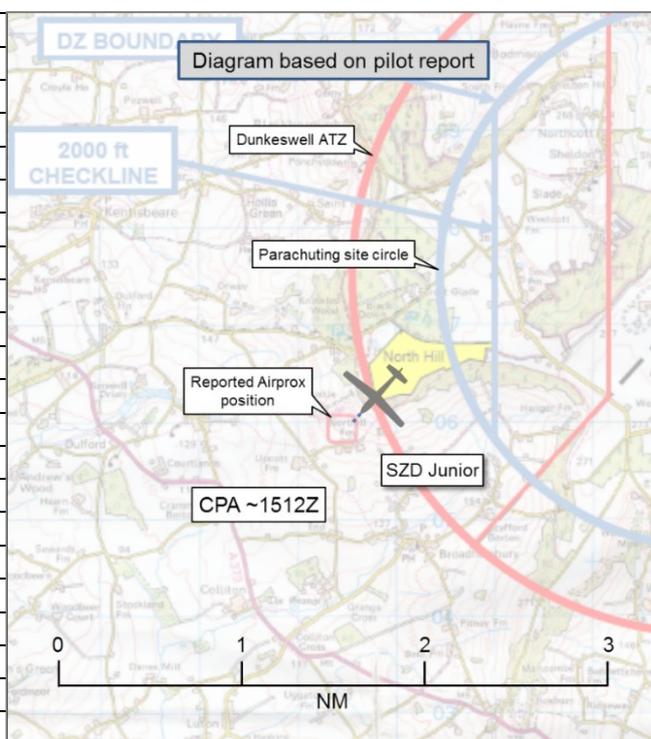


## **AIRPROX REPORT No 2019298**

Date: 19 Oct 2019 Time: 1512Z Position: 5051N 00317W Location: 1km SW North Hill gliding site

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	SZD Junior	Parachutist
Operator	Civ Gld	Civ Para
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	N/A
Service	None	None
Provider	(North Hill)	N/A
Altitude/FL	NK	NK
Transponder	Not fitted	Not fitted
<b>Reported</b>		Not reported
Colours	White, red	
Lighting	Not fitted	
Conditions	VMC	
Visibility	NK	
Altitude/FL	2100ft	
Altimeter	QFE (NK hPa)	
Heading	'SW'	
Speed	40kt	
<b>Separation</b>		
Reported	0ft V/100ft H	NK
Recorded	NK	



**THE SZD JUNIOR PILOT** reports that he winch-launched to 1200ft, found a thermal and climbed to 2100ft, which was 50-100ft below the cloud base. His position was about 500ft from the southwest edge of North Hill gliding site and there was blue sky about 500ft to the northwest. He then turned onto a southwest heading and flew at 40kts towards another potential thermal source when he saw a black and green or yellow striped parachute 'drop out of the cloud' in the 11 o'clock position and approximately 100ft away. He estimated the range from the fact that he could see the parachutist's face and the parachute was about a hand-width size in his canopy. The parachutist was wearing a black jumpsuit with green/yellow trim, was performing a spiral dive of some kind and consequently was flying very fast. The parachutist almost immediately dropped below him. There was no opportunity to take avoiding action. The glider pilot was concerned that there would be more parachutes dropping out of the cloud so he turned northwest towards the clear sky, deployed his airbrakes to lose height and dived to increase speed in order to reach clear sky quickly. After reaching clear sky, he had a good lookout and then attempted to resume thermaling. The Airprox was also witnessed by a fellow pilot who was flying on a southerly heading along the ridge on the western edge of North Hill.

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

**THE PARACHUTIST** did not respond to a UKAB request to submit an Airprox report but had already submitted a BPA form 118 (Incident/Malfunction/Deploy Problem Report). He stated, 'Full view of PLA [Parachute Landing Area] on exit, FL150, full canopy 5000ft agl, entered broken cloud 4500ft agl approx., 1500ft flew away from PLA + North Hill gliders [so] as to not overfly their airspace. Landed in farmers field upwind/south of North Hill.'

**THE DUNKESWELL CHIEF PARACHUTING INSTRUCTOR** reports that the [para-dropping] aircraft had completed a standard para-drop from FL150 with 19 jumpers on board, 18 jumpers landed on the PLA (Dunkeswell) [and] one jumper descended through broken cloud and decided to land onto an open field to avoid flying close to North Hill gliding site and avoid 2 gliders. The parachutist involved was

unfortunate to fly his parachute away from Dunkeswell after opening due to some broken cloud; he made the correct decision to land safely away from North Hill gliding site.

