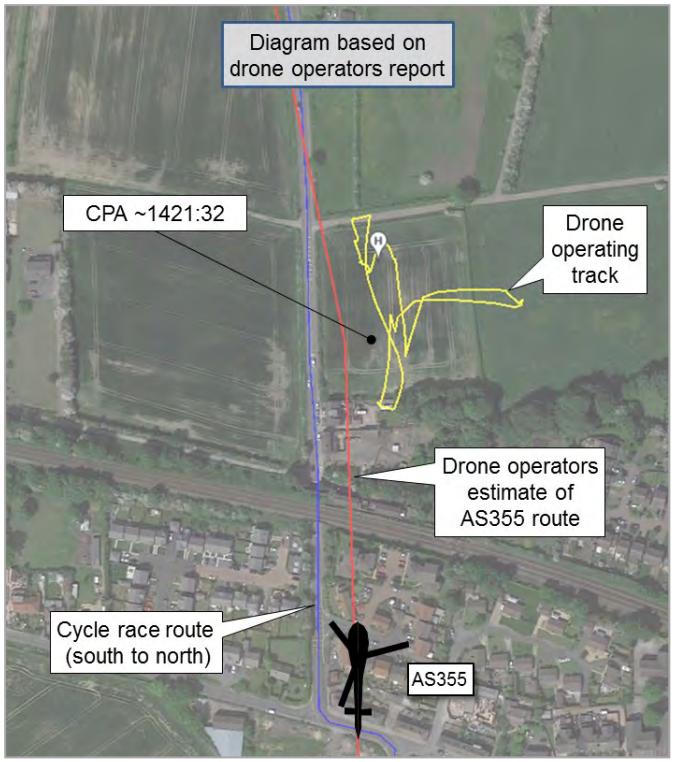
AIRPROX REPORT No 2018106

Date: 04 May 2018 Time: 0948Z Position: 5347N 00123W Location: Garforth

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Drone	AS355
Operator	Civ Comm	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Not reported
Provider	N/A	
Altitude/FL	NK	
Transponder	None	
Reported		
Colours	White, Red, Green	
Lighting	Strobe	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	550ft	
Altimeter	NK	
Heading	Hovering	
Speed	0kt	
ACAS/TAS	Not fitted	
Alert	N/A	
Separation		
Reported	150ft V/100m H	NK
Recorded	NK	



THE DRONE OPERATOR reports that he planned his task to be flown at 600ft agl and so his vertical EVLOS[1] procedures would be invoked. Amongst other things, those procedures require that he operates under a suitable NOTAM, which he requested on 23rd April and received an acceptance on 24th April (Figure 1). He carried out a task risk assessment on 1st May and identified the risk of an aerial incursion. His 'Preliminary Site Survey' document was prepared on 2nd May, this document is used to identify hazards & sensitivities at the operating site; nothing particularly concerning was found.

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-  H2001/18 NOTAMN

   Q)    EGTT/QWULW/IV/BO/W/000/009/5348N00123W001

   A)    EGTT                    B)          1805040900

   E)    UAS OPR EXTENDED VISUAL LINE OF SIGHT WI 0.5NM RADIUS OF 534755N
         0012318W (GARFORTH, LEEDS) MAX HGT 600FT AGL. FOR INFO 07802 872227.
         2018-05-0196/AS2
   F)    SFC                     G)          900FT AMSL
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Figure 1: NOTAM H2001/18

On the morning of the event he did not find any NOTAMs that related to the activities of a helicopter along the route of the cycle race. Nothing applicable was returned by a search of the NATS Aeronautical Information Service either. Aware that the cycle race usually involves a helicopter for filming, he raised a 'Task Notice' document on the 2nd of May (that his company issues to any other airspace users or

[1] Extended Visual Line of Sight (EVLOS) – CAP722, 3.12 & 3.13

other potentially interested parties), which was then emailed to the event organisers, the West Yorkshire Police, the Yorkshire Air Ambulance Service, the Police Helicopter Service and two local pilots that operate within 2.5km. At 09:48 (UTC) on the day, whilst hovering his UAV at 550ft agl and 100m away from his position (within the constraints of both his task notice and the NOTAM), the AS355 came into view at about 1500m from his location. He reduced the altitude of the UAV to 400ft as he watched the helicopter make its way along the route of the cycle race towards his position. As the helicopter reached an estimated distance of 1000m he reduced the altitude of the UAV to 150ft. When the helicopter was estimated to be within 500m he moved the UAV laterally to increase separation by roughly 100m to hold over his emergency landing area and further reduced the altitude. When the helicopter passed overhead, he estimated that the lateral separation was circa 100m and the vertical separation was around 150ft. He later discovered that a 'Pipeline Inspection Notification' NOTAM (PINS) had been raised to cover the activities of the helicopter. This PINS NOTAM quite inappropriately detailed the majority of the UK as the applicable area and, as such, was excluded by the NATS system for providing Drone operators with airspace information. He did not recognise the PINS notice as potentially applicable as it seemed to be completely unrelated in both task type and geography. He has expressed his concerns to the CAA and has been told that PINS notices will no longer be used in such circumstances and that they will in future issue a much more specific route/area brief as they do for Red Arrows transits etc.

