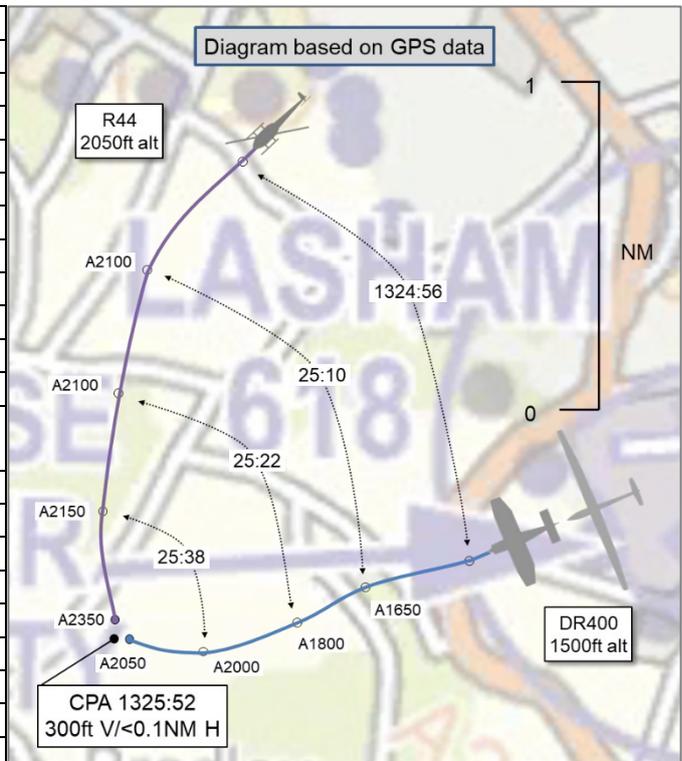


**AIRPROX REPORT No 2021188**

Date: 16 Sep 2021 Time: 1326Z Position: 5110N 00105W Location: 1.5NM W Lasham airfield

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	DR400	R44
Operator	Civ FW	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Basic
Provider	Lasham	Odiham Approach
Altitude/FL	2050ft	2350ft
Transponder	A, C	A, C, S
Reported		
Colours	Black, yellow	Yellow
Lighting	Strobes, Beacon, Taxi	Strobes
Conditions	Choose an item.	VMC
Visibility	5-10km	5-10km
Altitude/FL	1200ft aal	2000ft
Altimeter	QFE (NK hPa)	QNH (NK hPa)
Heading	270°	180°
Speed	70kt	90kt
ACAS/TAS	FLARM	PilotAware
Alert	None	Information
Separation at CPA		
Reported	300ft V/<100m H	NK V/NK H
Recorded	300ft V/<0.1NM H	



**THE DR400 PILOT** reports that they were on duty as the primary tow pilot at a busy gilding club. They had started launching gliders by aerotow about an hour earlier on RW27 as there was a light westerly wind. Flying had been delayed due to slow clearance of localised low cloud, but the cloud-base was rising and, by the time of this tow, it was about 2000ft (although with some variability) above the airfield (so about 2600ft amsl). The met forecast had suggested a very good day for the time of year, so there were a lot of glider pilots who wanted launching. This was their seventh launch, and they were towing a glider at the time of the Airprox and were climbing at about 700fpm. In general terms, because of the conditions and noise abatement procedures, they were dropping the gliders upwind of the airfield and following the lines of cumulus to enable them to connect with the thermals as easily as possible. This is standard practice for towing. There were already multiple gliders soaring in this area. In terms of avoiding action, they only saw the helicopter relatively late. Fortunately, [they felt at the time] that the vertical separation was enough but the horizontal separation was such that a collision was probably very likely, especially if the height difference had been less, as the tug and glider combination is around 70m in length. They did not take any avoiding action (they [state that the] only action they could have taken would have been to dive, but obviously they also had the consideration of a glider being towed with 70m of rope). Whether or not the helicopter took any avoiding action was difficult for them to ascertain. They were squawking 0034, the accepted squawk for aircraft towing gliders. Their observation about the incident is that the Farnborough airspace has created a chokepoint just west of [the glider site]. They had already seen a number of aircraft pass through the area a few miles west of the airfield.

