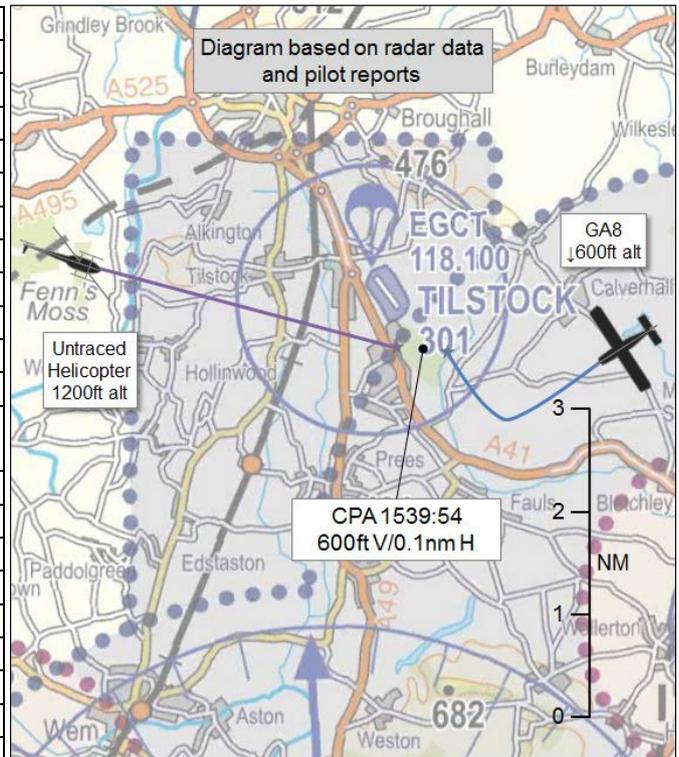


**AIRPROX REPORT No 2016233**

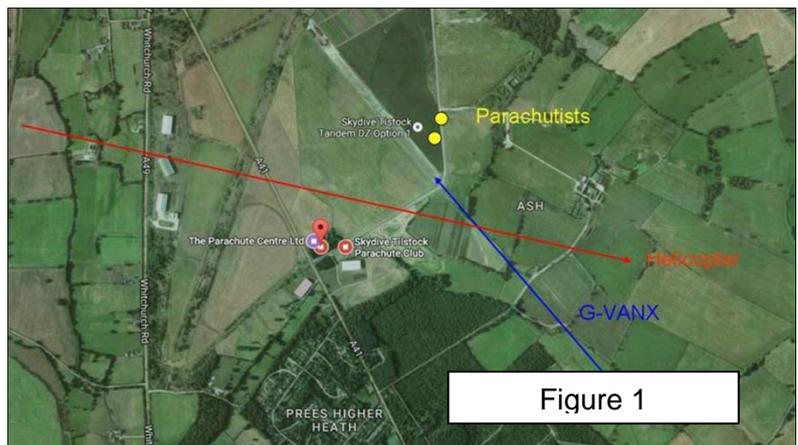
Date: 12 Nov 2016 Time: 1539Z Position: 5255N 00239W Location: Tilstock

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	GA8 Airvan	Helicopter
Operator	Civ Pte	Unknown
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	
Service	AGCS	
Provider	Tilstock	
Altitude/FL		
Transponder	A, C	A, C
Reported		
Colours	White	
Lighting	Stobes, Landing, Taxi	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	400ft	
Altimeter	QFE (1010hPa)	
Heading	320°	
Speed	70kt	
ACAS/TAS	Not fitted	
Separation		
Reported	250ft V/300m H	
Recorded	600ft V/0.1nm H	



**THE AIRVAN PILOT** reports that he had just dropped 7 parachutists and was on final approach to land at Tilstock RW32 when he saw a helicopter on a relative bearing of 20° to his left, about 400m away and 200ft above, heading towards him. At the same time, the Tilstock A/G operator warned him about the potential conflict. At that time there were parachutists about to land on the Tilstock parachute landing area, which is adjacent to RW32. When he saw the helicopter he was at about 400ft AGL, 1nm final, and had all his lights on. He continued his approach and the helicopter overflew him. He reported that it did not take any evasive action and appeared to be unaware of the Airvan, or the parachutists in the air. He also commented that the helicopter appeared to be within the Tilstock 1.5nm radius 'ATZ'. The event was witnessed by some observers on the ground, one of whom filmed it on his mobile phone. Figure 1 is a diagram given by the Airvan pilot describing the relative positioning of the two aircraft as he perceived it.



