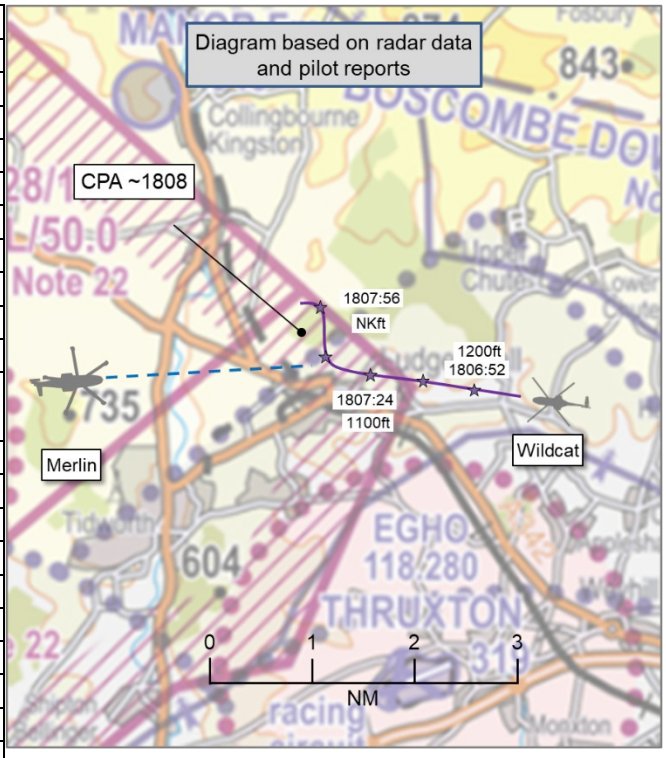
AIRPROX REPORT No 2024278

Date: 14 Nov 2024 Time: ~1808Z Position: 5115N 00136W Location: Ludgershall

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Merlin	Wildcat
Operator	HQ JAC	HQ JAC
Airspace	EGD126	EGD126
Class	Danger Area	Danger Area
Rules	VFR	VFR
Service	Basic	Basic
Provider	Salisbury Info	Salisbury Info
Altitude/FL	NK	NK
Transponder	None[1]	A, C, S
Reported		
Lighting	Strobes Upper Red	NR
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	100ft AGL	~500ft AGL
Heading	West	Holding
Speed	100kt	NR
ACAS/TAS	TAS	NR
Alert	Alert	NR
Separation at CPA		
Reported	0ft V/200m H	NR
Recorded	NK	



THE MERLIN PILOT reports that, while operating in the Salisbury Plain Training Area (SPTA), they had maintained communication with Salisbury Radio on UHF. As they were departing eastbound via Ludgershall circa 1830 (they recall), a Wildcat contacted Salisbury Radio on VHF. Due to the frequency difference, the Merlin pilot could only monitor one side of the exchange. Despite Salisbury Radio being aware of their routeing, which would conflict with the Wildcat's, Salisbury Radio had then informed the Wildcat that no traffic was reported. Additionally, Salisbury Radio had then instructed the Merlin pilot to switch to the UHF frequency that they had already been using. The Merlin pilot was aware of the Wildcat's routeing due to CADS and maintained visual contact throughout, observing it pass safely down their left-hand side without incident. The SPTA Range Standing Orders "Management of Salisbury Plain Airspace" has potential for confusion as the out-of-hours procedure is in a different section to Communications shown below it here:

Section 4 Operating procedures 4.4200 Out of Hours Procedures. Planned air activity within SPTA airspace between 1700-0730 Monday – Friday.

c. RT Calls. Blind RT calls are to be made on the SPTA Air Ops VHF frequency (122.750 MHz),

Section 7 Communications 4.7002 Radio Frequencies

a. UHF (Primary) 277.80 MHz C/S 'Salisbury Radio'

b. VHF (Secondary) 122.750 MHz C/S 'Salisbury Radio'

Operating on different frequencies led to limited situational awareness and a misunderstanding of aircraft's routeing as both aircraft pilots were told there was "no traffic to affect" and procedure confusion

[1] Mode A/C/S reported as carried but no returns recorded.

generated by the "Out of Hours" section saying to transmit blind on VHF, but Salisbury Radio remaining open on UHF until 2000.

