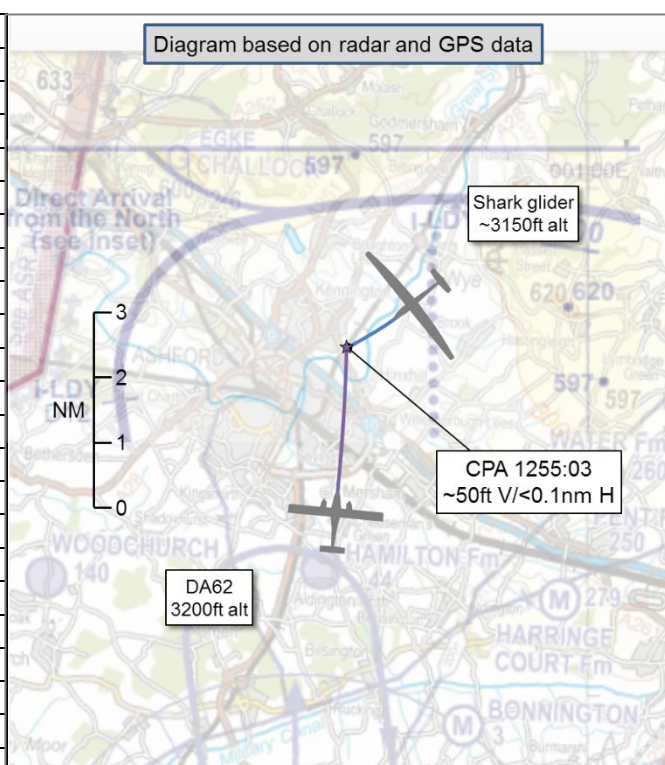


AIRPROX REPORT No 2019282

Date: 19 Sep 2019 Time: 1255Z Position: 5110N 00054E Location: ivo Ashford

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	HpH 304 Shark S	DA62
Operator	Civ Glid	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	IFR
Service	None	Procedural
Provider	(Challock gliding)	Lydd Information
Altitude/FL	3225ft	3200ft
Transponder	Not fitted	A, C, S
Reported		
Colours	White	Grey, orange
Lighting	Not fitted	Strobes, nav
Conditions	VMC ¹	VMC ¹
Visibility	20km	3km
Altitude/FL	3150ft	3200ft
Altimeter	QNH (1030hPa)	QNH (1031hPa)
Heading	'circling'	350°
Speed	50kt	160kt
ACAS/TAS	FLARM	TAS
Alert	None	None
Separation		
Reported	50-100ft V/0m H	20ft V/10m H
Recorded	~50ft V/<0.1nm H	



THE SHARK PILOT reports conducting a cross-country flight from Challock, listening out on the Challock gliding frequency. He was circling to the left in a broken thermal to the northeast of Ashford at about 3200ft QNH and about 400ft below the cloud base. As he came round towards the south he saw another aircraft coming straight towards him, perhaps just a few feet lower, in the left 11 o'clock position at a range of 100-200m. It was so close there was no time to roll out of the turn; his instinctive reaction, as the only option, was to pull up. The pilot noted that his circling speed would have been around 50kt so he probably slowed to around 40kt, near the stall, which gained just a little height as the other aircraft flew directly under him. He continued the turn and saw the other aircraft continuing on a course of about 330°, wings level. It appeared to be a mottled grey colour, perhaps with twin propellers, but he could not be sure of that. The pilot noted that it all happened so quickly, he could offer no more information. He continued the flight and landed back at Challock about 30min later, when he felt more able to do so.

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

THE DA62 PILOT reports the aircraft was on a pre-arranged training flight for the procedural ILS RW21 at Lydd and on a procedural service from Lydd Information. Whilst established on the outbound leg of the alternate procedure (LZD 360) and in level flight, a good lookout was being maintained by the instructor (front right-hand seat) and another pilot who was an observer on this flight (rear left-seat). The instructor is familiar with the area and the potential conflict with traffic, so was ensuring a very good lookout, assisted by the accurate flying from the trainee in the left front seat (pilot flying), which enabled a better lookout. The scan was 8sec outside the aircraft, 2sec inside. On the scan previous to the conflict, it was noted by the instructor that no aircraft were visible; however, the aircraft was only 50ft below the cloudbase, which was scattered to broken stratocumulus. Visibility below the cloud was good and 3200ft was being maintained in accordance with the procedure. On looking back out after the 2sec

¹ Both pilots reported VMC but were operating above 3000ft amsl and reported within 1000ft vertically of cloud. They were therefore operating in IMC and consequently under IFR.

scan inside, the instructor observed a glider, in what appeared to be a 5° nose down attitude, in his 1 o'clock heading directly at the aircraft, no more than 100-150m away. It appeared to have descended out of the cloud, but may have been hidden behind the uneven base on the previous lookout scan. The instructor immediately applied aggressive forward pressure on the control stick for avoiding action; at the same time the glider banked sharply left. The closest the two came was around 20ft vertically and 10m horizontally. The instructor noted that he was an experienced formation pilot and was used to judging close distances in the air and that the DA62's TAS showed no contacts at the time.

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

THE LYDD CONTROLLER reports that an Airprox was not declared on frequency, the glider pilot was not in contact with Lydd, and he had no recollection of such an occurrence.