He assessed the risk of collision as 'Medium'.

**THE HELICOPTER PILOT** could not be traced.

**Factual Background**

The weather at Shawbury was recorded as follows:

METAR EGOS 121450Z AUTO 35004KT 9999 FEW022/// 12/09 Q1014=

Details of Tilstock are listed in the UK AIP as:

## Analysis and Investigation

TILSTOCK, SHROPSHIRE A circle, 1.5 nm radius  
centred at 525551N 0023905W

Upper limit: FL85

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.  
Normally during daylight  
hours daily 0800-2000  
Winter (Summer 1hr  
earlier); and other times  
as notified.

## UKAB Secretariat

The Airvan and helicopter pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. 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<sup>2</sup>. Tilstock does not have an ATZ, but is marked on the VFR charts by a 1.5nm warning circle indicating the para-drop site. The UK AIP<sup>3</sup> has the following advice for aircraft transiting close to para-drop sites:

Visual sighting of free-falling bodies is virtually impossible and the presence of an aircraft within the Drop Zone may be similarly difficult to detect from the parachutists' point of view. Parachute dropping aircraft and, on occasions, parachutists may be encountered outside the notified portion of airspace. Pilots are strongly advised to give a wide berth to all such Drop Zones where parachuting may be taking place.

Figure 2 is a radar screen shot taken from the NATS area radar at 1539:50, the helicopter is squawking 7000 and the Airvan on final approach is squawking 0033. The area radar does not have the para-drop circle marked on the map; Tilstock is EGCT. Figure 3 taken at 1539:55 shows the helicopter crossing over the top of the Airvan, 600ft above and 0.1nm laterally.

<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3225 Operation on and in the Vicinity of an Aerodrome.

<sup>3</sup> UK AIP 5.5.4.3



Figure 2: 1539:50



Figure 3: 1539:55

## Summary

An Airprox was reported when an Airvan and a helicopter flew into proximity at 1539 on Saturday 12<sup>th</sup> November 2016. The Airvan pilot was operating under VFR in VMC, in receipt of an Air to Ground Service from Tilstock. The helicopter pilot could not be traced.

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

Information available consisted of reports from the Airvan pilot and radar photographs/video recordings.

The Board noted the comments made by the Airvan pilot regarding the Tilstock 'ATZ' and wished to make it clear to all parachuting clubs that the circle marked on the VFR charts is not an ATZ, or even an avoidance zone. The circle simply denotes that parachute dropping takes place at that location, and the circle size is purely related to making it conspicuous on the chart. Therefore, the helicopter pilot was entitled to fly where he did, albeit the Board did not advocate this as a sensible way to transit in the vicinity of a parachute dropping site. The UK AIP states that pilots are strongly advised to give parachute dropping airfields a wide berth, but without a report from the helicopter pilot it was impossible to know whether he was visual with the Airvan and/or the parachutists, or whether he was in fact unaware of the site. Either way, the Board thought that the helicopter pilot had displayed a woeful lack of airmanship in his choice of routing. Some members commented on the inadvisability of flying across an airfield's approach path at about 900ft agl, 1nm out, and they speculated about whether this indicated that the helicopter pilot was unaware of both Tilstock and the Airvan on final approach.

For his part, the Airvan pilot was visual with the helicopter and, although surprised by its routing, had enough time to assess that avoiding action was not necessary so he continued with his approach. The Board viewed the mobile phone footage of the incident but, other than confirming that the 2 aircraft had come into proximity, unfortunately it did not provide any additional information to that gained from the radar recordings.