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

THE WILDCAT PILOT reports that the crew were conducting night SCT for pre-CofC aircrew. The crew were transiting to SPTA from Basingstoke. Their booked entry point was Ludgershall, with a route via crossing Charlie, outbound to Yarnbury for further recovery to [destination]. The crew were progressing along their planned route to enter SPTA at Ludgershall. As they approached the VRP they noticed a light in the vicinity of the Lindens CA. Noting that this may be conflicting traffic, and awaiting communication with SPTA Info, they entered a hold northeast of Ludgershall. The NHP gained two way communication with SPTA Info and declared the crew's intention to enter SPTA at Ludgershall. Salisbury Info subsequently informed the crew that there was no traffic to affect their entry and further transit, and approved their entry into the Plain. During this time, the crew also noticed the light source move from the Lindens in the direction of Ludgershall in a climbing profile. It was agreed that this was potentially conflicting traffic, progressing to Ludgershall VRP. No call was heard from this aircraft on SPTA UHF, nor was its track or intention passed by SPTA Info. On receipt of clearance to enter SPTA, the crew orientated the aircraft on the intended track. Again, noticing the potently conflicting traffic, which was now climbing to the same height as the crew, the AC Commander elected to continue the hold and wait for the traffic to pass. Once apparent that this traffic was maintaining its level and progressing to Ludgershall, the AC Commander elected to continue a right turn and descend away from the VRP and the potential traffic conflict. The crew informed SPTA Info that there was, in fact, conflicting traffic at Ludgershall, and asked what frequency the aircraft was last operating on. SPTA Info suggested that the aircraft may be on the VHF frequency. The AC Commander contacted the traffic on the VHF frequency to inform them of their position and ascertain if any further deconfliction was required, given that no SPTA Info advisory information or R/T from the conflicting aircraft was heard prior to the conflict. No further deconfliction was required. The crew progressed back to [destination].

[…]. Salisbury Info services were not as comprehensive as the former service provided by Salisbury Ops. The VRPs for SPTA are natural choke points. Whilst CADS is a good advisory service to build crew SA, in this case that a Merlin might be in the Lindens, it is not a real time, accessible program, nor is it a replacement for the use of radio frequencies to inform other aircraft of intentions. Use of 2 differing frequencies whilst on SPTA can degrade SA. An emphasis on the use of SPTA UHF for entry and exit of the Plain can mitigate this, coupled with blind entry/exit transmissions if required.

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

THE SPTA FISO reports that, at approximately 1800, they had been sitting on the radio desk to all aircraft operating at Salisbury Plain Training Area (SPTA). A Merlin aircraft (callsign […]) completed their manoeuvres at […] and flew low-level routes east before reporting to the FISO that they were at crossing Charlie. The FISO informed the pilot to then report changing frequency enroute at Ludgershall. A few minutes later a Wildcat (callsign […]) had then established radio communications with the FISO but had been on VHF not UHF as they were supposed to be as [the SPTA] was not 'out of hours'. The FISO spoke to the Wildcat pilot and informed them to report when they had established at their area of operation[…]. The FISO also informed the Wildcat pilot that there was no reported traffic, which had been incorrect as the Merlin had been heading in the opposing direction. At this time the Wildcat and the Merlin [pilots] could not speak to each other as they were on different frequencies but the FISO could by transmitting separately to both aircraft. The Merlin pilot had then spoken on the radio that they were changing frequency at the same time that the Wildcat pilot spoke to inform the FISO that they were entering the SPTA at Ludgershall. This had resulted in both aircraft stepping on top of each other and the FISO reports that they lost further awareness of what had been occurring. In an attempt to correct the lack of communication between the aircraft, the FISO had asked the Merlin pilot to change frequency to UHF. The Merlin pilot was already on UHF and it was in fact the Wildcat pilot who had needed to change frequency. The FISO opines that the Wildcat pilot had been able to correct the frequency themselves without being told by them and establish two-way comms with the Merlin pilot. The Wildcat held just outside the Plains as they had seen the Merlin and had allowed it to pass before entering and continuing on with their planned route sortie […].

