

AIRPROX REPORT No 2020008

Date: 19 Jan 2020 Time: 1411Z Position: 5229N 00145W Location: Bexhill-on-Sea, Sussex

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	MD 902	Kite
Operator	Civ Helo	Civ UAS
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	N/A
Service	Basic	None
Provider	Farnborough	
Altitude/FL	700ft	
Transponder	A, C, S	N/A
Reported		
Colours	Blue	
Lighting	Strobes, Nav	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1600ft	
Altimeter	NK (1046hPa)	
Heading	West	
Speed	140kt	
ACAS/TAS	TCAS I	
Alert	None	
Separation		
Reported	100ft V/200m H	NK
Recorded	NK	



THE MD 902 PILOT reports that he was experiencing a high workload, monitoring the parameters for engine checks, when he saw a kite approximately 300m ahead of him. It was off-shore and at an altitude directly in front of his track. He made an avoiding action turn to the right. He noted that when flying he used an App to display NOTAMs on his route and that normally the App updated the data in real-time, i.e. it did not need down-loading beforehand, but on this occasion it did not display the kite NOTAM. He was surprised, because it had not let him down before, so checked for, and found the kite NOTAM on-line on a different system later that day. He would not have flown through the area had he known about the kites. He tried to telephone the number on the NOTAM to apologise, but could not get an answer. He had subsequently been told by the CAA that the kite operator suggested he had collided with a kite, but he did not believe he had, he was certain he would have known if one had hit his aircraft and subsequent examination of the aircraft by his engineers had not found any damage.

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

THE KITE OPERATOR reports that they were conducting kite fighting at Bexhill-on-Sea and had issued a NOTAM. Between 1310 and 1330hrs they heard an aircraft noise coming from the right-hand-side and noticed a low-flying helicopter from a distance heading towards them. As the helicopter got closer he and a few others instructed both teams to start bringing their kites to a lower height to avoid any contact. He noticed the helicopter was flying really low, roughly around 1000-1200ft or even lower. Some of the kites were below 1000ft but some were above. All the kites were below the permitted height and were above and in front of them. They untethered any kites that were directly in path of the helicopter to avoid any contact. Most of the kites didn't come in contact with the helicopter, however he believed one did. The helicopter made contact and the kite became untethered and went with the wind into the sea. It didn't become entangled with helicopter at anytime. The player sustained minor cuts to his fingers and was attended to and taken care of instantly. The kite operator made contact with the kite-flying organiser who wasn't present at the scene and made him aware of the situation. The

organiser contacted the NOTAM office to confirm the details of the NOTAM and to report the situation. The helicopter continued on track, then made a 180° turn and went back to where it came from, but this time routed behind them. After about 30mins another helicopter came from the opposite direction, this time from the left. This helicopter was also flying lower than usual, but higher than the 1st helicopter. They managed to avoid the second helicopter. It was quite a nerve-wracking experience for everyone involved and they were worried about the safety of the helicopter and its occupants.

THE FARNBOROUGH LARS E CONTROLLER reports that he was working with LARS N and E banded. Traffic levels were relatively high on a sunny Sunday. At around 1415, the MD902 pilot, who was on a Basic Service, reported that he had encountered several kites on the coast around Bexhill (slightly outside the LARS E area), that he had been at 600ft and some of them were above him. The controller acknowledged the report and made a note for any oncoming controllers. The pilot of a second aircraft then spoke on the frequency stating that the kite area was as per the NOTAM, to which the MD902 pilot replied that it had been his error, no other comment was made and there was no reference to an Airprox.

Factual Background

The weather at Lydd was recorded as follows:

METAR EGMD 191350Z 36014KT 9999 FEW021 08/05 Q1044=

The following NOTAM was issued:

H0128/20 NOTAMN

Q)EGTT/QWCLW/IV/M/W/000/032/5050N00025E001

A)EGTT

B)2001190745

C)2001191630

E)KITE FLYING WI 1NM RADIUS 504944N 0002445E (COODEN, EAST SUSSEX).

MAX HGT 3000FT AGL. FOR INFO [REDACTED] OR [REDACTED].