## Factual Background

The weather at Exeter was recorded as follows:

METAR EGTE 191520Z 27006KT 240V300 9999 FEW010 FEW030TCU 13/07 Q1002=

METAR EGTE 191450Z 29006KT 250V320 9999 FEW010 SCT030 14/08 Q1002=

## Analysis and Investigation

### UKAB Secretariat

The circle around parachuting sites on CAA ½ million scale VFR charts is included solely to highlight the AIP description of the lateral limits of a parachute jumping site. Despite common use of the term 'Drop Zone', there is no zone or controlled or regulated airspace associated with a civilian parachute jumping site, other than airspace that may already exist in the vicinity of the site.

Article 23 of the ANO 2016 states that 'any parachute including a parascending parachute' is exempt from the provisions of the ANO 2016, apart from the following articles:

PART 1 Interpretation and categorisation

CHAPTER 1 Interpretative matter

2 (Interpretation)

PART 5 Operations

CHAPTER 3 Specialised activities

91 (Dropping articles for purposes of agriculture etc. and grant of aerial application certificates)

CHAPTER 4 Other aerial activities

92 (Mooring, tethering, towing, use of cables, etc.)

94 (Small unmanned aircraft)

95 (Small unmanned surveillance aircraft)

PART 10 Prohibited behaviour, directives, rules, powers and penalties

CHAPTER 1 Prohibited behaviour

239 (Power to prohibit or restrict flying)

241 (Endangering safety of any person or property)

CHAPTER 4 Powers and penalties

257 (CAA's power to prevent aircraft flying) (apart from 257(2)(a))

The requirements to comply with the Rules of the Air are stated at Article 249 and as such, a person under a parachute, including a parascending parachute, is not required to comply with the Rules of the Air 2015. However, Article 241 specifies that 'A person must not recklessly or negligently cause or permit an aircraft to endanger any person or property.' SERA defines an aircraft as 'any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface'. The ANO 2016 Schedule 1 defines a parascending parachute as,

"Parascending parachute" means a parachute which is towed by cable in such a manner as to cause it to ascend.'

The British Parachute Association (BPA) British Skydiving Operations Manual (Fourth re-write December 2019) states at Section 8 part 3 (Cloud and Visibility):

**3.1 Cloud**

Skydivers may not leave the aircraft if, at the point of exit, the ground between the opening point and the intended landing area is not visible.

**3.2 Visibility.**

The minimum flight visibility must be at least 5km.'

## Comments

**THE DEVON AND SOMERSET GLIDING CLUB (DSGC) SAFETY AND AIRSPACE COORDINATION OFFICER** stated the following: North Hill airfield is [exclusively] used for gliding activities, is within Dunkeswell ATZ and about 25% covered by a parachuting DZ centred on Dunkeswell. DSGC has a letter of agreement with the operator of Dunkeswell giving them freedom to use the western third of the ATZ without making RT contact, and each party stays within its own area. DSGC had a Code of Practice with the previous parachuting operation to allow use of some of the DZ, but until now DSGC has not been able to gain agreement from the current operator. On the day of these incidents there was a steady westerly breeze and a rapid cycling of 2/8ths to 6/8ths cloud with a base of around 2000ft QFE. A lot of the cloud was convective allowing thermal soaring to cloudbase. It is normal for gliders local soaring their home site to try to always stay upwind of the airfield. At the time of the incident there was a large, dark convective cloud above the western half of North Hill airfield and extending further west, there was plenty of clear air around this cloud. He was on the ground at the time of the incidents, looking up worrying about a number of parachutes emerging from cloudbase above the airfield, but had not realised that there had been some near misses until sometime later when [he was] handed a hand-written report. This sort of event has been worrying DSGC, none having been this close before, but [the club] have made no progress with coordination with the parachuting organisation.

### BGA

It is disappointing that Devon & Somerset Gliding Club (DSGC) and the parachuting operator based at Dunkeswell do not have a current agreement about safely sharing this multi-purpose airspace in order to avoid this kind of conflict. We understand that efforts over a number of years by DSGC to reach such an agreement have not borne fruit.

### BPA

Although BPA Operations Manual regulations do not specifically state that descent through cloud is prohibited, the requirement to be able to see the landing area before exit implies that there should be no cloud between the point of exit and the landing area. No skydiver would intentionally wish to descend through cloud because of the possible dangers, especially near a gliding site. However, as with all human activity, occasional misjudgement may occur.

## Summary

An Airprox was reported when an SZD Junior glider and a parachutist were reported to have flown into proximity near North Hill gliding site at about 1512Z on Saturday 19<sup>th</sup> October 2019. The glider pilot was operating under VFR in VMC, listening out on the North Hill launch point frequency.

