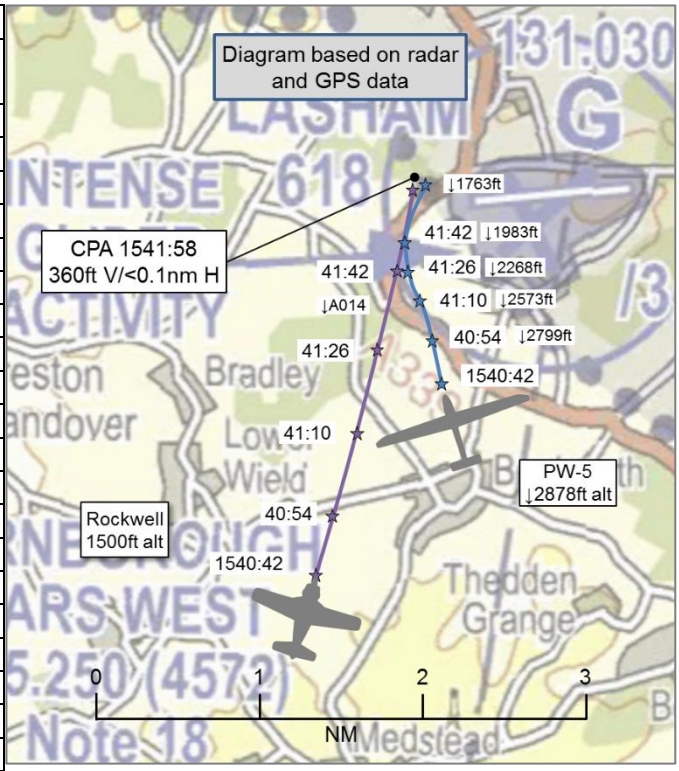
AIRPROX REPORT No 2019263

Date: 01 Sep 2019 Time: 1542Z Position: 5111N 00103W Location: Lasham Gliding Site

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Ventus CT glider	Rockwell Commander 112
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider		Farnborough West
Altitude/FL	1763ft	A014
Transponder	Not fitted	A, C, S
Reported		
Colours		Yellow, Red stripe
Lighting		
Conditions	VMC	VMC
Visibility	40km	50nm
Altitude/FL	1700ft	
Altimeter	QFE (993hPa)	
Heading	030°	360°
Speed	67kt	125kt
ACAS/TAS	FLARM	Rosetta[1]
Alert	Unknown	None
Separation		
Reported	100ft V/0m H	4-500ft V/0m H
Recorded	360ft V/<0.1nm H	



THE VENTUS CT GLIDER PILOT reports that he was flying his Schempp-Hirth Ventus CT glider in the near vicinity of Lasham, his home airfield. He had just returned from a cross-country flight and had height to spare, so he flew around gradually losing height locally, as is his normal practice. While local to Lasham, he decided to fly a RH circuit to the north of the airfield where RW27 was in use. Having made this decision while still south of the airfield, he flew past the upwind end of the airfield in a descending profile to join the RH circuit at the 'high key' position, which is roughly abeam the upwind end of the airfield. As he was descending with his airbrakes slightly open and heading approximately 030°, passing to the west of the airfield and just outside the airfield's western boundary, he was startled to see a yellow single-engine aircraft fly past him on a heading of approximately 020° and, he estimated, around 100ft below him. The aircraft appeared from below his left wing-root, came past quite fast and was much closer underneath than Lasham traffic would normally pass a glider. He called the launch point on the radio to enquire if it was Lasham traffic, to which the response was that it was not and he was passed the aircraft's registration. He stated his intention to file an Airprox and was requested to contact Farnborough Radar, to which he replied that he was too low in the circuit to have time to change frequency. Although Lasham does not have an ATZ, this incident took place immediately adjacent to the airfield and certainly within the circuit pattern for Lasham's gliders and tow aircraft. The pilot states that Lasham is clearly marked on 1:500,000 charts with warnings about winch cables and intense gliding activity. The pilot considered that the pilot of the other aircraft flew straight through Lasham's circuit, at high speed, at the same height as gliders commence the circuit and at a height well below the height of a typical winch launch, albeit he was just upwind of the winch cables. The pilot states that he did not see any sign of avoiding action from the pilot of the other aircraft and, because the aircraft approached him from behind, he could not have initiated any avoiding action himself.

