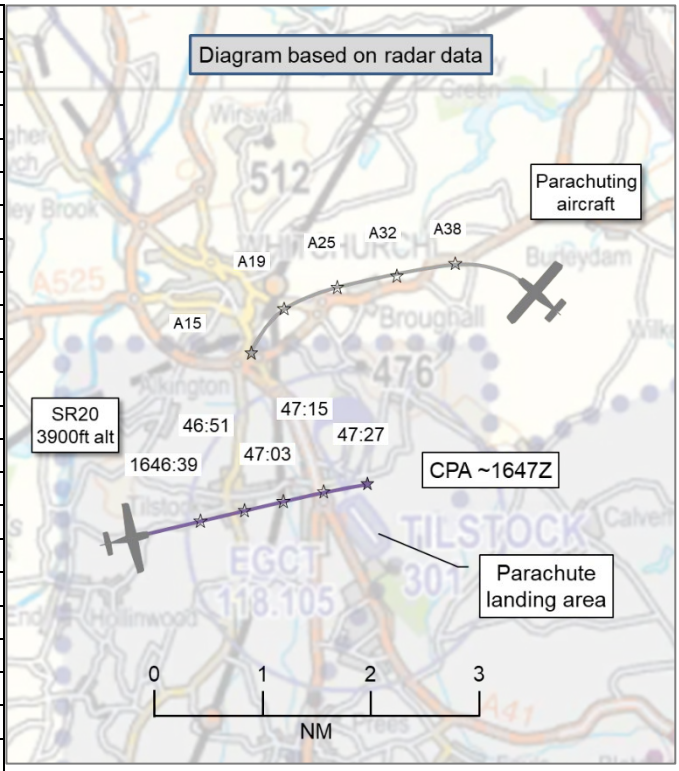
AIRPROX REPORT No 2022039

Date: 26 Mar 2022 Time: 1647Z Position: 5256N 00239W Location: Tilstock

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	3 x Parachutists	SR20
Operator	Civ Para	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	N/A	VFR
Service	None	Listening Out
Provider	N/A	Shawbury Zone
Altitude/FL	NR	3900ft
Transponder	N/A	A, C, S+
Reported		
Colours	Various	White
Lighting	N/A	Strobe
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	~3400ft	4000ft
Altimeter	N/A	QNH (1035hPa)
Heading	N/A	070°
Speed	N/A	120kt
ACAS/TAS	N/A	PilotAware
Alert	N/A	N/A
Separation at CPA		
Reported	0ft V/300m H	1000ft V/0.5NM H
Recorded	NK	



THE PARACHUTISTS' Airprox was reported by the parachuting organisation's Chief Pilot. Prior to the start of parachute operations (0900Z), phone notifications advising of parachute activity were made to the following agencies: Scottish ATC Prestwick, Swanwick Military and Shropshire Aeroclub Tower. The parachute drop pilot notified the 'D/Z' of the intended parachute drop in accordance with company SOPs. At about 1645, the parachutists exited the parachute aircraft from FL100. The drop-zone was clear at this time and permission to drop was broadcast on the Tilstock A/G frequency by the D/Z controller. Shortly after, an SR20 was observed flying through the overhead from west to east at the same height as the inflated canopies. The parachutists attempted to avoid by turning away from the SR20's flight-path.

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

THE SR20 PILOT reports on a navigation leg from Dolgellau to Stoke-on-Trent. The route was over the Shawbury MATZ at 4000ft and they were tuned to Shawbury Zone following an initial contact attempt. Shawbury was closed on Saturday with no ATC/LARS available, but they stayed on the frequency whilst flying in the vicinity of the zone. They were aware that the route was crossing a parachute drop zone but as this zone was fully within the Shawbury MATZ they made a wrong assumption about the relation between the two; since Shawbury Zone was not operational at the time, they assumed that the parachute drop zone was also not active. In addition, there was traffic north of Shawbury and also just north of their flight path which also contributed to the decision not to route around the area. Shortly upon entering the parachute drop zone (approx. 1NM in) they saw a parachute about 1000ft below and 0.5NM to the right. As it was already well below, and being concerned with the possibility of other parachutes in the vicinity, they decided to avoid any manoeuvres that could lead to confusion and continued in straight and level flight at 4000ft. Both the passenger and pilot increased their lookout scan but had no further visual contact.

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

Factual Background

The weather at Shawbury was recorded as follows:

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METAR EGOS 261650Z AUTO 08010KT 9999 FEW050/// 17/05 Q1032=
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Analysis and Investigation

UKAB Secretariat

Tilstock is referenced in the UK AIP ENR 5.5 as a parachute jumping site, as follows:

Designation Lateral limits	Vertical Limits	Operator/User Tel No	Remarks Activity times
1	2	3	4
Parachute jumping			
TILSTOCK PARACHUTE SITE, SHROPSHIRE A circle, 1.5 NM radius, centred at 525551N 0023905W	Upper limit: FL85 Lower limit: SFC	Phone: Prestwick Centre, Ops Supervisor: 01294-655300 and Shawbury ATC Watch Supervisor: 01939-250351 (ext 7232).	Activity notified on the day to Prestwick Centre, Ops Supervisor and Shawbury ATC (weekdays). Tilstock DZ contact: 118.100 MHz. Alternative contact: Shawbury Zone: 133.150 MHz (weekdays). Drops may be made up to FL150 with Scottish Control (Prestwick) permission. Hours: Normally during daylight hours daily 0800-2000 (0700-1900); and other times as notified.