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

THE SPTA SUPERVISOR reports that at approximately 1800, a Merlin [C/S …] pilot reported to 'Salisbury Information' on Salisbury Air Ops primary UHF Frequency that they were complete at […] and intended to fly low-level to the east via crossing Charlie to exit at Ludgershall as per their booking. Salisbury Information acknowledged that routeing and requested the Merlin pilot to report crossing Charlie, which they did. 'Salisbury Information' had then requested the Merlin pilot to report when changing enroute. At approximately 1810, the Wildcat C/S […] had, on Salisbury Air Ops Secondary frequency [VHF], requested to enter the SPTA at Ludgershall, as per their booking to route to […] HLS. 'Salisbury Information' reported to the Wildcat pilot that there had been no reported traffic [to affect] which had been incorrect as the Merlin had been routeing from crossing Charlie to exit the SPTA at Ludgershall. The Merlin pilot switched to Salisbury Air Ops Secondary VHF frequency and communicated with the Wildcat pilot and both aircraft passed each other safely.

Investigation

The investigator had reviewed the audio replay of the event and had taken a statement from the SPTA supervisor on duty at time of the event. They had also taken a statement from SPTA ASOS on duty at the time of the event and had communicated over the radio with the aircraft pilots involved in the event.

Findings

Outcome - ATC/ABM/ALI -> Oversight/Procedure Error -> Checklists/Procedures -> Not Followed. 'Salisbury Information', SPTA ASOS lost Situational Awareness of the aircraft and passed incorrect Traffic Information.

Cause 1 - Human Factors Performance -> Perception - Situational Awareness -> Hazard Assessment

'Salisbury Information', SPTA ASOS lost Situational Awareness of aircraft and passed incorrect Traffic Information.

Recommendations (Mitigations)

An assurance bulletin will be published internally to mitigate against this type of event happening again and all SPTA ASOS verbally briefed.

Causal Factor 1.1 Organisation Factors -> Policy/Doctrine -> Policy

Both pilots involved in the event were operating on different frequencies as one had been on the wrong frequency.

Causal Factor

SPTA Range Safety Orders Pt4 Management of Salisbury Plain Airspace amended to reflect updated SPTA Air Ops opening times.

Factual Background

The weather at Boscombe Down was recorded as follows:

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METAR EGDM 141750Z AUTO 04006KT 9999 OVC027/// 09/05 Q1031=
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Analysis and Investigation

UKAB Secretariat

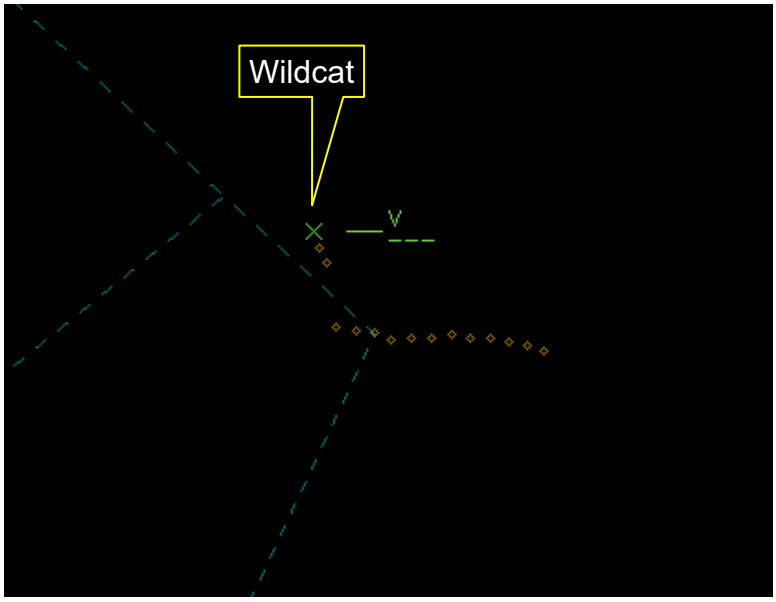


Figure 1: At reported CPA position 1808:00.

