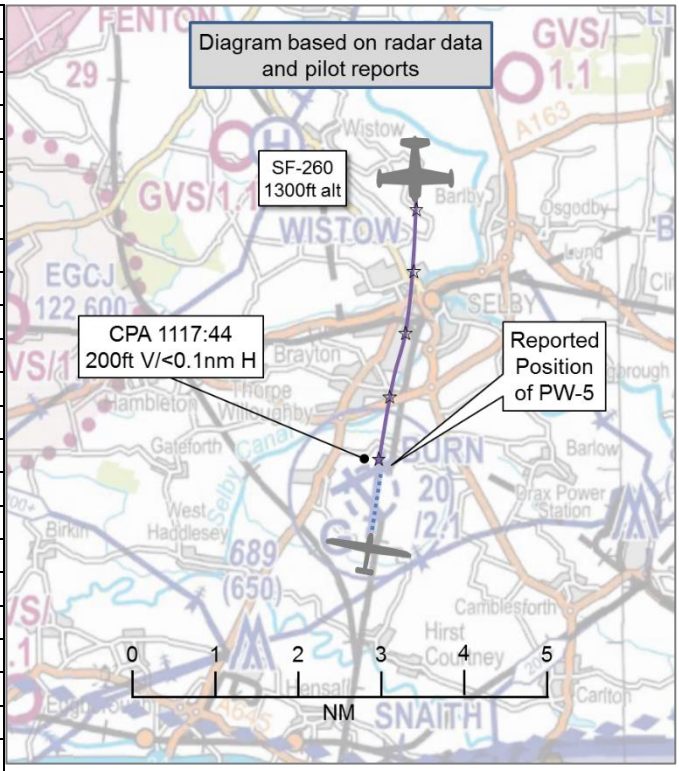
AIRPROX REPORT No 2019236

Date: 13 Jul 2019 Time: 1118Z Position: 5345N 00105W Location: Burn Gliding Site

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PW-5 Glider	SF-260
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	
Provider		
Altitude/FL		1300ft
Transponder	Not Fitted	A, C, S
Reported		
Colours	White/red wingtips	
Lighting		
Conditions	VMC	VMC
Visibility	50km	
Altitude/FL	900ft	
Altimeter	QNH	QNH
Heading	001°	
Speed	55kt	170kt
ACAS/TAS	FLARM	Unknown
Alert	None	Unknown
Separation		
Reported	200ft V/70m H	NR
Recorded	NK	



THE BURN WINCH OPERATOR reports that he was winch-launching a PW-5 Glider from RW01 and was approximately 3/4 of the way into the launch when an unidentified aircraft flew along RW01/19 in a north-to-south track at a height which he believed to be approximately 1000ft. The pilot of the glider estimated that the separation between the glider and the unidentified aircraft was approximately 200ft. The pilot continued with his flight and landed back at Burn Gliding Club. Calls were made to Doncaster Robin Hood airport to try and establish the identity of the aircraft; this proved unsuccessful and they were informed that, unless the aircraft had initially contacted them requesting a service/information, they would not be able to identify the aircraft in question.

The winch operator assessed the risk of collision as 'High'.

THE PW-5 PILOT reports that, at around 1217 BST, he was taking off in Burn Gliding Club's PW-5 single-seat glider. It was a winch-launch on Burn RW01. As he was part way through the climb he noticed a light fixed-wing aircraft crossing his path at around 90° from left to right [he perceived]. It was a light-wind day and he only reached around 900ft QFE. At the time the aircraft crossed his path, he estimated having reached around 600ft QFE and the light-aircraft was about 200ft above. The pilot states that, luckily, he managed to miss the other aircraft without needing to change course. Had it been five seconds later, it could have been much more serious.

THE BURN DUTY PILOT reports that the PW-5 was approaching the final part of a winch launch, approximately 800-1000ft, and had a close encounter (maybe 200ft) with a powered aircraft travelling on a reciprocal heading at what looked like fairly high speed. Unable to identify the aircraft using Flight Radar 24, he telephoned Doncaster radar to see if they could help (the aircraft was heading for their airspace). They said that because the aircraft wasn't communicating with them they couldn't help.

THE SF-260 PILOT reports that, on the day in question, he had flown to Sutton Bank, landed, and then returned. The pilot noted nothing remarkable about the day, which he described as 'just a normal flying day'. He does not recall seeing any other aircraft during his flight, nor does he recall on which flight the Airprox may have taken place. His only recollection of the weather conditions was that the gliders at Sutton Bank were all parked up at the launch point when he arrived, waiting for the weather to improve, and were still there when he departed Sutton Bank around an hour later. When contacted by the UKAB Secretariat to confirm the tools that he uses for navigation, the pilot confirmed that he carries a 1:500,000 topographical chart and that the aircraft is fitted with a Garmin 430 [see Figure 1], both of which were current.

Figure 1 – Example Garmin 430 Navigational Display.[1]

The pilot does not recall seeing the glider.

Factual Background

The weather at Doncaster Sheffield Airport was recorded as follows:

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METAR EGCN 131120Z 35007KT 320V020 9999 SCT017 BKN023 18/14 Q1023=
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Analysis and Investigation

UKAB Secretariat

Radar recordings show the SF-260 in a level cruise at FL011 (about 1300ft aal) transiting through the overhead of Burn Glider site; the PW-5 does not show on the NATS radar at any point and thus no recording of horizontal or vertical separation is possible.