The circle around parachuting sites on CAA ½ million scale VFR charts depicts the 'lateral limits' of a parachute jumping site. Despite common use of the term 'Drop Zone' or 'D/Z', 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 and with which its notified lateral or vertical limits overlap. 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))
  - 265 (Offences and penalties) [in relation to the above articles]

The requirements to comply with the Rules of the Air are stated at Article 249, an article from which a parachutist is exempt, and as such a person under a 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'. (UK) 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 SR20 pilot had responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[1] and the parachutists were required not to recklessly or negligently cause or permit an aircraft to endanger any person or property.

Summary

An Airprox was reported when three parachutists and an SR20 flew into proximity at Tilstock at 1647Z on Saturday 26th March 2022. The SR20 pilot was operating under VFR in VMC, listening out on the Shawbury Zone frequency, but not in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers involved 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.

Members first discussed the SR20 pilot's actions and agreed that their knowledge as to the activity at Tilstock parachuting site had been somewhat lacking and consequently that they had applied incorrect assumptions in their planning and execution of the flight. Ultimately, their assumption that activity at Tilstock parachuting site was associated with the status of Shawbury's activity was erroneous (**CF7**). To that extent, the Board agreed that the SR20 flight had been insufficiently briefed (**CF6**) and that the SR20 pilot had flown through promulgated and active airspace (**CF3**) because they were operating under the mistaken assumption that Tilstock parachuting site was not active (**CF5**). Members commented that this event underlined the value of a defensive approach to flying; the SR20 pilot could have made a small deviation to track, at no discernible expense in time or cost, thereby remaining clear of the parachuting site and avoiding potential confliction whether the site was active or not. It was also noted that radio communication with London Information and the establishment of a Basic Service would have been of much greater value than listening out on a frequency that was known to be inactive (**CF4**) and would have been available for the SR20 pilot to query the status of activity at Tilstock parachuting site. Additionally, Tilstock parachuting site has a promulgated contact frequency, although the Board noted that the frequency on the VFR chart (118.105MHz) was not the same as that in the UK AIP (118.100MHz) (**CF2**). With the introduction of 8.33kHz voice channel spacing, it was assumed that the VFR chart frequency was the correct frequency and would have been available for the SR20 pilot to make direct contact (**CF4**) and to establish the status of Tilstock parachuting site before flying in to confliction with descending parachutists.

In the event, the Tilstock D/Z controller had no situational awareness as to the approaching SR20 (**CF1**) and so could not communicate the need to delay drop to the parachuting aircraft pilot. The EC barrier was ineffective (**CF8**), leaving see-and-avoid as the remaining safety barrier. Although the parachutists saw the SR20 and manoeuvred away, and the SR20 pilot reported seeing a parachutist, the Board felt that the narratives and reported separations at CPA reflected a situation where the SR20 pilot had not seen closer parachutists, effectively a non-sighting (**CF9**) and that that situation, together with the separation reported by the Chief Pilot, was such that safety had been much reduced (**CF10**).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022039			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness

[1] (UK) SERA.3205 Proximity.

	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
2	Organisational	• Flight Operations Documentation and Publications	Flight Operations Documentation and Publications	Inadequate regulations or procedures
	• Tactical Planning and Execution			
3	Human Factors	• Aircraft Navigation	An event involving navigation of the aircraft.	Flew through promulgated and active airspace, e.g. Glider Site
4	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
5	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
6	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
	• Situational Awareness of the Conflicting Aircraft and Action			
7	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance			
8	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			
9	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
	• Outcome Events			
10	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: B.

Recommendation: Nil.

Safety Barrier Assessment[2]

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

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **ineffective** because the Tilstock parachute jumping site personnel had no situational awareness of the approaching SR20.

Electronic Warning System Operation and Compliance were assessed as **not used** because the Tilstock parachute jumping site had no EC provision.

Flight Elements:

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

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Tilstock frequency was notified differently on the VFR chart and in the UK AIP.

Tactical Planning and Execution was assessed as **ineffective** because the SR20 pilot incorrectly assumed that the Tilstock parachute jumping site was not active and hence planned to fly within its notified lateral and vertical limits

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the SR20 pilot's situational awareness of the status of activity at the Tilstock parachute jumping site was incorrect.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the parachutists were not equipped with electronic conspicuity equipment.

See and Avoid were assessed as **partially effective** because the parachutists observed the SR20 in time to take late avoiding action.