[1] Rosetta is a PilotAware product that can receive signals from ADS-B, Mode C, Mode S and OGN-R stations (as well as other PilotAware equipment via GPS).

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

THE ROCKWELL COMMANDER 112 PILOT reports that he was en-route to Blackbushe and had agreed a Basic Service from Farnborough West, who had informed him of the glider. The glider was identified at a range of approximately ½nm and above, travelling in the same direction; the pilot assessed there to be no risk of collision and, therefore, that it was unnecessary to take any form of avoiding action. He was using SkyDemon on an iPad mini, linked to Rosetta with FLARM, which was working but not showing the glider.

The pilot assessed the risk of collision as 'None'.

THE FARNBOROUGH LARS WEST CONTROLLER reports that he was informed that an Airprox occurred between two aircraft in the vicinity of Lasham. The Airprox was not reported on frequency and he cannot remember the specific session on radar. He does recall that both the 1st and 2nd September were particularly busy with respect to LARS and there was significant gliding activity at Odiham, Lasham and Parham.

THE LASHAM GLIDING SOCIETY DEPUTY CFI reports that Lasham was using RW27 on the day of this event and, as with most weekends, was active with a high intensity of glider movements throughout the day. At the time of the Airprox there were a number of gliders returning to the airfield. In recent years, Lasham has seen an increased amount of aircraft flying, both with and without an ATC Service, within or in very close proximity to the circuit pattern and also below the notified maximum altitude for winch-launches. A frequency is available to contact Lasham Gliding, but very few pilots take advantage of this to aid their situational awareness. Lasham is one of the busiest GA airfields in the south of the UK, with 50,000 movements annually, including commercial airliners. At some points, there can be over 100 movements an hour at Lasham. Continued education efforts are being made by Lasham and the wider BGA to encourage awareness of glider sites to prevent these events which could have catastrophic consequences.

Factual Background

The weather at RAF Odiham was recorded as follows:

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METAR EGVO 011550Z AUTO 29012KT 9999 FEW050/// 19/07 Q1019=
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Analysis and Investigation

NATS Farnborough

The LARS West controller remembered the day and that it had been very busy with gliding around Lasham but had no recollection of an Airprox having been reported on frequency. At the time of the incident LARS West was split from Approach and traffic levels were medium, with high workload due to several a/c being in receipt of a Traffic Service.

The Rockwell Commander pilot called on frequency routing at 1500ft and was issued with a squawk of 0442, a Basic Service, and the QNH 1018hPa. The controller passed generic Traffic Information on gliding activity at Lasham which was not acknowledged by the pilot, before passing Traffic Information to another aircraft in receipt of a Traffic Service. Despite the pilot of the Rockwell Commander being on a Basic Service, the controller gave Traffic Information on two occasions of conflictions in the aircraft's immediate vicinity as it routed abeam Lasham. Between the Traffic Information transmissions to the pilot of the Rockwell Commander, the controller continued to work other aircraft on frequency.

15:39:44 - "*Rockwell Commander C/S, caution north-east bound, exceptionally busy in the vicinity of Lasham. Multiple contacts north-east, 4 miles, no height or type*".

No response from the pilot of the Rockwell Commander.

15:41:15 - "*Rockwell Commander C/S, unknown contact north of your position, north/north east of your position, 1nm on your nose northbound, no height or type, may be a glider*".

15:41:21 - "*Yeah, Rockwell Commander C/S keeping a lookout*".

