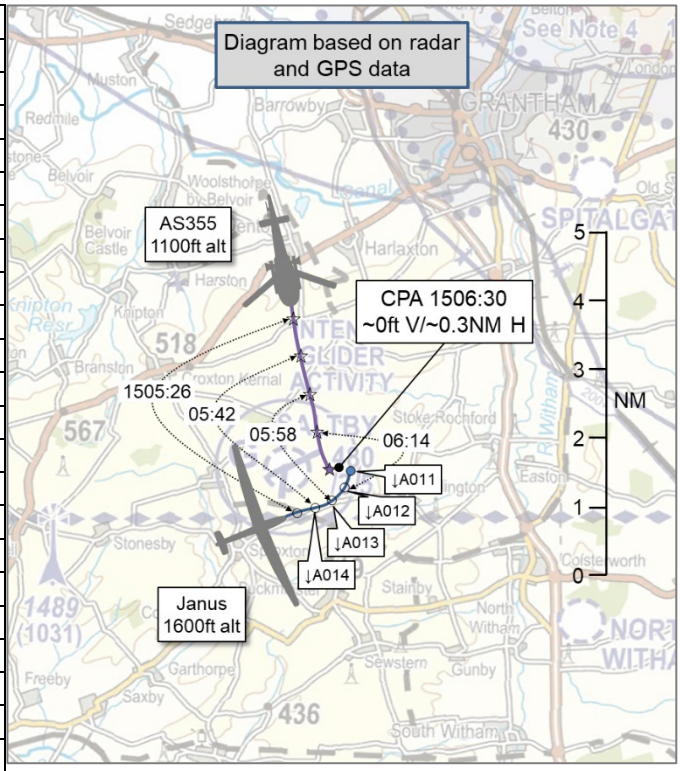
AIRPROX REPORT No 2021100

Date: 01 Jul 2021 Time: 1506Z Position: 5250N 00041W Location: Saltby Gliding Site

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Janus glider	AS355
Operator	Civ Gld	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	CGFF[1]	London Information
Altitude/FL	1100ft	1100ft
Transponder	Not fitted	A, C, S
Reported		
Colours	White	Blue
Lighting	None	Anti-colls, HISLs
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	500ft	1200ft
Altimeter	QFE (NR hPa)	QNH (NR hPa)
Heading	090-270° (circuit)	165°
Speed	50kt	110kt
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
Separation		
Reported	0ft V/200m H	Not Seen
Recorded	~0ft V/~0.3NM H[2]	



THE JANUS GLIDER PILOT reports that they joined the circuit at Saltby for a standard left-hand glider circuit for RW25. Three-quarters of the way downwind, they spotted a dark aircraft flying on a southerly heading from the north of the airfield. At approximately the same time, Saltby radio transmitted a warning to airborne pilots of the traffic. Due to limited landing areas and manoeuvring restrictions of a glider, they continued with the circuit while continuously observing the aircraft. The aircraft passed across the threshold of RW25 as they were on base leg; at this point, the aircraft was approximately 100ft above with a lateral separation of several hundred metres. The aircraft did not deviate course and did not display any signs of observing their aircraft or, indeed, the airfield.

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

THE AS355 PILOT reports that, on landing back at base, they were told about a possible Airprox by their chief pilot who had spoken to the tug-master on the ground at the gliding site. The AS355 pilot then spoke to the tug-master the following day who said that they had flown close to their site and they had spooked one of the glider pilots in the circuit. They apologised to the tug-master and said that they would not fly near their site again. On this occasion, they did not see any gliders and so did not take any avoiding action.

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

[1] Common Glider Field Frequency.
[2] Separation derived from GPS data for the Janus glider and radar data for the AS355.

Factual Background

The weather at Cranwell was recorded as follows:

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METAR EGYD 011450Z 02004KT 9999 SCT035 SCT050 20/12 Q1017 NOSIG RMK BLU BLU=
METAR EGYD 011520Z 29003KT 9999 SCT040 19/10 Q1017 NOSIG RMK BLU BLU=
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Analysis and Investigation

NATS Safety Investigations

The RT and radar logs were reviewed for the event in question. [The AS355 pilot] did not call on the London FIS frequency at any point.

UKAB Secretariat

An analysis of the NATS radar replay and the GPS data provided by the Janus glider pilot was undertaken. The AS355 was identified using radar data and a steady track was observed in the moments leading up to the Airprox. The AS355 was observed to maintain 1100ft and not deviate from its course as it flew past the area of Saltby Gliding Site. The GPS data provided by the Janus glider pilot was correlated with the radar track of the AS355; CPA was measured as ~0ft V and ~0.3NM H by comparison of the positional information from the 2 different data sources.