Factual Background

The weather at Lydd was recorded as follows:

METAR EGMD 191250Z 09008KT 060V120 9999 SCT036 18/12 Q1031=

Analysis and Investigation

UKAB Secretariat

The Shark and DA62 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard². If the incident geometry is considered as converging then the DA62 pilot was required to give way to the Shark³. The requirement to hold an instrument rating if flying under IFR is contained in a flying licence. A glider pilot is not required to hold a national or EASA licence and consequently is not required to hold an instrument rating in order to fly under IFR.

BGA

Forward visibility near cloudbase is often limited, limiting the effectiveness of see and avoid. This encounter would likely have been avoided by compatible EC equipment in the aircraft involved.

The BGA encourage gliding sites operating in the vicinity of other airfields to develop appropriate coordination procedures.

Summary

An Airprox was reported when a HpH 304 Shark S glider and a DA62 flew into proximity near Ashford at 1255Z on Thursday 19th September 2019. Both pilots were operating under IFR in IMC, clear of cloud but in proximity to the cloud base, the DA62 pilot in receipt of a Procedural Service from Lydd and the Shark pilot not in receipt of a FIS but listening out on the Challock gliding frequency.

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 air traffic controller 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

² SERA.3205 Proximity.

³ SERA.3210 Right-of-way (c)(2) Converging.

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 air traffic control factors and noted that the Lydd Offset ILS/DME RWY 21 procedure passed in very close proximity to Challock gliding site. Although the DA62 pilot was operating under a Procedural Service, the Lydd controller was not aware of the location of the glider (**CF2**) and so could not pass Traffic Information or otherwise deconflict the DA62 (**CF3**). Members noted that some military ATSU's were equipped with a FLARM monitor in the Control Tower and, on observing a primary only radar contact, a controller could use observed FLARM information to pass Traffic Information. It was acknowledged that the Lydd controller did not have access to surveillance and so could not first observe a primary contact but members wondered whether FLARM could be used nonetheless to inform and improve SA to everyone's benefit.

Some members thought the glider pilot may have been able to call Lydd to advise of his position but the Board noted that many glider pilots were not in possession of an R/T licence and so were not permitted to communicate on a frequency other than that allocated to the gliding community. In any case, members thought that the glider pilot was not likely to have been aware of the proximity of the Lydd ILS procedure and therefore not have felt a need to communicate with Lydd given his range from the airport.

The Board felt that the proximity of operations between the 2 units was not desirable without some form of coordination or understanding between Challock and Lydd (**CF1**, **CF4**). Consequently, the Board resolved to recommend that, 'Kent Gliding Club and Lydd Airport establish a Letter of Agreement to address the risk of concurrent activities in the same volume of airspace'.

In the event, neither pilot was aware of the other aircraft's proximity (**CF5**) and, although each was fitted with a TAS, they were not compatible and therefore did not alert on each other (**CF6**). The final hole in the 'swiss cheese' was provided by marginal visibility conditions (**CF7**) when operating close to the cloud base and the consequent late visual sighting by both pilots. Some members felt that pilots operating under the premise of see-and-avoid in Class G airspace should ensure they have sufficient in-flight visibility in order to be able to 'see' at a range in order to take timely avoiding action and in turn to be seen; they argued that neither pilot had sufficient time to react and so, in accordance with good 'defensive flying' practices, would have been better served by operating at a greater distance from the cloud structure.

Turning to the risk, the Board agreed that neither pilot saw the other aircraft until at a very late stage (**CF8**). Members discussed the pilots' reports and the radar/GPS data-derived estimate of CPA and agreed with the pilots that the risk of collision had been high, in fact, to the extent that this had been a situation where separation had been reduced to the bare minimum and which only stopped short of an actual collision because providence had played a major part in the aircraft not colliding.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISKContributory Factors:

	2019282		
CF	Factor	Description	Amplification
	Ground Elements		
	• Regulations, Processes, Procedures and Compliance		
1	Organisational	• Organisational Documentation and Publications	Inadequate regulations or procedures
	• Situational Awareness and Action		
2	Contextual	• Situational Awareness and Sensory Events	Generic, late, no or incorrect Situational Awareness
3	Human Factors	• Conflict Detection - Not Detected	
	Flight Elements		
	• Regulations, Processes, Procedures and Compliance		
4	Organisational	• Flight Operations Documentation and Publications	Inadequate regulations or procedures
	• 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: A.

Recommendation: Kent Gliding Club and Lydd Airport establish a Letter of Agreement to address the risk of concurrent activities in the same volume of airspace.

Safety Barrier Assessment⁴

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

Ground Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Lydd Offset ILS/DME RWY 21 approach procedure exists in close proximity to the overhead of Challock gliding site.

Situational Awareness of the Confliction and Action were assessed as **not used** because the glider was not known traffic to the Lydd controller.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the DA62 crew were unaware of the proximity of the ILS procedure to Challock gliding site.

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

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot was aware of the proximity of the other aircraft until visually sighted at a very late stage.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the aircrafts' warning systems were not compatible.

See and Avoid were assessed as **ineffective** because neither aircraft was sighted until at a very late stage, such that avoiding action had little material effect on increasing separation at CPA.