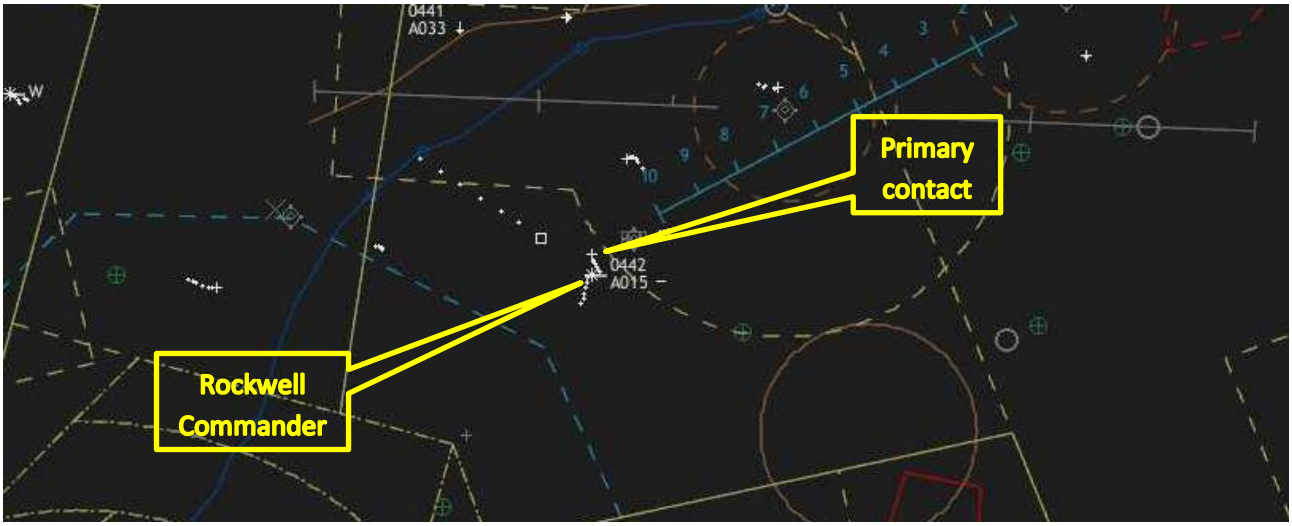


Figure 1 – 1541:33

15:42:39 - "*Rockwell Commander C/S, unknown contact west/north west of your position, 1nm southbound, no height*".

Figure 2 – 1542:41

15:42:45 - " *Rockwell Commander C/S keeping a good lookout*".

The Rockwell Commander pilot continues to his destination with the LARS controller giving further generic Traffic Information on gliding at Odiham and to remain outside the ATZ, before the pilot requests transfer to his destination. There is no recording of the pilot of the Rockwell Commander reporting an Airprox on the RT with the Farnborough LARS West controller.

The RT and radar recordings were reviewed, and the controller involved was interviewed. Unfortunately, due to the amount of time that had elapsed between the incident and the unit being informed of the Airprox, the controller was not able to recall any particulars of the incident.

Due to the number of aircraft in the vicinity of Lasham, and none of them having transponders, it was not possible for Farnborough to identify which (if any) of the contacts that are shown in close proximity to the Rockwell Commander was the Ventus CT. It is well known at Farnborough that a very small fraction of the number of gliders at Lasham are seen due to their poor radar signature.

The pilot of the Rockwell Commander was on a Basic Service with Farnborough routing in close proximity to Lasham Gliding site, which was active. The Farnborough controller passed a generic Traffic Information warning on Lasham to the pilot of the Rockwell Commander (which is a best practise at Farnborough) before passing specific Traffic Information a further two times. The controller did this in accordance with CAP774 that states:

"*Traffic information*

2.5 Given that the provider of a Basic Service is not required to monitor the flight, pilots should not expect any form of traffic information from a controller/FISO. A pilot who considers that he requires a regular flow of specific traffic information shall request a Traffic Service.

2.6 However, where a controller/FISO has information that indicates that there is aerial activity in a particular location that may affect a flight, in so far as it is practical, they should provide traffic information in general terms to assist with the pilot's situational awareness. This will not normally be updated by the controller/FISO unless the situation has changed markedly, or the pilot requests an update.

Traffic information in general terms could include warnings of aerial activity in a particular location:
- *Intense gliding activity over Smallville*
- *multiple aircraft known to be operating 15 miles north of Smallville*
- *PA28 estimating CPT at 25, altitude 2000 feet*
- *fast jet reported routing from Smallville to Midtown below altitude 500 feet*
- *helicopter conducting power line inspection 5 miles north of Borton below altitude 500 feet*

2.7 A controller with access to surveillance-derived information shall avoid the routine provision of traffic information on specific aircraft but may use that information to provide a more detailed warning to the pilot.

