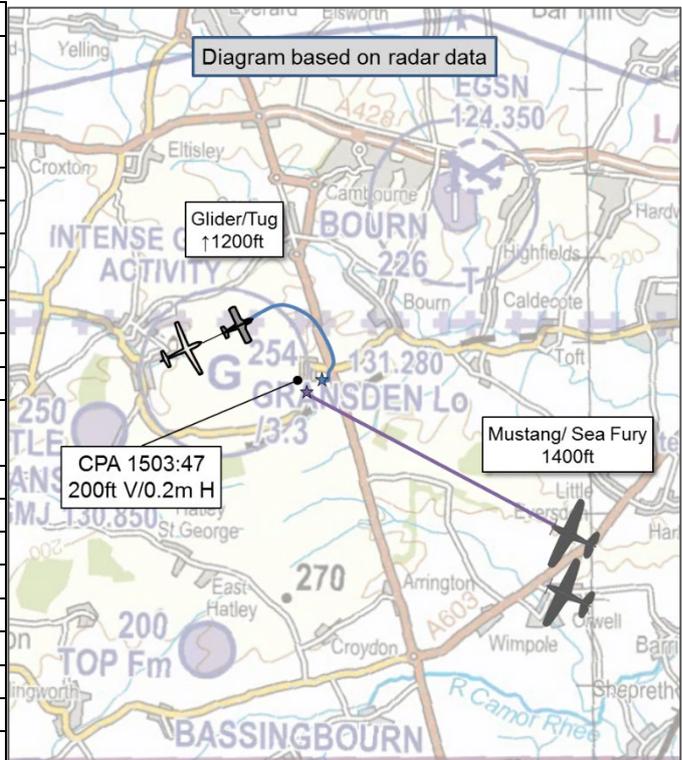


**AIRPROX REPORT No 2019110**

Date: 19 May 2019 Time: 1503Z Position: 5210N 00004W Location: Gransden Lodge

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	Puchaz glider	P51 Mustang/ Sea Fury
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	None
Provider	Gransden Lodge	
Altitude/FL	1200ft	1400ft
Transponder	Not fitted	A, C, S
<b>Reported</b>		
Colours	White	Green/Grey Camouflage
Lighting	Nil	Not known
Conditions	VMC	VMC
Visibility	>30km	10km
Altitude/FL	1000ft	1500ft
Altimeter	QFE (1000hPa)	QNH
Heading	180°	280°
Speed	65kt	230kt
ACAS/TAS	FLARM	Not fitted
<b>Separation</b>		
Reported	100ft V/500ft H	100ft V/200m H
Recorded	200ft V/0.2nm H	



**THE PUCHAZ PILOT** reports that he was being towed by another aircraft when 2 other aircraft (thought to be a P51 and a Sea Fury) flew directly over the airfield and in front of the glider-tug combination.

The pilot assessed the risk of collision as ‘Medium’.

**THE DR400 (TUG) PILOT** reports that he took off from RW04 climbing on a right-hand circuit. At 1000ft and climbing at 400fpm, he saw two aircraft (a silver Sea Fury and a dark coloured Mustang) approach from left-to-right, heading south-to-north, at the same height. He was heading west and was initially concerned that the other aircraft were heading very close towards the glider-tug combo, so he jinked right then left before stabilizing as the pair passed in front of his aircraft, at the same altitude, approximately 500m ahead. They were difficult to see against the background clutter of fields and cloud. The pair then flew over the active gliding site on a steady heading and altitude.

The pilot assessed the risk of collision as ‘None’.

**THE MUSTANG PILOT** reports that he saw the glider at 1nm, but did not consider them to be on a collision course and so did not take any avoiding action.

The pilot assessed the risk of collision as ‘None’.

**Factual Background**

The weather at Stansted was recorded as follows:

METAR EGSS 191450Z AUTO 36005KT 9999 NCD 15/10 Q1010=

## Analysis and Investigation

### UKAB Secretariat

The Mustang pilot provided a screenshot of his SkyDemon track (Figure 1). It was noted that the information as presented has Gransden Lodge marked with a glider symbol, unlike Little Gransden which was marked with a circle. [UKAB note: glider sites can be deselected from display on SkyDemon and it is likely that this was the case in the Mustang pilot's case. Figure 2 shows a similar area on SkyDemon Light with the Gransden Lodge specific glider site displayed].