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

Information available consisted of reports from the SZD Junior pilot, radar photographs/video recordings and reports from the appropriate operating authorities. 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 degree to which DSGC and the parachuting company had coordinated their activities. The Board established that formal coordination had existed between DSGC and the former parachuting operator at Dunkeswell in the form of a Code of Practice but that this had been agreed in 1999 and that subsequent attempts to update the agreement with the current parachuting operator on a formal basis had not been fruitful. [UKAB Note: Email exchanges subsequent to the Board meeting established that representatives of DSGC and the parachute training organisation held a meeting on 25<sup>th</sup> October at which procedures were verbally agreed and subsequently actioned but that a formal written agreement was not forthcoming]. After further discussion, the Board agreed that this was not an acceptable state of affairs (**CF1**) and resolved to recommend that, 'Dunkeswell airfield and the Devon And Somerset Gliding Club reach agreement to include parachuting operations within their Letter of Agreement'. Members then discussed the glider pilot's and the parachutist's actions. It was apparent that the parachutist had misjudged his descent (**CF2**) and that he had subsequently elected to land away from the PLA whilst also trying to avoid the airspace at North Hill. The end-result had been that the parachutist had appeared to land at a position about 2 miles upwind of the designated PLA and in proximity to the DSGC gliding site (**CF3**). It was clear that neither pilot or parachutist could have been aware of the proximity of the other until visually sighted (**CF4**) and that the parachutist's descent through cloud had negated the barrier of see-and-avoid (**CF5**). This resulted in the glider pilot seeing the parachutist too late to take avoiding action (**CF6**), in effect a non-sighting. The parachutist did not mention sighting of the glider in close proximity in his BPA report so the Board surmised that he had not seen it. Discussing the risk, members agreed that the glider pilot's reported separation and associated detailed description of the parachutist indicated that they had been in very close proximity. Given that the parachutist had just emerged from the cloud-base, was unsighted on the glider, and with insufficient time for the glider pilot to take avoiding action, the Board agreed that collision had only been avoided by providence, a Risk category A.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

	2019298		
CF	Factor	Description	Amplification
	<b>Flight Elements</b>		
	<b>• Regulations, Processes, Procedures and Compliance</b>		
1	Organisational	• Flight Operations Documentation and Publications	Inadequate regulations or procedures
	<b>• Tactical Planning and Execution</b>		
2	Human Factors	• Action Performed Incorrectly	Incorrect or ineffective execution
3	Human Factors	• Aircraft Navigation	Flew through promulgated and active airspace or sporting site
	<b>• Situational Awareness of the Conflicting Aircraft and Action</b>		
4	Contextual	• Situational Awareness and Sensory Events	Generic, late, no or incorrect Situational Awareness
	<b>• See and Avoid</b>		
5	Contextual	• Poor Visibility Encounter	One or both aircraft were obscured from the other
6	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots

Degree of Risk: A.

Recommendation: Dunkeswell airfield and the Devon And Somerset Gliding Club reach agreement to include parachuting operations within their Letter of Agreement.

Safety Barrier Assessment<sup>1</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** was assessed as **partially effective** because there is no formal coordinating agreement between the gliding and the parachute jumping operations.

**Tactical Planning and Execution** was assessed as **partially effective** because the parachutist misjudged his descent and did not land at the Dunkeswell Parachute Landing Area.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the glider pilot was not aware of the parachutist until visually sighted and the Board surmised that the parachutist was equally unaware.

**See and Avoid** were assessed as **ineffective** because the glider pilot saw the parachutist at such a late stage that it was effectively a non-sighting, i.e. nothing could be done to increase separation at CPA, and the parachutist did not see the glider.

Airprox Barrier Assessment: 2019298		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	✗	✗					
<b>Key:</b> <span style="margin-left: 20px;">Full</span> <span style="margin-left: 20px;">Partial</span> <span style="margin-left: 20px;">None</span> <span style="margin-left: 20px;">Not Present/Not Assessable</span> <span style="margin-left: 20px;">Not Used</span>								
Provision: <span style="margin-left: 20px;">✓</span> <span style="margin-left: 20px;">⚠</span> <span style="margin-left: 20px;">✗</span> <span style="margin-left: 20px;">●</span> <span style="margin-left: 20px;">○</span> Application: <span style="margin-left: 20px;">✓</span> <span style="margin-left: 20px;">⚠</span> <span style="margin-left: 20px;">✗</span> <span style="margin-left: 20px;">●</span> <span style="margin-left: 20px;">○</span> Effectiveness: <span style="margin-left: 20px;">■</span> <span style="margin-left: 20px;">■</span> <span style="margin-left: 20px;">■</span> <span style="margin-left: 20px;">■</span> <span style="margin-left: 20px;">□</span>								

<sup>1</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).