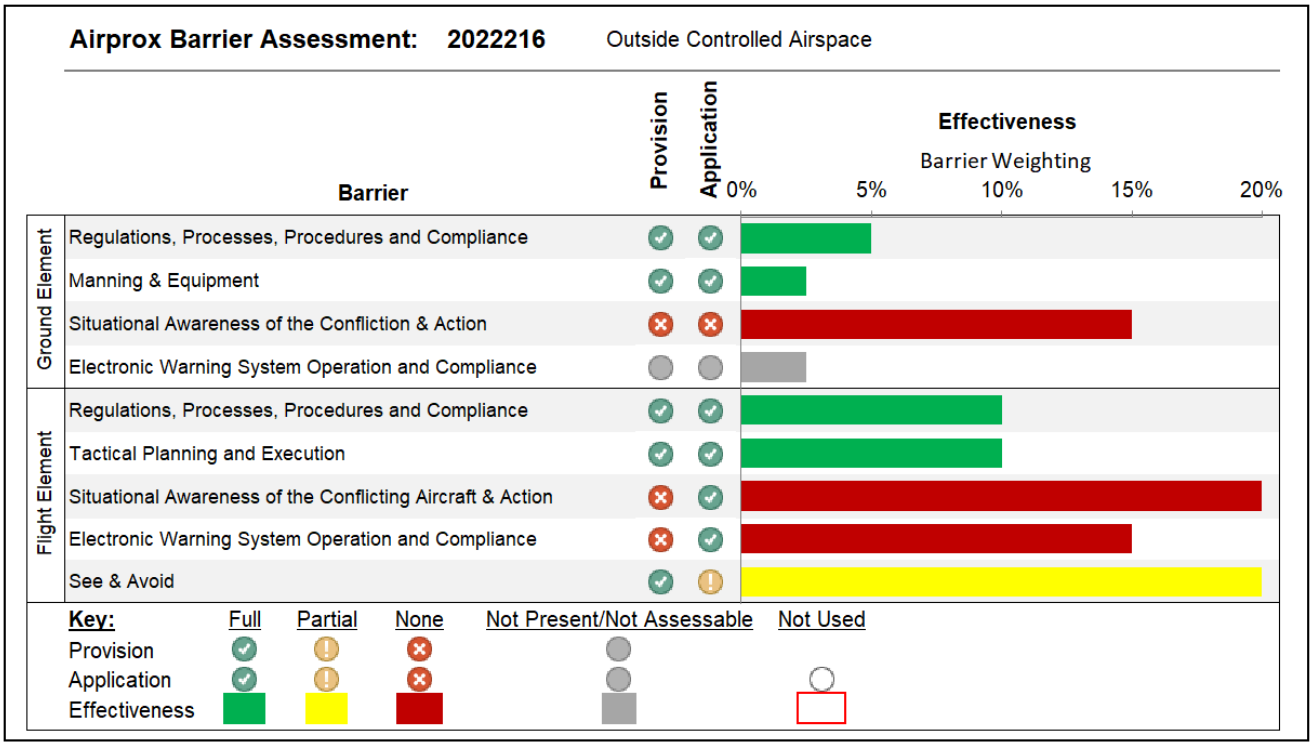
Situational Awareness of the Confliction and Action were assessed as **ineffective** because the Bournemouth radar could not detect the paraglider.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any prior situational awareness about the presence of the other.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because neither aircraft had EC equipment that could detect the other.

See and Avoid were assessed as **partially effective** because, had the M20 pilot had turned to avoid the paraglider before reporting it to ATC, there may have been a greater margin of separation.



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