Figure 1 – Mustang Pilot's Screenshot

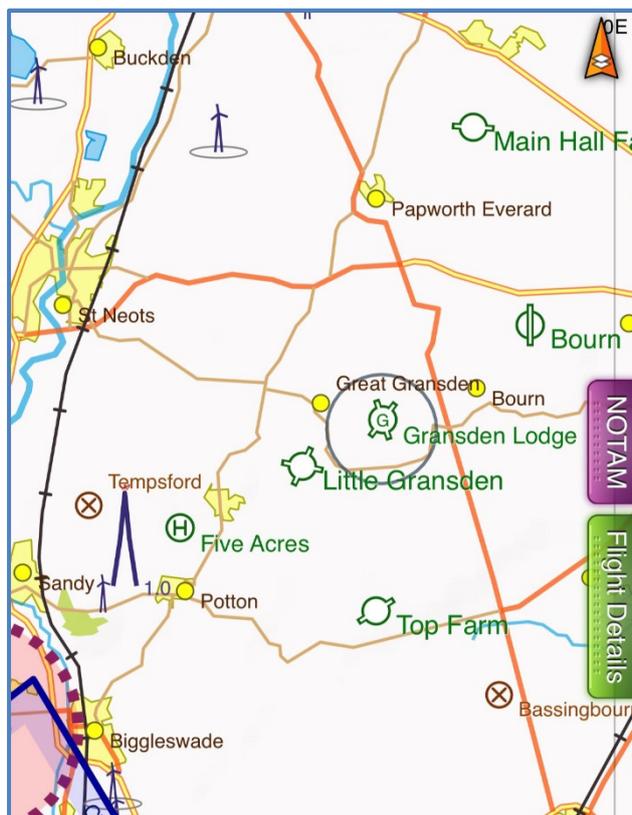


Figure 2 – SkyDemon showing Gransden Lodge

Although neither aircraft was receiving an ATS, the incident could be seen on the NATS area radar. CPA was at 1503:47 (Figure 3), both aircraft were squawking 7000, the tug and glider were to the east of the airfield and had just commenced the right/left turn as described by the tug pilot.

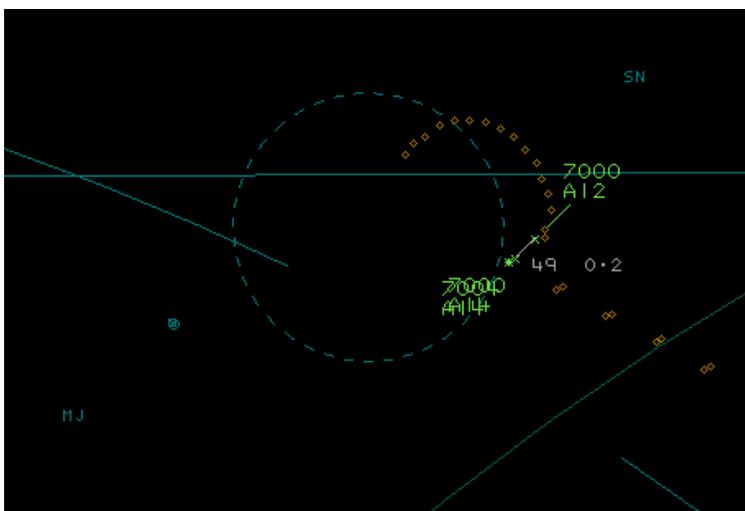


Figure 3 CPA: 1503:47

The glider and tug combination and Mustang/Sea Fury formation 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 converging then the Mustang/Sea Fury pilots were required to give way to the glider and tug<sup>2</sup>. 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<sup>3</sup>.