Without the helicopter pilot's report, assessing the effectiveness of the safety barriers associated with this incident was somewhat problematic and the Board concluded that many of the potential barriers to Airprox were either not applicable or not assessable for this incident. What was known was that the Airvan pilot was not in receipt of an ATS and did not have any onboard collision avoidance system, whether this was also true for the helicopter pilot could not be known. Of the remaining barriers, the key factors were assessed as follows:

- **Flight crew pre-flight planning** was assessed as only **partially effective** at best because the helicopter pilot had not given the parachute dropping site a wider berth, which indicated that his flight planning may not have been particularly comprehensive.
- **See and Avoid** was considered to have been **effective** because the Airvan pilot had seen the helicopter in time to assess that no action was necessary.

In determining the cause of the Airprox, the Board quickly agreed that the helicopter had flown too close to an active and promulgated Parachuting Site and into conflict with the GA8 Airvan. The risk was assessed as Category C; although safety had been degraded, CPA was 600ft vertically and about 200m laterally, and there had been no risk of collision because the Airvan pilot had seen the helicopter.

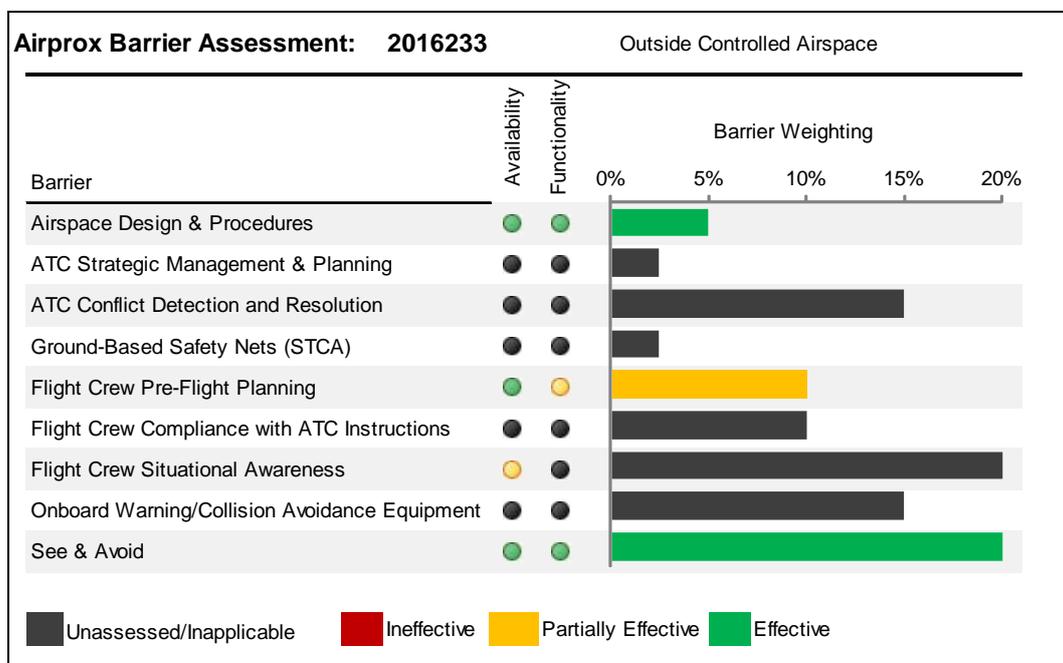
### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The helicopter flew too close to an active and promulgated Parachuting Site and into conflict with the GA8.

Degree of Risk: C.

#### Barrier Assessment<sup>4</sup>:

Modern safety management processes employ the concept of safety barriers that prevent contributory factors or human errors from developing into accidents. Based on work by EASA, CAA, MAA and UKAB, the following table depicts the barriers associated with preventing mid-air-collisions. The length of each bar represents the barrier's weighting or importance (out of a total of 100%) for the type of airspace in which the Airprox occurred (i.e. Controlled Airspace or Uncontrolled Airspace).<sup>5</sup> The colour of each bar represents the Board's assessment of the effectiveness of the associated barrier in this incident (either Fully Effective, Partially Effective, Ineffective, or Unassessable/Absent). The chart thus illustrates which barriers were effective and how important they were in contributing to collision avoidance in this incident.



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

<sup>5</sup> Barrier weighting is subjective and is based on the judgement of a subject matter expert panel of aviators and air traffic controllers who conducted a workshop for the UKAB and CAA on barrier weighting in each designation of airspace.