2020-01-0166/ AS2

F)SFC

G)3200FT

Analysis and Investigation

NATS Investigation

The MD902 had taken-off from a private site for a local flight. It was identified and given a Basic Service on Farnborough LARS East. Due to very nice weather, high pressure and weekend traffic, the airspace was busy and workload was medium to high with more than 10 aircraft on frequency. The pilot had not reported their specific routing on the initial call to the Farnborough controller and the controller had not asked where they were planning to go. This was not a requirement of a Basic Service. The frequency was busy due to the good weather so the MD902 was not constantly monitored. The first time that the controller became aware that it had come into close proximity with the kites at Cooden was when it was reported on frequency. At 14:11:07 the pilot reported "*We're, um, we're just, er, inbound from the coast, eastbound now, er, just past Bexhill-on-sea, just for your information sir, if there is anybody routing down the coast today, we just past a lot of kites, up to, er, we were at 860ft, and they were above us sir.*" The controller acknowledged and another pilot responded with "*It's actually NOTAM-ed, I think you've just flown through a NOTAM*". It was apparent from the exchange on the frequency that the MD902 pilot was unaware of the NOTAM'd activity.

UKAB Secretariat

The NATS radar indicates that the MD902 flew within the vicinity of the kites twice, firstly, at 1336z, (see Figures 1 and 2), when the profile matched that described by the kite operator. The centre of the NOTAM is marked by the white cross. Figure 3 shows the MD902 at around 1410z, just before he reported the incident to the Farnborough controller.

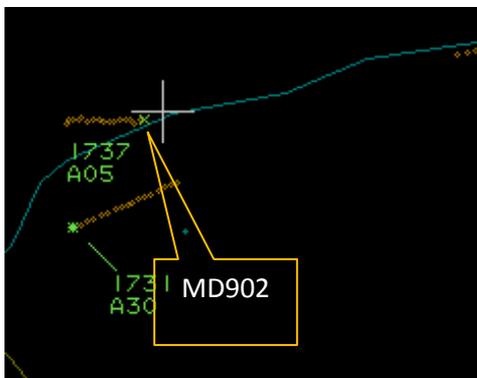


Figure 1: 1336:36



Figure 2: 1338.23

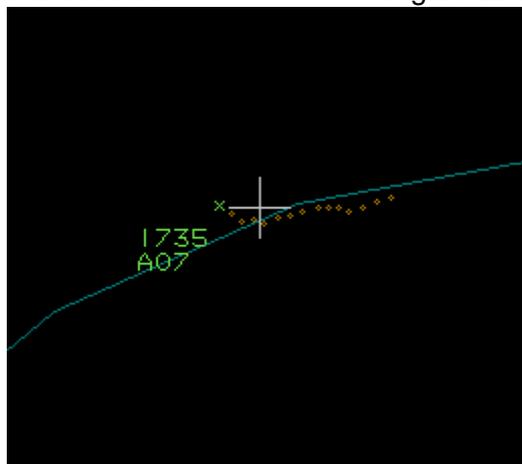


Figure 3:1410:50

A kite weighing not more than 2kg is exempt from the majority of the ANO¹ apart from a few articles, including Article 241, which states that a person must not recklessly or negligently cause or permit an aircraft to endanger any person or property². Article 241 is also applicable to the MD902 pilot, along with Article 240, to not recklessly or negligently act in a manner likely to endanger an aircraft or any person in an aircraft³.

Summary

An Airprox was reported when an MD902 flew into proximity with a kite at 1411z on Sunday 19th January 2020. The MD902 pilot was operating under VFR in VMC, and in receipt of a Basic Service from Farnborough. There had been a NOTAM issued about the kite flying activity.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the MD902 pilot and the kite operator, transcripts of the relevant RT frequencies, radar photographs/video recordings, a report from the air traffic controllers involved and reports from the appropriate ATC operating authorities. Relevant contributory factors

¹ The Air Navigation Order 2016 Article 23: Exceptions from the application of provisions of the Order for certain classes of aircraft.

² The Air Navigation Order 2016 Article 241: Endangering safety of a person or property.

³ The Air Navigation Order 2016 Article 240: Endangering safety of an aircraft.

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.