## Comments

### Cambridge Gliding Centre

After the two warbirds passed close to the aerotow combination they continued to fly over the active gliding site at Gransden Lodge, heading south-to-north, crossing partway down active RW04 at 1000ft, the approximate point at which a launching glider would be expected to complete a winch-launch. At the time, although winch-launching in almost nil wind conditions, gliders were still achieving winch heights in excess of 1200ft agl. It was only through lucky timing that a winch-launch was not in progress at the time of the over-flight. All Cambridge Gliding centre training gliders are FLARM and Airband radio equipped; no FLARM alarms were triggered and no radio calls were heard.

### BGA

A Glider/Tug combination has limited manoeuvrability and is best given a wide berth. We are again disappointed to see aircraft overflying Gransden Lodge below the promulgated maximum winch launch height. The SkyDemon image illustrates the risks introduced by deselecting certain classes of airspace to display; the BGA is actively seeking ways to resolve this issue.

## Summary

An Airprox was reported when a glider and tug combination and a Mustang/Sea Fury formation flew into proximity overhead Gransden Lodge at 1503hrs on Sunday 19th May 2019. Both pilots were operating under VFR in VMC, neither in receipt of an ATS.

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

Information available consisted of reports from the pilots of both aircraft, and radar photographs/video recordings. 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 DR400 pilot who was towing a glider and, as such, had limited manoeuvrability. Having seen the Mustang and Sea Fury approaching, he was understandably concerned about the risk of collision and, although the Mustang/Sea Fury formation were required to avoid or give way to him, he took action by 'jinking' right and left to increase separation in case they had not seen him. The Board noted that, prior to seeing them, the DR400 pilot had no knowledge about the approaching formation. Although his aircraft was fitted with FLARM, which could detect other FLARM units, it could not detect the Mustang's transponder. Furthermore, there had been no calls made by the Mustang/Sea Fury formation on Gransden Lodge's frequency as they approached, and there was no ATC to provide any warnings (**CF6**, **CF7**).

For his part, the Board wondered whether the Mustang pilot was familiar with the local area and whether he had been fully briefed on areas to avoid on departure from Duxford. Whether he was familiar or not, members thought that his planning or execution was evidently somewhat lacking because he had ended up over-flying Gransden Lodge below its maximum winch-launch altitude (**CF2**). Nevertheless, he had reported seeing the tug/glider combination at 1nm and members felt that this was sufficiently far away

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

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

<sup>3</sup> SERA.3225 Operation on and in the Vicinity of an Aerodrome.

that he could have adapted his plan accordingly and avoided them by a greater margin had he wished (**CF1, CF3**). Instead, the Mustang pilot elected not to take any avoiding action (**CF8**), and continued to fly over the gliding airfield below the winch-launch height of 3300ft without calling on the Gransden Lodge frequency (**CF4, CF5**).

The Board then discussed at length the SkyDemon navigation application that the Mustang pilot was using. Although they couldn't be sure what the Mustang pilot had displayed at the time, they heard how the glider sites were easy to overlook or could be deselected from the display. Furthermore, information such as winch-launch heights and frequency information were not easily evident and the BGA members in particular were concerned that pilots may inadvertently be deselected sites used for sporting and recreational activities without realising. This could also be considered as being non-compliant with EASA regulation AMC1 to NCO.GEN.135(a)(10) (Current and Suitable Aeronautical Charts) amplifies the requirement as follows:

'(a) The aeronautical charts carried should contain data appropriate to the applicable air traffic regulations, rules of the air, flight altitudes, area/route and nature of the operation. Due consideration should be given to carriage of textual and graphic representations of:

(1) aeronautical data, including, as appropriate for the nature of the operation:

...

(iv) prohibited, restricted and danger areas; and

(v) sites of other relevant activities that may hazard the flight; ...'

This situation had also occurred in another Airprox seen by the Board this month (2019101) and so the Board resolved to re-iterate a recommendation made for that Airprox that SkyDemon review the selection and depiction of sites used for aerial sporting and recreational activities.

Finally, in assessing the risk, the Board quickly agreed that the action taken by the DR400 pilot had been timely and effective and, given that both pilots were visual with each other at some range, there had been no risk of collision. However, the Board also agreed that because the Mustang/Sea Fury pilots had flown through a promulgated and active glider site, had not called on frequency, and had flown in front of the tug/glider combination at relatively close range, safety had been degraded; accordingly, the Board assessed the risk as Category C.

