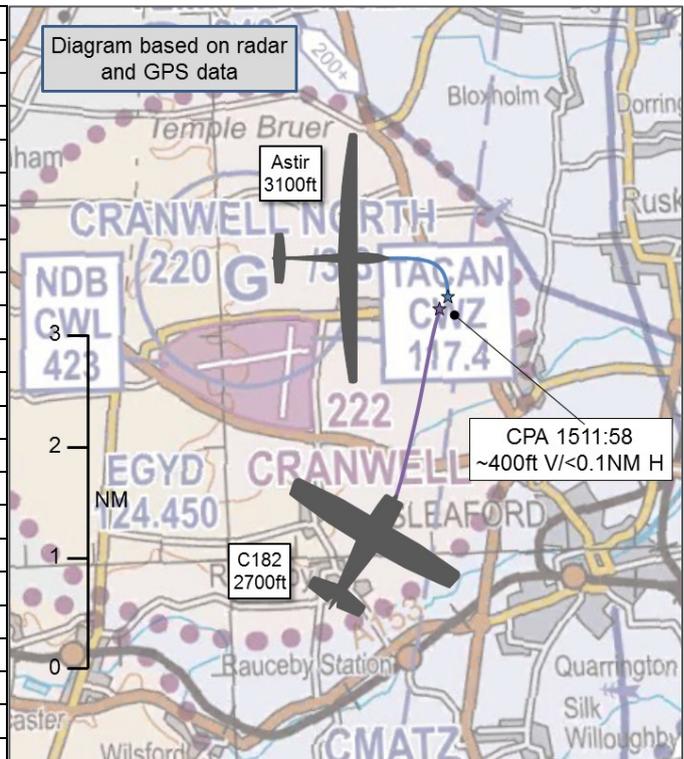


AIRPROX REPORT No 2020054

Date: 20 Jun 2020 Time: 1511Z Position: 5302N 00026W Location: Cranwell

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Astir	C182
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider		London Information
Altitude/FL	3100ft	2700ft
Transponder	Not fitted	A, C, S
Reported		
Colours	White	Red, White, Black
Lighting	NR	NR
Conditions	VMC	VMC
Visibility	>30NM	10km
Altitude/FL	2800ft	2800ft
Altimeter	QFE	QNH
Heading	180°	005°
Speed	50kt	125kt
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
Separation		
Reported	200ft V/50m H	100ft V/0m H
Recorded	~400ft V/<0.1NM H ¹	



THE ASTIR PILOT reports they were in a single seat glider operating out of Cranwell North Airfield and had climbed in a thermal for a few minutes above Cranwell village and then rolled wings level heading approximately 180° at 2800ft (QFE) above Cranwell. A few seconds later another aircraft was seen, on a reciprocal heading quite close, slightly to the right of the nose and slightly below the horizon. The aircraft passed approx 50m to the right and 200ft below. The speed was estimated to be in the region of 100kt. They immediately turned right and saw the aircraft continue on the same heading towards RAF Waddington, leading them to believe that the other pilot had not seen the glider.

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

THE C182 PILOT reports that instead of routing around Cranwell ATZ they had enough altitude available to route overhead giving 500ft clearance above the ATZ. As the airfield was to the left they were scanning for traffic. Looking ahead both the pilot and passenger spotted the glider at the same time, 500m away. Although the proximity was close it was assessed that there would be no collision and so they maintained track and altitude. They both focused their attention on the glider and watched it pass overhead through the skylight roof windows. The pilot reported being very aware that the conditions of the day were ideal for gliding and that gliders would be operating up to the cloud base and sometimes within it and had briefed the passenger of this, consequently 500ft was maintained between the aircraft and the cloud base for this reason.

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

¹ Separation estimated by comparing GPS and radar data

THE LONDON INFORMATION CONTROLLER reports that the C182 was receiving a Basic Service, but that the glider was not on frequency. The Airprox was not reported at the time and so the controller had no knowledge of it until after the event.

Factual Background

The weather at Cranwell was recorded as follows:

METAR EGYD 201450Z AUTO 18012KT 9999 // SCT037/// SCT050///20/12 Q1017=

Analysis and Investigation

NATS Investigation

The C182 pilot called on to the London Information frequency at 1430:11Z and a Basic Service agreed. The pilot reported on a direct track for Wickenby; reporting point estimates were subsequently passed, as was a Regional Pressure Setting change.