The Janus glider and AS355 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[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

Although on this occasion the vigilance of the Janus crew and ground observers meant that the risk of a collision was low, overflying glider winch launch sites below the promulgated maximum winch altitude without positive, timely confirmation of the site's status is inadvisable. Relying on visual observation of activity is often ineffective; a winching glider is hard to see and climbs very rapidly and the winch cable is effectively invisible.

We are pleased to read that the AS355 pilot had the courtesy to contact Saltby and will keep clear of the airfield in the future.

Summary

An Airprox was reported when a Janus glider and an AS355 flew into proximity in the Saltby Gilding Site circuit at 1506Z on Thursday 1st July 2021. Both pilots were operating under VFR in VMC, the Janus glider pilot listening out on the Common Glider Field frequency and the AS355 pilot listening out on the London FIS frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and GPS data from the Janus glider pilot. 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.

[3] (UK) SERA.3205 Proximity.
[4] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

The Board first considered the actions of the Janus glider pilot. A glider pilot member noted that this was another example of overflight of a glider site below the maximum altitude of winch-launching for the site and wished to highlight to pilots the increased risk of so doing. The cables used for winch-launching gliders are commonly around 4.5-6mm in diameter and are consequently almost impossible to see (and therefore avoid) in flight. Contact with one of these cables is not simply a risk to the glider and the winch – it presents a significant risk of damage to the airframe of the aircraft striking it, with possible catastrophic results. Concerning the Airprox itself, the Board noted that the Janus glider pilot was in the circuit at Saltby and therefore had had a limited number of options available to them as they could not gain height and had essentially been committed to landing at the airfield. Members noted that the Janus glider had been fitted with FLARM but that this had not been able to detect the signals from the AS355's transponder (**CF5**). This, coupled with the pilot listening on the Common Glider Field Frequency and so not in a position to receive Traffic Information from another agency, had meant that the Janus pilot had not had any situational awareness of the approaching helicopter (**CF4**). However, the Board was heartened to hear that the glider pilot had been maintaining a thorough lookout whilst in the circuit and had seen the AS355 with sufficient time to assess whether or not further action had been required on their part to increase the separation. The Board agreed that, although no manoeuvring had been necessary, the Janus glider pilot had been concerned by the proximity of the AS355 (**CF7**).

Turning to the actions of the AS355 pilot, the Board heard from helicopter pilot members with experience of operating in the area around where the Airprox took place. Members wondered why the pilot had elected to listen-out on the London FIS frequency and not seek an ATS from East Midlands LARS, as the view of the Board was that East Midlands controllers often know of, and pass information to pilots on, the activity of minor aerodromes and glider sites in the surrounding area. The Board agreed that, although not obliged to do so, the AS355 pilot may have been better served by obtaining an ATS from East Midlands LARS, and considered that the AS355 pilot not communicating with East Midlands ATC had been contributory to the Airprox (**CF2**). Members then discussed the AS355 pilot's routing and wondered if the visibility of aerial sporting sites on VFR charts – particularly electronic charts provided with commercial navigation software applications – was sufficient; members questioned whether or not the AS355 pilot had been aware of the presence of Saltby glider site as they flew through the area. In this regard, Director UKAB undertook to approach the CAA's GA Unit on behalf of the Board to highlight recent overflights of aerial sporting sites with a view to reviewing whether their representation on widely-available VFR charts is sufficiently prominent. Returning to the Airprox, the Board considered that the AS355 pilot's choice of routing (through the overhead of a glider site) (**CF1**) at an altitude where they would have been likely to encounter traffic in a circuit pattern (1100ft or ~600ft agl at Saltby) (**CF3**) had been contributory factors in the Airprox. Members noted that the AS355 pilot had not been carrying any form of electronic conspicuity equipment that could have interacted with the FLARM on the Janus glider and therefore they had not had any situational awareness of the presence of the glider (**CF4**). This had left the AS355 pilot to rely on their lookout for the detection of other aircraft and the Board agreed that, in the event, they had not seen the Janus glider (**CF6**).