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

**THE R44 PILOT** reports that it was a smoggy day when lifting from [departure airfield]. They changed frequency to Odiham 131.300MHz and asked for a Zone transit. The Zone transit was approved and

the controller warned them of Lasham being active and that it was busy. They advised that they would go further out and around Lasham and decided to go about 2 miles outside it. On approaching the [vicinity of] Lasham, they were aware there were a lot of gliders. [Their compatible EC equipment] started to alert them to the gliders, they could see between 8 to 12 gliders. There was a significant amount of traffic that they were monitoring and they asked some of their passengers to start to monitor them also. Odiham called them and warned that there was a plane taking off which was engaged in glider towing, they confirmed that they would look out for it. They became visual with the tow-plane and monitored its ascent. They proceeded to pass over the tow-plane, keeping what they thought to be a safe distance. After this point the traffic became lighter and they corrected their course back to the planned route. They thanked Odiham and switched to their next frequency.

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

**THE LASHAM CHIEF FLYING INSTRUCTOR** reports that the Lasham winching and aerotowing operation had been operating from RW27 and at around 1250 an Airbus A319 had departed, so the launching operation was suspended for the period of the jet movement. While the jet was departing, a launch line had been set up on the grass area to the north of the main runway and, at around 1310, they recommenced aerotow launching from this point. There were two tugs operating and the first couple of tows were uneventful. They carried out the normal launching procedures for the DR400 that was towing a glider. This consisted of an "up-slack" call on the radio which informs the pilot to move forward and get the rope tight. When the rope is tight the [radio] operator then checks that it's "clear above and behind" and then gives the "all out" call. A second tug that was operating was ready to go too, so once there was safe separation, they carried out the launching process for this aircraft and then went about other duties, as they were planning to move the operation back on to the main runway. They were alerted to the event by a radio call from the pilot of the DR400 and also another call from the pilot of the [second tug aircraft]. They could then see the helicopter a few miles to the west of the airfield at what appeared to be 1200ft to 1500ft. They spoke to the pilot of the DR400 at a later time and discussed the incident and the need to file an Airprox report.

**THE ODIHAM CONTROLLER** reports that their recollection of events may not be entirely accurate, as some time had passed before they received notification of the Airprox<sup>1</sup>. They were working radar using only SSR, as the PSR was U/S. They provided the R44 pilot with a Basic Service for their routing from approximately 15NM north of Odiham, through the western MATZ boundary and routing towards the south coast. The R44 pilot's track would bring them close to the glider site at Lasham, which they knew was busy with gliding, and they recall advising the pilot that the site was busy with a couple of tugs visible and it was likely there were a large number of non-squawking contacts which they would have been unable to see. The pilot adjusted their route slightly further west, giving more lateral separation from Lasham. The Lasham gliding community doesn't communicate with Odiham at all. The site begins and ends its daily flying without notifying Odiham directly<sup>2</sup>, and their traffic routinely operates in the lateral confines of the Odiham MATZ, close to and on the centreline and at similar altitudes to the IFR inbounds. With no PSR, these aircraft are effectively invisible on radar, although [an EC display] on a second screen is used to provide some situational awareness. The pilot who reported the Airprox was therefore not in contact with Odiham. As the R44 pilot transited closer to Lasham, they recall providing Traffic Information regarding a pair of squawks which appeared to be a tug squawking 0034 and a glider squawking 7000. They believe that the pilot of the R44 called visual with those aircraft.

The controller perceived the severity of the incident as 'negligible'.

**THE ODIHAM SUPERVISOR** reports that, similar to the controller's comments, having found out about the Airprox a week after the event, their recollection of the event is fairly vague. They recall the RA controller having a civilian pilot on frequency receiving a Basic Service, [the R44], that was routing close to Lasham, and that the pilot was warned of the potential glider traffic including the tug aircraft and told to keep a good lookout. This was acknowledged by the pilot.

<sup>1</sup> The Odiham controller reports being notified on 23<sup>rd</sup> September 2021.

<sup>2</sup> MOU between RAF Odiham and Lasham Gliding society para 8.1 states: Unless and until notified to the contrary RAF Odiham will assume gliding activity at Lasham every day during daylight hours from 0830 until 1/2 an hour after sunset.