At 1513:17 the C182 pilot reported that they had approximately 5min to run to Wickenby and requested to change frequency to Wickenby Radio. There was no report of an Airprox whilst the pilot was in contact with London Information.

Analysis of radar data showed a primary return appear in the vicinity of Cranwell (Figure 1), after the aircraft had passed. This return was only present for three radar updates, Safety Investigations Swanwick has been unable to determine the identity of this radar return. There were no other radar returns visible within a 5NM radius of Cranwell whilst the C182 was in the vicinity.



Figure 1

London Information provides Basic and Alerting Services only and are not equipped with radar. The Astir pilot was not in contact with London Information, therefore the FISO was unaware of the aircraft's presence.

CAP774 – UK Flight Information Services, Chapter 2 Paragraph 1 defines a Basic Service as:

A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.

UKAB Secretariat

The Astir and C182 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 If the incident geometry is considered as converging then the C182 pilot was required to give way to the glider.⁴

Comments

BGA

It is refreshing to come across a GA pilot aware of good gliding conditions and the likely operating band of gliders. When one glider is seen soaring close to a gliding site, it is likely that there will be others in the vicinity; it's important to maintain a vigilant lookout for all aircraft.

Summary

An Airprox was reported when an Astir and a C182 flew into proximity in the vicinity of Cranwell at 1511Z on Saturday 20th June 2020. Both pilots were operating under VFR in VMC, the Astir pilot was not in receipt of an ATS, the C182 pilot was in receipt of a Basic Service from London Information.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the AFISO involved. 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments. Although not all Board members were present for the entirety of the meeting and, as a result, the usual wide-ranging discussions involving all Board members were more limited, sufficient engagement was achieved to enable a formal assessment to be agreed along with the following associated comments.

Members first discussed the actions of the glider pilot. The FLARM on the glider was not able to detect the C182 (**CF4**) and they were not receiving an ATS, so were without any prior situational awareness that the C182 was transiting through the vicinity (**CF3**). This lack of situational awareness probably led to a degree of surprise when the other aircraft was sighted and the late sighting meant that although an avoiding action turn was made, it probably resulted in little difference to the separation (**CF5**).

The C182 pilot was receiving a Basic Service from London Information, who were not required to monitor the flight (**CF1**) and had no knowledge of the glider, therefore could not give any Traffic Information. Although the pilot was aware that gliding took place at Cranwell, and had briefed the passenger to expect to see gliders, without a CWS or a radar surveillance based ATS, they did not receive any specific situational awareness on the glider (**CF3**). Members noted that the pilot had made provision in their planning to remain clear of the ATZ but opined that, given that the intention was to route just over the top of the ATZ, it might have been prudent to have made an information call on the Cranwell gliding frequency when transiting past (**CF2**). Had this been done, it should have alerted the glider pilot to their presence and the other pilot may have been less concerned by the proximity (**CF6**). Glider members noted that where there was one glider there was likely to be others and cautioned against becoming fixated on the one glider to the detriment of further look-out. However, in the end, the see-and-avoid barrier worked, in that the C182 pilot saw the glider and assessed that no avoiding action was necessary.

² SERA.3205 Proximity.

³ SERA.3210 Right-of-way (c)(1) Approaching head-on.

⁴ SERA.3210 Right-of-way (c)(2) Converging.

In determining the risk, members quickly agreed that there had been no risk of collision, that said, some thought that the lack of prior situational awareness meant that safety had been degraded. However, others considered that with 400ft separation, normal safety standards and parameters for flight in Class G airspace had pertained. In the end the latter view prevailed; Risk Category E.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2020054			
CF	Factor	Description	Amplification
Ground Elements			
• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Not required to monitor the aircraft under the agreed service
Flight Elements			
• Tactical Planning and Execution			
2	Human Factors	• Accuracy of Communication	Ineffective communication of intentions
• Situational Awareness of the Conflicting Aircraft and Action			
3	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance			
4	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
• See and Avoid			
5	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots
6	Human Factors	• Lack of Individual Risk Perception	Pilot flew close enough to cause concern

Degree of Risk: E.

Safety Barrier Assessment⁵

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the C182 pilot only had generic situational awareness about gliders operating from the site.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the FLARM in the glider could not detect the C182.

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: 2020054 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								