The Board first looked at the actions of the MD902 pilot, many of the pilot members opined that the use of Apps for flight planning made navigating through the NOTAM system much easier than looking through on-line, due to the sheer numbers of NOTAMs in force at any one time. However, they also had anecdotal evidence that from time-to-time some NOTAMs did not appear and so they urged pilots not to rely solely on such Apps, it remained the responsibility of the pilot to ensure pre-flight briefing was thorough. In this case, the MD902 pilot had not been aware of the NOTAM (**CF2, CF3**) and had flown through the area that the kites were flying. Members familiar with helicopter operations wondered on the type of power-checks that the pilot was conducting, noting that certain checks were quite time consuming and required the noting down of engine parameters which probably drew the pilot's attention away from look-out and into the cockpit (**CF6**), certainly he had not seen the kites on the first transit through the area (**CF8**). They noted that this was a busy piece of airspace and advised that if at all possible an observer should be utilised, either to make notes or to act as a look-out. Although the MD902 had been fitted with a TCAS I, it could not detect the kites (**CF5**) and the pilot did not receive any information from ATC and so had been denied situational awareness prior to seeing the kites in close proximity (**CF4, CF9**). Members wondered whether in general terms he may have been better conducting the flight at a higher level, if he had done so he could have requested a Traffic Service from ATC, which would have mitigated his reduced look-out, but noting that ATC also had no knowledge of the kites, they acknowledged that it would not have made any difference in this case (other than perhaps to have put him above the height of the kites) and so did not attribute this as a contributory factor.

Looking at the actions of the kite operators, they had issued a NOTAM to warn pilots about their presence, and had fortuitously heard and then seen the helicopter as it approached and were able to take action. Members noted that a NOTAM did not provide exclusive use of the airspace, but was there as a warning to pilots that activity was taking place.

Finally, turning to the role of ATC, Farnborough LARS were providing a Basic Service and as such were not required to monitor the flight of the MD902 (**CF1**). Members were told that the area of responsibility was so large that controllers did not routinely have NOTAMs displayed on their radar screens, nor could they be expected to remind pilots that they were approaching any such temporary activity, it was the sole responsibility of the pilot to ensure that he was fully briefed.

There was a wide and varied discussion when assessing the risk of the Airprox. Some members thought that this had been a very close encounter, with a possibility that the helicopter had struck a kite and they discussed whether the pilot would have known if he had collided with a kite, with members discussing anecdotal evidence of reports of helicopters landing with kite strings tangled around the aircraft without the pilot knowing about it. Others thought that the helicopter would have incurred damage if it had collided with the kite and thus, without any such damage, it was likely that the kites were further away from the helicopter than they appeared from the ground, and that it had been the down-wash from the helicopter that had caused the behaviour of the kites as described by the operators. The discussion went to a vote, with the majority deciding that safety was not assured; Risk Category B (**CF7**).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**Contributory Factors:**

2020008			
CF	Factor	Description	Amplification
Ground Elements			
• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Not required to monitor the aircraft under the agreed service
Flight Elements			
• Regulations, Processes, Procedures and Compliance			
2	Human Factors	• Flight Operations Documentation and Publications	Regulations and/or procedures not complied with
• Tactical Planning and Execution			
3	Human Factors	• Flight Planning and Preparation	
• Situational Awareness of the Conflicting Aircraft and Action			
4	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance			
5	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
• See and Avoid			
6	Human Factors	• Distraction - Job Related	Pilot looking elsewhere
7	Contextual	• Near Airborne Collision with Other Airborne Object	Unpiloted air vehicle
8	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots
9	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

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:

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the MD902 pilot was required to know that there was an active NOTAM to affect his route.

Tactical Planning and Execution was assessed as **ineffective** because the MD902 pilot flew through the NOTAM area.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the MD902 pilot was not aware of the kite flying activity and the kite operators only had generic situational awareness that the helicopter was in the vicinity.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TCAS on the MD902 could not detect the kites.

⁴ 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 **partially effective** because the kite operators saw the MD902 in sufficient time to take action the first time the helicopter flew passed, and the MD902 pilot saw the kites and took avoiding action on the second occasion.

Airprox Barrier Assessment: 2020008		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	⚠	⚠					
Key:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	✓	⚠	✗	⊖				
Application	✓	⚠	✗	⊖				
Effectiveness								