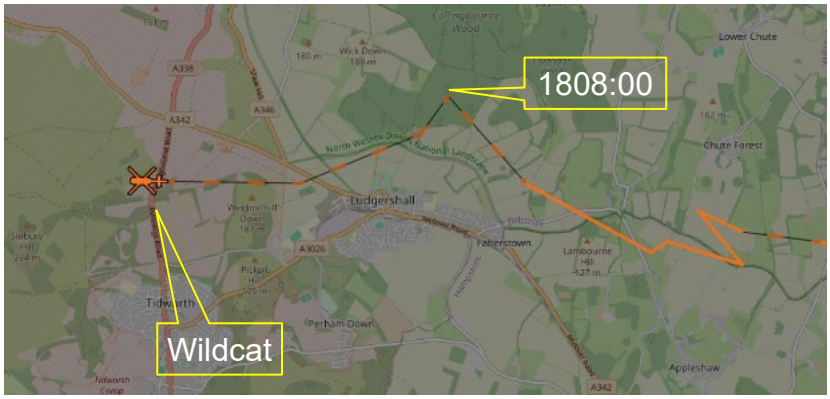


Figure 2: MLAT-capable tracking tool showing the Wildcat at 1809:30

EG D126 BULFORD 511621N 0013746W - 511525N 0013606W - 511247N 0013759W - 511233N 0013942W - 511044N 0014308W - 511059N 0014641W - 511351N 0014759W thence clockwise by the arc of a circle radius 5 NM centred on 510912N 0014504W to 511354N 0014225W - 511621N 0013746W	Upper limit: FL90 Lower limit: SFC	AMC Manageable. Vertical Limit 1400 FT ALT H24. Vertical Limit OCNL notified up to FL 90 by NOTAM. Activity: Ordnance, Munitions and Explosives / Para Dropping / Unmanned Aircraft System (VLOS/BVLOS). Service: DACS: Boscombe Down ATC on 126.700 MHz when open; at other times DAAIS via London Information on 124.750 MHz. Contact: Pre-flight information / Booking: Salisbury Operations, Tel: 01980-674710 or 01980-674730 or Boscombe Down ATC, Tel: 01980-663246. Remarks: SI 1970/1282, SI 1981/1882. Danger Area Authority: DIO. Hours: See above.

Figure 3: UK AIP entry for EGD126

Up to the calculated CPA, the Wildcat could be tracked (intermittently) and is shown in Figure 1 having turned north from Ludgershall. The transponder at that point was recorded as Mode A only. The Wildcat ceased to display from the following radar sweep. The Merlin did not show on radar. Figure 2 is an extract from an MLAT-capable tracking tool and shows the (intermittent) flight path of the Wildcat up to and beyond CPA. The Merlin did not appear on this system until approximately 7min beyond CPA. Figure 3 is an extract from the UK eAIP showing detail regarding operations within D126.

The Merlin and Wildcat 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 head-on or nearly so then both pilots were required to turn to the right.[3]

Comments

Military ATM

This occurrence highlights areas for improvement in the SPTA aviation safety and operational communication space. While the airborne crews performed as expected within the VFR environment of Salisbury Plain airspace, the information provided to them did, on this occasion, not meet standard expectations. Communication challenges, exacerbated by equipment configuration and internal changes related to extended operational hours, likely played a significant role in the event. It's important to recognise that the FISO (Flight Information Service Officer) handling of Salisbury Plain is still within its first year of operation, which means that their competence and confidence levels are still developing. Moving forward, focusing on enhancing communication protocols and equipment along with providing additional support to new FISO-trained personnel will be essential for the continuous improvement of safety and operational effectiveness of this airspace.