The PW-5 and SF-260 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] 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 particularly disappointing that a pilot departing from a gliding site would then overfly another gliding site well below the promulgated maximum winch launch height.

[1] Source: https://www.gps.co.uk/garmin-gns-430-gps-nav-com-recertified/p-0-1247/
[2] SERA.3205 Proximity.
[3] SERA.3210 Right-of-way (c)(1).
[4] SERA.3225 Operation on and in the Vicinity of an Aerodrome.

Summary

An Airprox was reported when a PW-5 glider and an SF-260 flew into proximity overhead Burn gliding site as the PW-5 was undergoing a winch-launch at around 1118hrs on Saturday 13th July 2019. Both pilots were operating under VFR in VMC. Neither pilot was in receipt of an Air Traffic Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, the Burn glider winch operator, the Burn duty glider pilot 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 considered the actions of the SF-260 pilot, and members wondered whether he was aware of the presence of Burn glider site on his route. The pilot had confirmed that the aircraft was equipped with a Garmin 430 and that he carried an up-to-date 1:500,000 VFR chart, so members agreed that it would have been reasonable to expect that he should have known of the location of Burn glider site and that he could have made a radio call to Burn Radio to inform them of his intentions. A GA member familiar with the Garmin 430 confirmed to the Board that this equipment is not really optimised for low-level navigation and, as such, the pilot would have needed to refer to his VFR chart to confirm the presence of sporting sites and other minor aerodromes that do not have an ATZ. Reflecting on all of this, the Board felt that, during the SF-260 pilot's pre-flight planning they should have taken the presence of Burn glider site into account and planned to avoid it by a suitable margin or otherwise have confirmed via radio that there was no activity before he overflew the site below the maximum altitude of the winch launch (**CF1, CF2, CF3, CF4**). The Board concluded that the SF-260 pilot therefore had, at best, only generic situational awareness of the possibility of there being gliders in the vicinity of Burn glider site (**CF5**) and that he had not seen the glider (**CF8**).

Turning to the actions of the PW-5 pilot, the Board quickly agreed that, with the glider in the process of launching and therefore in a high nose-up attitude, the pilot's view of the approaching SF-260 would have been obscured by the nose of the glider (**CF7**). As a result, there was therefore little he could have done to prevent the Airprox. A controller member wondered if the PW-5 pilot had seen a different aircraft because he had reported it as crossing left-to-right at approximately 90° but the Board felt that the PW-5 pilot's estimate of the SF-260's track had likely been a question of his perception when in a high nose-up attitude and that he had only caught a fleeting glimpse of the SF-260 as it passed (**CF8**). The Board also noted that, although the PW-5 was equipped with FLARM, it would have been unable to interact with the transponder on the SF-260 and so the Electronic Warning System barrier was defeated in this encounter (**CF6**).

A glider member informed the Board that Burn glider site often witnesses powered aircraft flying above or near to the site without contacting Burn Radio. The Board also heard that the British Gliding Association (BGA) has been gathering statistics on the number of reports of aircraft flying over or near a winch-launching glider sites below the promulgated maximum height of the winch and that, since March 2019, there have been over 120 reports of this kind of event. The glider member confirmed that the BGA will continue to monitor the situation.

In considering the risk, and in the absence of a recorded CPA, some members thought that the glider pilot, winch operator and Burn duty pilot had all described a situation and where providence had played a major part and there had been a definite risk of collision. Other members thought that there could have been as much as 400ft of vertical separation, given that the SF-260 was recorded as being at an altitude of 1300ft and the glider pilot recalls a maximum launch height of 900ft (Burn airfield elevation is 20ft amsl). Irrespective, what all members could agree was that even if there had not been a definite risk of collision, the incident represented a situation where safety had at least been much reduced below the norm and so, even though the precise vertical separation could not be determined, the separation was sufficiently close to warrant a risk assessment of Category B; safety not assured.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2019236		
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
4	Human Factors	• Communications by Flight Crew with ANS	Pilot did not communicate with appropriate service provider
	• Situational Awareness of the Conflicting Aircraft and Action		
5	Contextual	• Situational Awareness and Sensory Events	Generic, late, no or incorrect Situational Awareness
	• Electronic Warning System Operation and Compliance		
6	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
	• See and Avoid		
7	Contextual	• Poor Visibility Encounter	One or both aircraft were obscured from the other
8	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots

Degree of Risk: B

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 SF-260 pilot flew through a promulgated and active glider site below the maximum winch-launch altitude.

Tactical Planning and Execution was assessed as **ineffective** because the SF-260 pilot's route was planned directly through the overhead of Burn Glider Site without contacting Burn Radio.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because Burn Glider site is clearly marked on the 1:500,000 VFR chart and the SF-260 pilot did not act on the possibility of there being glider activity by routing around the site.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the FLARM fitted to the PW-5 could not interact with any signals from the SF-260.

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

See and Avoid were assessed as **ineffective** because the SF-260 pilot did not see the glider and the glider pilot saw the SF-260 too late to act to materially affect CPA.