Finally, the Board considered the risk involved in this Airprox. The Board was grateful to the Janus glider pilot for providing their GPS log file of the flight because, since the Janus glider had not been detected by the NATS radars, the GPS data had greatly enhanced the Board's understanding of the geometry of the event. Members noted that the Janus glider pilot had assessed the risk of collision as 'high', but that they had also reported not taking any avoiding action and simply monitoring the progress of the AS355 as it passed through. The Board also considered the recorded separation – albeit from 2 different data sources – and concluded that, although safety had clearly been reduced, the actions of the glider pilot indicated that there had been no risk of collision. Accordingly, the Board assigned a Risk Category C to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021100			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Aircraft Navigation	An event involving navigation of the aircraft.	Flew through promulgated and active airspace, e.g. Glider Site
2	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
3	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
	• Situational Awareness of the Conflicting Aircraft and Action			
4	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
	• Electronic Warning System Operation and Compliance			
5	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
	• See and Avoid			
6	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
7	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[5]

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

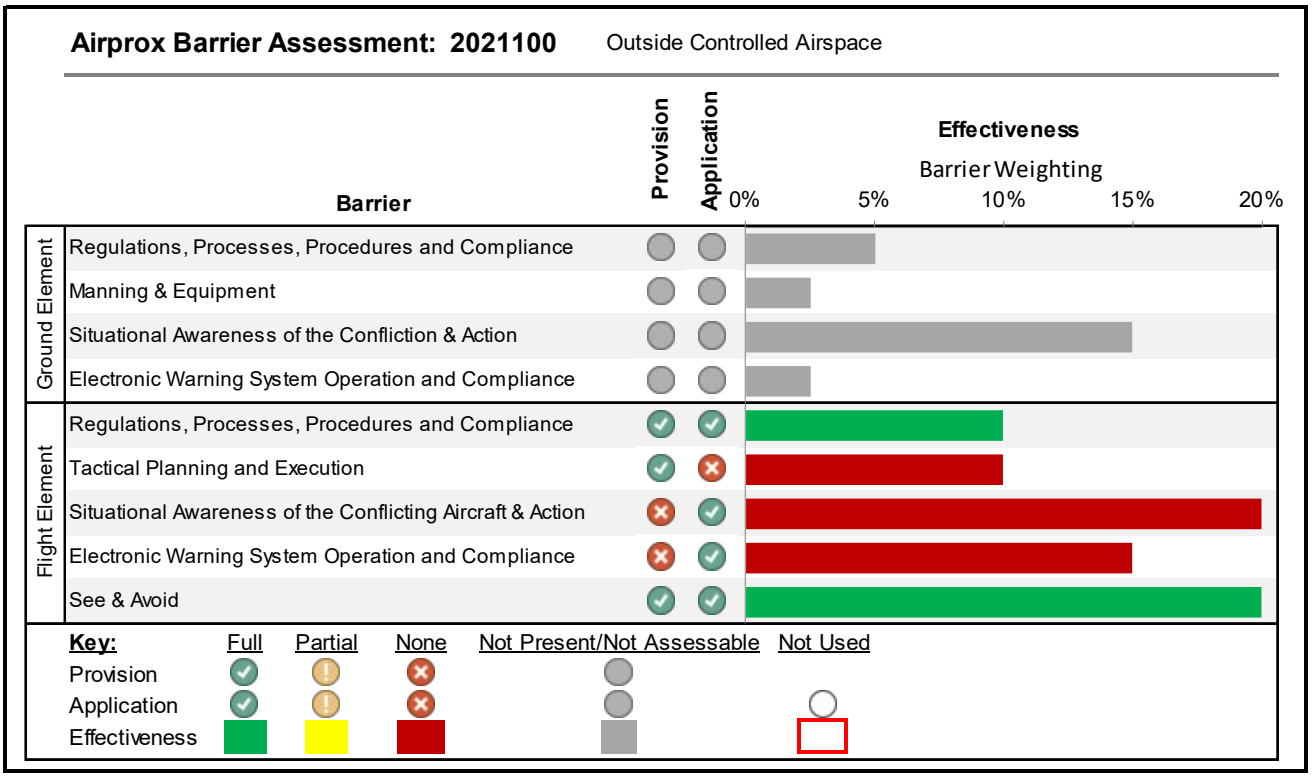
Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because the AS355 pilot flew through a promulgated and active glider site at or around circuit height and did not avoid the pattern formed by the Janus glider.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any awareness of the presence of the other aircraft prior to the Janus glider pilot sighting the AS355.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the FLARM equipment carried by the Janus glider pilot could not detect the signals from the AS355's transponder.

[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: 2021100
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