## Factual Background

The weather at Odiham was recorded as follows:

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METAR EGVO 161350Z 22005KT 9999 SCT031 22/14 Q1017 NOSIG RMK BLU BLU
METAR EGVO 161320Z 23005KT 9999 SCT028 20/13 Q1018 NOSIG RMK BLU BLU
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## Analysis and Investigation

### RAF Odiham unit investigation

An RAF Odiham unit investigation was conducted which resulted in findings and conclusions which have been summarised below.

- RAF Odiham had been operating SSR alone at the time and so could not provide Traffic Information against non-transponding traffic within the bounds of Lasham. The controller did not notify the R44 pilot that they were operating SSR alone at the time which may have aided situational awareness however, the pilot only requested a Basic Service and was reminded of the density of Lasham traffic against the track it was taking. Odiham operates with [a system displaying specific electronic conspicuity devices widely used in the glider community] in the Approach room to aid awareness of probable glider traffic, however, it does rely on the pilots selecting their system on.
- A Standards Bulletin has been raised to remind controllers at Odiham that there is no requirement to provide LARS as Farnborough Radar is the LARS unit, and that if pilots who are free-calling Odiham require a penetration of the Odiham MATZ, they can approve it and suggest that pilots use Farnborough LARS West for the service.
- RAF Odiham gets a lot of pilots requesting a service from them as they cannot always get a service from Farnborough.

### Military ATM

The DR400 was acting as the primary tow aircraft and had been launching gliders for around an hour from Lasham glider site. Due to the favourable forecast meteorological conditions following slow clearance of localised low cloud, it was reported that there were several gliders launching. The DR400 was on their 7<sup>th</sup> launch and was towing a glider at the time of the Airprox and was following standard towing practice. It was reported that they saw the R44 relatively late, however it was evident that the vertical separation was sufficient. They reported that they did not take avoiding action due to the fact they had a glider in tow, separation was reported as approximately 300ft vertically and less than 100m horizontally. The pilot reported that the Farnborough airspace had created a chokepoint to the west of Lasham and had already seen several aircraft pass through the area.

The R44 pilot was transiting and had been warned by the Odiham Approach controller of Lasham being active and that the surrounding airspace was busy. The pilot advised ATC that they would increase their separation from Lasham. On approaching the Lasham area their [compatible EC equipment] began to alert due to the glider traffic. The pilot noted that there was a significant amount of traffic that they were monitoring, and they also used the on-board passengers to monitor the traffic. They were advised of an aircraft departure by Lasham which would be towing, and the pilot believes that they reported visual with the departing aircraft. Separation was not known by the pilot.

The Odiham Approach controller provided a Basic Service to the R44 pilot for a transit via the Odiham MATZ whilst working 'SSR Alone' as the Primary Radar was unserviceable. The R44 pilot was advised by the controller that Lasham was active with gliders and highlighted that, as they were working SSR alone, they were unable to see non-transponding tracks. Traffic Information was passed to the R44 which was acknowledged by the pilot.

Figures 1 and 2 show the positions of the DR400 and the R44 at relevant times during the Airprox. The screenshots are taken from a replay using the NATS Radars and provide both primary and

secondary radar information, therefore, are not entirely representative of the picture available to the Odiham Controller.



Figure 1 - R44 proximity to the DR400 prior to the Airprox.

Forty seconds prior to the start of the radar replay, Traffic Information was passed to the R44 pilot regarding two conflicting tracks. It is unknown what the second track was squawking at the time as the first was highlighted and believed to be a glider and a tug. Separation was 1.4NM, height was unknown. The R44 pilot reported visual with both reported tracks.

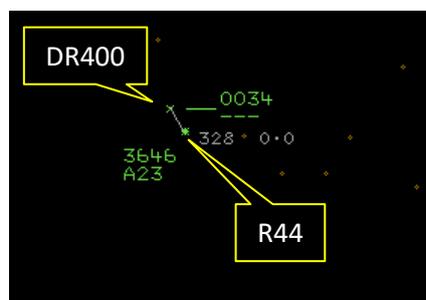


Figure 2: - CPA

The horizontal CPA was measured at 0NM, height was unknown.