JAC

Both aircraft had been operating on different frequencies and the loss of situational awareness from the SPTA FISO led to incorrect or no information being passed. Basic information was known from CADS and both pilots were visual throughout with appropriate action taken to deconflict. The aircrew were using different published information and therefore operated on different frequencies which was a contributory factor to the occurrence. SPTA has updated the Range Safety Orders and JAC welcomes SPTA Air Ops MAA accreditation to provide a Basic Service to SPTA users.

Summary

An Airprox was reported when a Merlin and a Wildcat flew into proximity at Ludgershall at approximately 1808Z on Thursday 14th November 2024. Both pilots had been operating under VFR in VMC and in receipt of a Flight Information Service from Salisbury Ops.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the FISO 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 firstly considered the actions of the Merlin pilot, noting that they had been operating within the SPTA and in communication with the SPTA FISO on the UHF frequency specified within the Range Standing Orders. They had, on approaching their departure point from the area, heard and monitored one-side of a radio exchange between the FISO and a second aircraft (the Wildcat) which had been positioning to enter the area via the same access point. They noted that the FISO had informed the other pilot that there had been no traffic to conflict but the Merlin pilot had fortunately been aware of the planned route of the Wildcat in advance through the CADS system and had utilised that, together with their TAS equipment alert (**CF7**), to establish generic situational awareness (**CF6**) and then gain visual contact with the Wildcat as it had held to the north of the access point.

Members moved on to consider the actions of the Wildcat pilot, noting that they had approached the SPTA from the east and, coincidentally, had planned to join through the same access point as that chosen for departure by the Merlin crew. The Wildcat pilot had established communications with the SPTA FISO on the VHF frequency specified for out of hours operations in the area (as the specified

[2] (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.
[3] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on. MAA RA 2307 paragraph 13.

opening hours had shown the area to be closed approximately 1 hour earlier). This alternative frequency interpretation (**CF5**) of the rule-set, together with the call from the FISO stating that there had been 'no traffic to affect', had led to a lack of situational awareness (**CF6**) for the Wildcat pilot of the presence of the Merlin. Fortunately, the Wildcat pilot had gained visual acquisition of the Merlin aircraft lighting as both aircraft had approached the access point and the Wildcat pilot had held their position and altitude to assure deconfliction as they had passed.

Both pilots had become concerned by the proximity of the other (**CF8**). Board members praised both pilots for their airmanship and decision-making in this case.

In reviewing the contribution made by the Salisbury FISO, the Board noted that the Range Orders had been ambiguous (**CF1**) regarding 'hours of operation' and frequency use and felt that this, in part, explained the difficulty faced by the FISO as they had communicated with the 2 pilots on separate frequencies. Members were heartened to be informed that this anomaly in the documentation has subsequently been resolved. It was clear to the Board members that the FISO had not detected the potential conflict (**CF4**) and had made an incorrect call (**CF2**, **CF3**) to the Wildcat pilot in stating that there had been 'nothing to affect' their entry into the SPTA and they had been fortunate that both pilots had gained awareness of the other through partial radio calls and visual acquisition.

Concluding their discussion, members noted that the Merlin and Wildcat pilots had become aware of the other's presence through a combination of TAS alert, CADS and partial radio calls which had allowed them to gain visual acquisition of the other and avoid any potential for a collision. The ambiguity in the rule-set had allowed 2 operators to be present in the same airspace whilst monitoring separate frequencies and an incorrect radio call had been mitigated by good airmanship. Members felt that, although safety had been degraded, there had been no risk of collision and assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024278			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Organisational	• Aeronautical Information Services	An event involving the provision of Aeronautical Information	The Ground entity's regulations or procedures were inadequate
2	Human Factors	• ATM Regulatory Deviation	An event involving a deviation from an Air Traffic Management Regulation.	Regulations and/or procedures not fully complied with
	• Situational Awareness and Action			
3	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
4	Human Factors	• Conflict Detection - Not Detected	An event involving Air Navigation Services conflict not being detected.	
	Flight Elements			
	• Tactical Planning and Execution			
5	Organisational	• Flight Planning Information Sources	An event involving incorrect flight planning sources during the preparation for a flight.	
	• Situational Awareness of the Conflicting Aircraft and Action			
6	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			
7	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
	• See and Avoid			

8	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: C.