2.8 If a controller/ FISO considers that a definite risk of collision exists, a warning shall be issued to the pilot (SERA.9005(b)(2) and GM1 SERA.9005(b)(2)).

2.9 Whether traffic information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller."

The Rockwell Commander and Ventus CT came into close proximity in the vicinity of Lasham. The controller called generic Traffic Information on Lasham once, and specific Traffic Information twice, on traffic in close proximity to the Rockwell Commander. However, it is not known which contact was the Ventus CT.

UKAB Secretariat

Lasham Gliding Site is reported as having an OGN facility; the CFI of Lasham Gliding Society was approached and asked if the equipment was serviceable on the day of the Airprox. He confirmed that the Lasham OGN station is just a receiver unit and not a rebroadcasting unit; it is the property of a club member who supplied it for use during the summer. Intermittent power supplies to the building that houses the OGN station has meant that it is very often unserviceable. However, Lasham Gliding Society is in the process of adding a new receiver which will be an OGN-R station; this should hopefully be installed and functional shortly before the implementation of the new Farnborough airspace on 27th February 2020.

The NATS radar shows the Rockwell Commander (squawk 0442) approaching the vicinity of Lasham from the south at an altitude of 1500ft. There is a brief appearance (for three radar sweeps) of a primary return in the area of the Ventus CT (see Figure 3); it is assumed that this is the return on which the Farnborough LARS controller issues Traffic Information to the pilot of the Rockwell Commander. This primary radar return fades at 1541:14. It cannot be stated whether or not this primary return is the Airprox glider or a different aircraft.

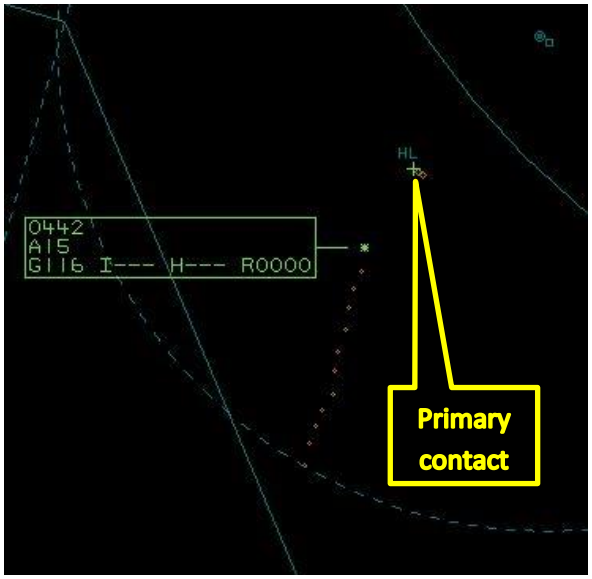


Figure 3 – NATS radar screenshot at 1541:14

The Ventus CT glider and Rockwell Commander 112 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 overtaking then the Ventus CT glider pilot had right of way and the Rockwell Commander 112 pilot was required to keep out of the way of the other aircraft by altering course to the right.[3] An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.[4]

Comments

BGA

It is disappointing to see aircraft transiting the circuit at busy airfields like Lasham without any radio contact. There were almost certainly other gliders/tugs in the immediate vicinity on what was a good weekend soaring day. A small deviation, actioned early, will add virtually no distance to a leg but take a passing aircraft clear of the pattern, much reducing the risk of a close encounter. This applies even more to sites like Lasham, where winch-launching gliders will "pop up" at a very high rate-of-climb attached to thousands of feet of steel cable. It is important to understand, as demonstrated, that FLARM is only an addition to an active lookout, not a replacement.

Summary

An Airprox was reported when a Ventus CT glider and a Rockwell Commander 112 flew into proximity close to Lasham gliding site at 1542hrs on Sunday 1st September 2019. Both pilots were operating under VFR in VMC, the Ventus CT glider pilot was not in receipt of a Service and the Rockwell Commander 112 pilot was in receipt of a Basic Service from Farnborough LARS West.