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

### **Contributory Factors:**

2019110			
CF	Factor	Description	Amplification
	<b>Flight Elements</b>		
	<b>• Regulations, Processes, Procedures and Compliance</b>		
1	Human Factors	• Flight Crew ATM Procedure Deviation	Regulations/procedures not complied with
	<b>• Tactical Planning and Execution</b>		
2	Human Factors	• No Decision/Plan	Inadequate planning
3	Human Factors	• Insufficient Decision/Plan	Inadequate plan adaption
4	Human Factors	• Aircraft Navigation	Flew through promulgated and active airspace
5	Human Factors	• Communications by Flight Crew with ANS	Pilot did not communicate with appropriate controlling authority
	<b>• Situational Awareness of the Conflicting Aircraft and Action</b>		
6	Contextual	• Situational Awareness and Sensory Events	Pilot had no, only generic, or late Situational Awareness

• Electronic Warning System Operation and Compliance		
7	Technical	• ACAS/TCAS System Failure Incompatible CWS equipment
• See and Avoid		
8	Human Factors	• Lack of Action Pilot flew into conflict

Degree of Risk: C.

Recommendation: SkyDemon review the selection and depiction of sites used for aerial sporting and recreational activities.

Safety Barrier Assessment<sup>4</sup>

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

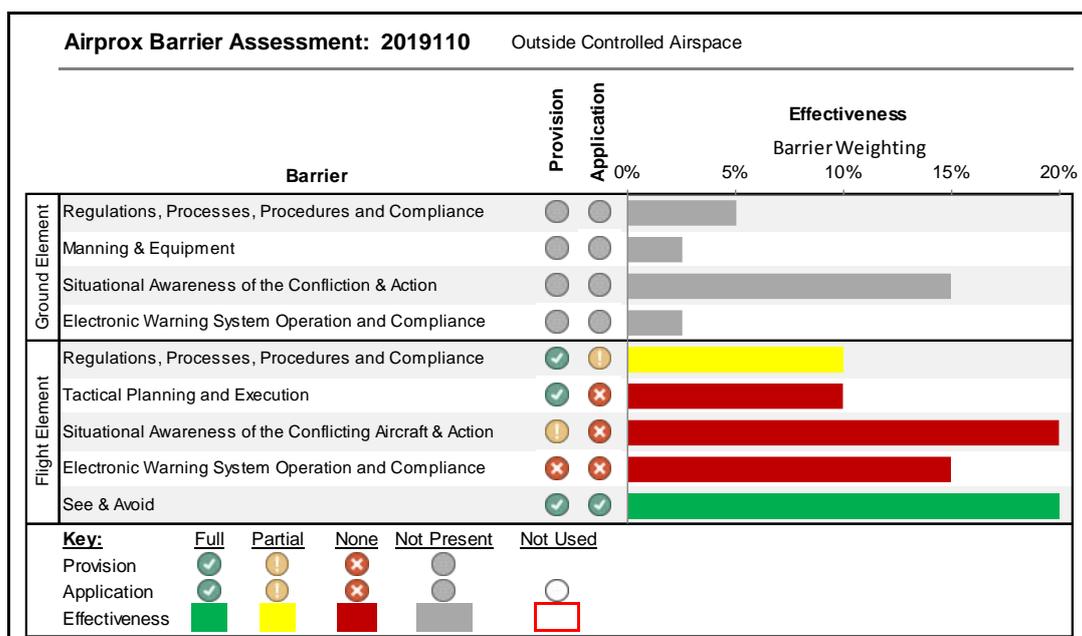
**Flight Elements:**

**Regulations, Processes, Procedures and Compliance** were assessed as **ineffective** because the Mustang/Sea Fury formation flew through a promulgated and active glider site and also didn't sufficiently give way to the glider and tug.

**Tactical Planning and Execution** was assessed as **ineffective** because the Mustang/Sea Fury formation flew over a promulgated and active glider site.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the Mustang and Sea Fury pilots should have at least known generically that gliding took place at Gransden Lodge but they didn't take that into consideration when flying overhead at 1400ft.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because although the DR400 was fitted with a FLARM, the Mustang wasn't FLARM equipped.



<sup>4</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).