Although there was a delay in notifying Odiham ATC of the Airprox, the tape transcript combined with the radar replay provided sufficient information. The controller provided navigational advice to the pilot in relation to their proximity to Lasham gliding site and provided Traffic Information where a confliction was identified. The pilot reported visual following the Traffic Information provided by the Odiham controller therefore, there were no further updates provided. If the Primary Radar had been serviceable, it is likely that the volume of Traffic Information would have increased however, this was not an option for the controller at the time.

## Comments

### BGA

We are pleased to read that the R44 pilot was aware of the intense gliding activity at Lasham, and commend the Odiham controller for providing timely and effective Traffic Information. We are also happy to read that data from [compatible EC equipment] is available to the Odiham controller to help with their Situational Awareness. That said, the route chosen by the R44 pilot was very likely to be busy with gliders and particularly aerotow traffic, and a call to Lasham on their published frequency would have been courteous. A combination has limited manoeuvrability and may climb rapidly on encountering a thermal, which tug pilots are normally trying to find, so avoiding laterally as well as vertically would have been wise.

We are surprised by the comments from the Odiham Controller, given that relations between Lasham and Odiham are generally excellent and there is a formal MOU in place that describes how the parties will operate.

## **AOPA**

With the advent of increased EC pilots should plan what they should do with this information, for example, continuing their flight path in the direction and altitude of multiple contacts, or altering their flightpath to minimise conflict. The R44 pilot could have given this very busy airspace a better lateral and vertical clearance. Also, tug pilots in this area must be aware of the significantly increased risk of conflicting traffic in their local Class G airspace because of Farnborough's controlled airspace.

## **UKAB Secretariat**

The DR400 and R44 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>3</sup> If the incident geometry is considered as converging then the R44 pilot was required to give way to the DR400 and glider.<sup>4</sup>

## **Summary**

An Airprox was reported when a DR400 and a R44 flew into proximity 1.5NM W of Lasham airfield at 1326Z on Thursday 16 September 2021. Both pilots were operating under VFR in VMC, the R44 pilot in receipt of a Basic Service from RAF Odiham, the DR400 pilot was 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 logs, reports from the air traffic controllers 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 discussed this event and were satisfied that there had been no risk of collision. Members' focus then turned to whether or not there had been a degradation in safety and, although it was agreed that relying solely on vertical separation had limitations, especially when a tug and glider combination can climb rapidly should a thermal be encountered, on balance it was decided that normal safety standards and parameters had pertained and, as such, the Board assigned Risk Category E. Members agreed on the following contributory factors:

- CF1. The Odiham controller had not been required to monitor the flight of the R44 under the provision of a Basic Service.
- CF2. The DR400 pilot had no prior situational awareness regarding the presence of the R44 whereas the R44 pilot had only generic situational awareness that the DR400 was in the vicinity.
- CF3. The compatible EC equipment carried by the R44 pilot issued a genuine alert in accordance with the expectations of the system.
- CF4. The DR400 pilot visually acquired the R44 at a late stage.
- CF5. Although normal safety parameters were assessed by the Board to have pertained, the separation between the aircraft at CPA was such that it caused concern to the pilot of the DR400.

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<sup>3</sup> (UK) SERA.3205 Proximity.

<sup>4</sup> (UK) SERA.3210 Right-of-way (c)(2) Converging.

## PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

### Contributory Factors:

	2021188			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
<b>• Situational Awareness and Action</b>				
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
<b>Flight Elements</b>				
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
2	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
<b>• Electronic Warning System Operation and Compliance</b>				
3	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
<b>• See and Avoid</b>				
4	Human Factors	• Identification/Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
5	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<sup>5</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 of the Confliction and Action** were assessed as **not used** because under a Basic Service the controller is not required to monitor the flight.

#### **Flight Elements:**

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **partially effective** because the R44 pilot had only generic awareness of the presence of the DR400 towing the glider before becoming visual with it whilst the DR400 pilot had no awareness of the R44 before sighting it.

<sup>5</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

<b>Airprox Barrier Assessment: 2021188</b>		Outside Controlled Airspace						
<b>Barrier</b>		<b>Provision</b>	<b>Application</b>	<b>Effectiveness</b>				
				<b>Barrier Weighting</b>				
				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	✓	✓					
<b>Key:</b>		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	✓	⚠	✗	⊖				
Application	✓	⚠	✗	⊖	○			
Effectiveness								