[2] SERA.3205 Proximity
[3] SERA.3210 Right-of-way (c)(3) Overtaking.
[4] SERA.3225 Operation on and in the Vicinity of an Aerodrome.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, transcripts of the relevant RT frequencies, radar photographs/video recordings, reports from the air traffic controller involved and reports from the appropriate ATC and 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 considered the actions of the Rockwell Commander pilot. GA members were surprised that the pilot had not elected to give Lasham a wider berth, both laterally and in terms of altitude, because the area around Lasham is invariably very busy with glider activity. Members noted that the London TMA was ahead and to the east of the aircraft (on its current track) but nevertheless felt that there had probably been an opportunity for the Rockwell pilot to plan to further separate from Lasham traffic in both altitude and azimuth (**CF2**). Board members agreed that flying so close to the Lasham overhead, and below the maximum altitude of the winch launch as marked on VFR charts, vastly increased the likelihood of encountering a glider and consequently needing to take action to increase separation (**CF1, CF3**). Moreover, the Rockwell pilot had received Traffic information from the Farnborough controller on 2 different primary contacts in the vicinity of Lasham and had also been warned that it had been "*exceptionally busy in the vicinity of Lasham*". That being said, the pilot had called visual with one of the contacts, but members wondered whether this had been the Airprox glider or, possibly, a different glider; after some discussion, the Board considered that the Rockwell pilot had been visual with the Ventus but that, even with SA and visual contact, he had flown close enough to the glider to cause its pilot concern (**CF4, CF8**). The Board noted that the Rockwell pilot had been carrying equipment on-board his aircraft that should have provided him with warnings of proximate glider traffic through FLARM but, at the time of the Airprox, Lasham did not have an OGN-R station so this barrier to MAC was not available to him (**CF5**); the Board was heartened to hear that Lasham is due to acquire an OGN-R station towards the end of February 2020.

Turning to the actions of the glider pilot, members considered that there was little he could have done to avoid the conflict; the Rockwell had been approaching from behind the Ventus and had been obscured from the pilot's view underneath his left wing (**CF6**), which had led to him only spotting the Rockwell as it had passed underneath his aircraft (**CF7**). Members agreed that, being so close to Lasham and with the intent of landing shortly, the Ventus pilot would have been expected to be in contact with Lasham's glider frequency.

The Board then considered the actions of the Farnborough controller and commended him for spotting the potential conflict between the Rockwell and the primary contacts in the vicinity of Lasham, even though he was providing a Basic Service to the Rockwell pilot and had not been required to monitor the aircraft. Members agreed that the Farnborough controller had done all that he could under the provisions of a Basic Service to permit the Rockwell pilot to fulfil his responsibilities for collision avoidance.

When assessing the risk involved in this Airprox, the Board considered that the Ventus pilot may have been surprised to see the Rockwell appear from underneath his left wing and that this may have led to him assessing the vertical separation as somewhat less than had been determined through analysis of the radar and GPS files of the respective aircraft. For his part, the Rockwell pilot had been visual with the Ventus throughout the encounter and so members felt that, although safety had been degraded, any risk of collision had been removed and therefore the encounter was assessed as risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2019263		
CF	**Factor**	**Description**	**Amplification**
	Flight Elements		
	• Regulations, Processes, Procedures and Compliance		
1	Human Factors	• Flight Crew ATM Procedure Deviation	Regulations/procedures not complied with
	• Tactical Planning and Execution		
2	Human Factors	• No Decision/Plan	Inadequate planning
3	Human Factors	• Aircraft Navigation	Flew through promulgated and active airspace or sporting site
	• Situational Awareness of the Conflicting Aircraft and Action		
4	Human Factors	• Lack of Action	Pilot flew close enough to cause concern despite Situational Awareness
	• Electronic Warning System Operation and Compliance		
5	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
	• See and Avoid		
6	Contextual	• Poor Visibility Encounter	One or both aircraft were obscured from the other
7	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots
8	Human Factors	• Lack of Individual Risk Perception	Pilot flew close enough to cause the other pilot concern

Degree of Risk: C

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:

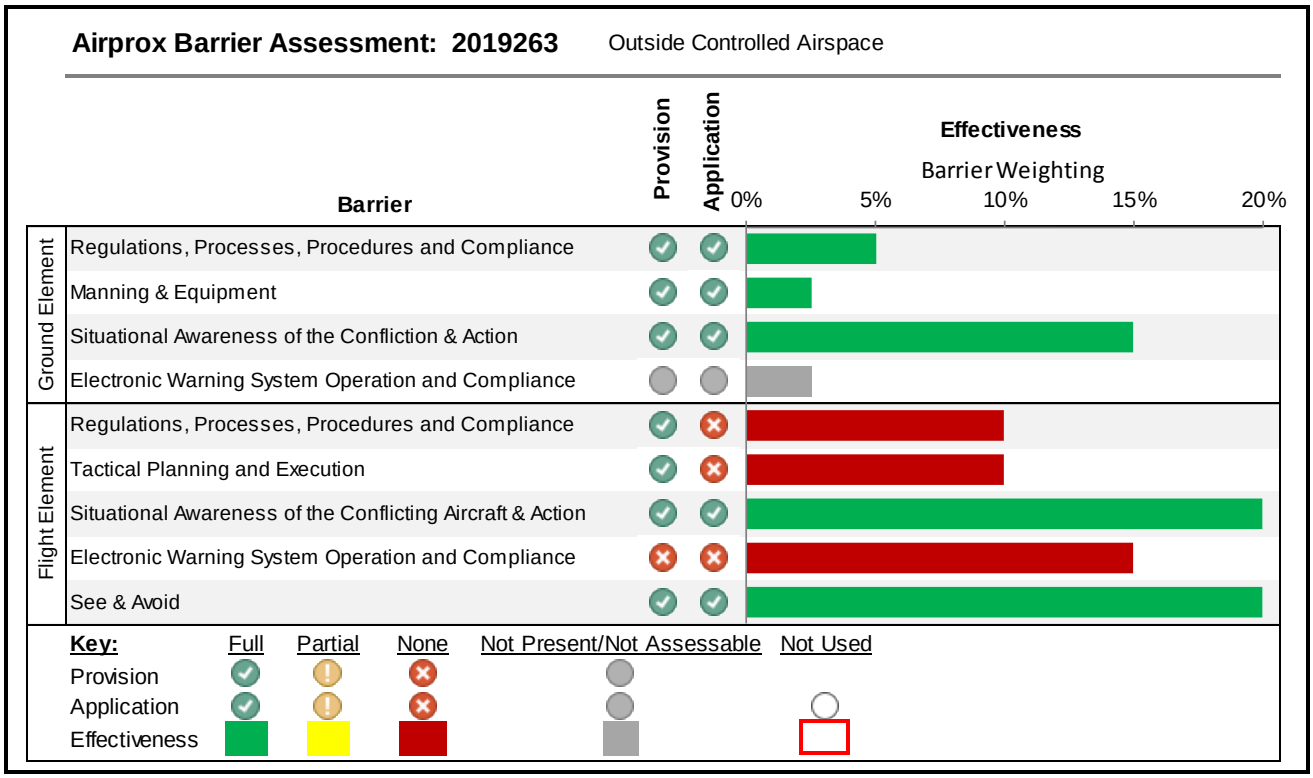
Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the Rockwell Commander pilot flew over a promulgated and active glider site and did not conform with or avoid the pattern of traffic formed.

Tactical Planning and Execution was assessed as **ineffective** because the Rockwell Commander pilot flew over a promulgated and active glider site below the published maximum altitude of the winch launch.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the PilotAware Rosetta carried by the Rockwell Commander pilot could not directly receive the FLARM signal from the Ventus CT glider. For the PilotAware equipment to receive FLARM indications, this required an OGN-R station which, at the time of the event, Lasham did not have.

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


Airprox Barrier Assessment: 2019263
Outside Controlled Airspace
Barrier
Provision
Application
Effectiveness
Barrier Weighting
0%
5%
10%
15%
20%
Ground Element
Regulations, Processes, Procedures and Compliance
Manning & Equipment
Situational Awareness of the Confliction & Action
Electronic Warning System Operation and Compliance
Flight Element
Regulations, Processes, Procedures and Compliance
Tactical Planning and Execution
Situational Awareness of the Conflicting Aircraft & Action
Electronic Warning System Operation and Compliance
See & Avoid
Key:
Full
Partial
None
Not Present/Not Assessable
Not Used
Provision
Application
Effectiveness