Safety Barrier Assessment[4]

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

Ground Elements:

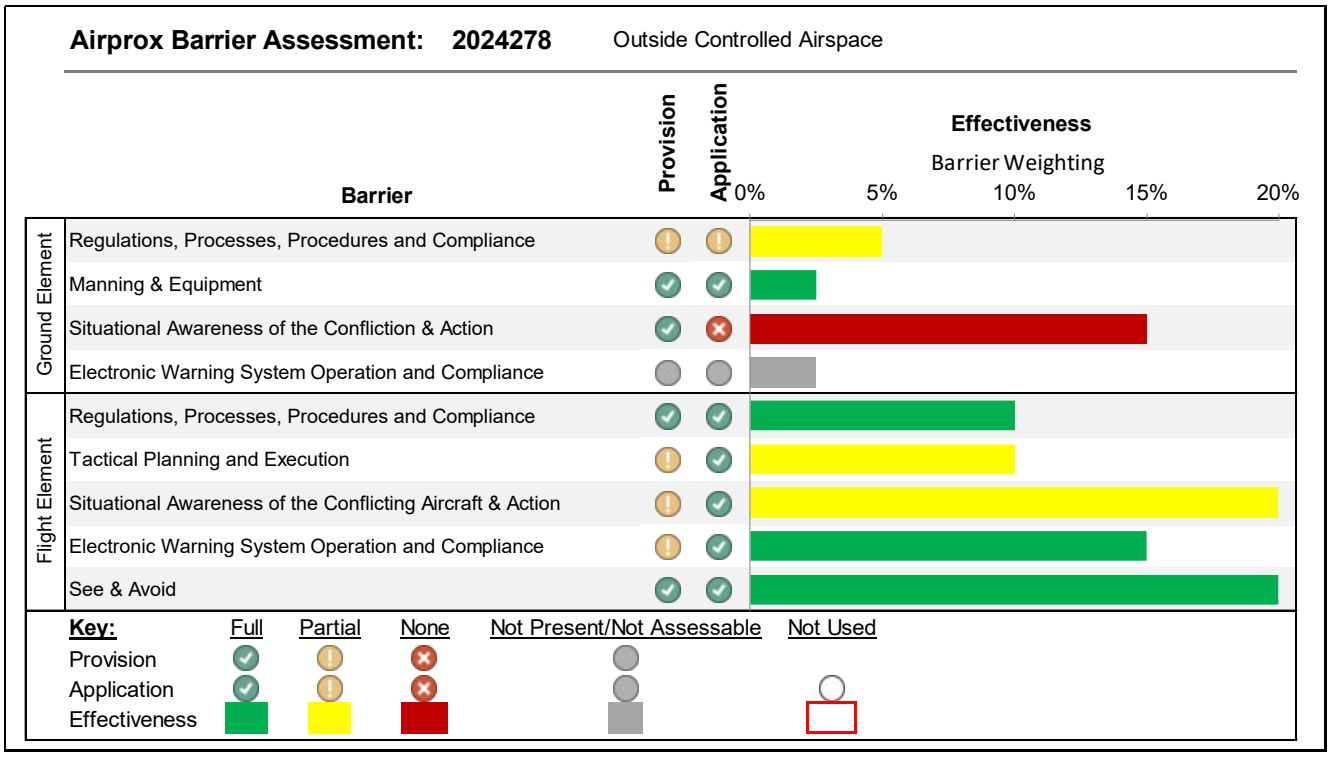
Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the SPTA orders had been ambiguous regarding frequency use and the FISO had made an incorrect call regarding conflicting traffic for the Wildcat pilot.

Situational Awareness of the Confliction and Action were assessed as **ineffective** because the SPTA FISO had not detected the potential conflict and had made an incorrect call to the Wildcat pilot regarding the conflicting Merlin.

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the SPTA orders had been ambiguous.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the Wildcat pilot had no situational awareness of the presence of the Merlin, and the Merlin pilot had generic situational awareness of the presence of the Wildcat.



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