He perceived the severity of the incident as 'High'.

THE AS355 PILOT declined to submit a report. The associated AS355 PINS NOTAM is shown at Figure 2.

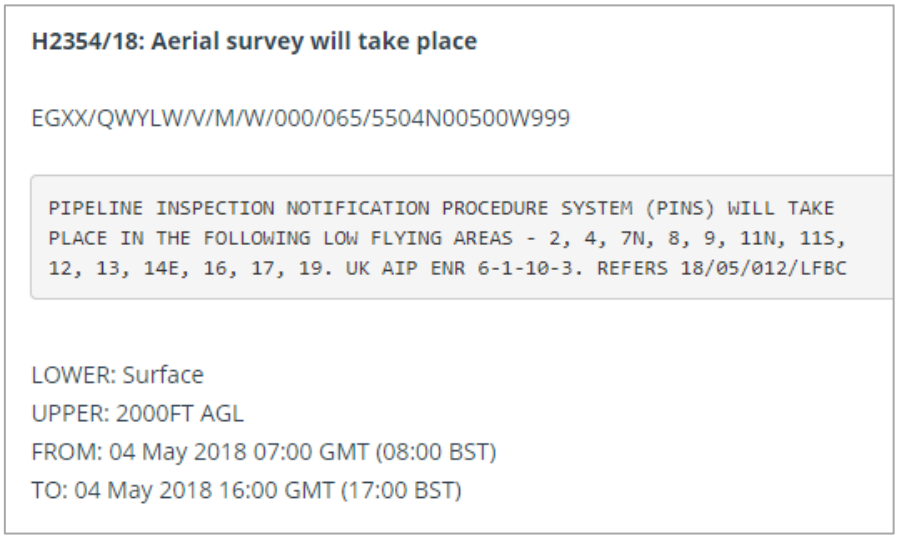

Figure 2: NOTAM H2354/18

Factual Background

The weather at Leeds was recorded as follows:

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METAR EGNM 040950Z 23007KT 190V290 9999 FEW008 SCT015 12/09 Q1021=
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Analysis and Investigation

UKAB Secretariat

The drone and AS355 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard[2].

[2] SERA.3205 Proximity.

Occurrence Investigation

The AS355 is not visible on the radar replay immediately preceding and during CPA probably due to its height; therefore, the actual track of the AS355 cannot be determined. The drone operator has provided an estimation of the AS355's track but this cannot be verified.

After this incident the CAA acknowledged that PINS was not a suitable medium for the notification of the type of activity the AS355 was undertaking and does not provide sufficiently accurate information for other airspace users. The CAA and NATS have undertaken to review how they promulgate such information and will issue a more specific method for notifying other airspace users of the associated activity.

Summary

An Airprox was reported when a drone and an AS355 flew into proximity near Garforth at about 0948hrs on Friday 4th May 2018. The drone operator was operating under VFR in VMC and not in receipt of a service. The AS355 pilot declined to submit a report.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the drone operator and track recordings from the drone operator.

The Board began by looking at the actions of the drone operator. They agreed that he had conducted appropriate pre-flight planning and had endeavoured to inform as many involved parties as possible. Notwithstanding, members commented that a NOTAM is only a means of informing other aviators of the presence of an activity and does not afford any level of protection from aircraft transiting through the notified area should they wish. Although unable to show the Board an associated video of the event taken by the drone operator due to technical issues, the Chair informed members that the video showed that the drone operator had taken timely and effective actions on sighting the AS355, and had been extremely pro-active in ensuring that his drone was flown well away from its path. Ultimately, the Board agreed that the drone operator had seen the AS355 early (about 1.5km away at first sighting), and had carried out all reasonable actions to ensure his drone did not conflict with the AS355; they commended him for his alertness and appropriate actions on sighting the potential conflict.

The Board then looked at the AS355 pilot's activities. They opined that issuing only a generic PINS alert rather than a specific route NOTAM for the helicopter was not a suitable means of informing other airspace users of the helicopter pilot's detailed intentions. The Board were heartened to hear that this has been recognised as being a less than satisfactory method, and that the CAA and NATS were reviewing their procedures for notifying others of similar activities during these types of event. Some members also wondered whether, as a foreign operator, the AS355 pilot may not have been fully conversant with the intricacies of UK airspace and may have both assumed that the correct method of notifying other airspace users had been implemented and that he may have had a degree of protection as a result. Notwithstanding, although the Board agreed that the AS355's task notification was lacking, they opined that even without a NOTAM the drone operator could reasonably have expected a helicopter to be filming the sporting event (which indeed he had during his risk assessment), and this was probably one of the reasons why he was so vigilant and effective with his lookout.

The Board then turned to the cause of the Airprox. Although they could not comment on whether the AS355 pilot had seen the drone, they agreed that the drone operator had seen the helicopter in good time and had effectively ensured his drone remained suitably far enough away. They therefore agreed that the incident was probably best described as a conflict in Class G resolved by the drone operator. Turning to the risk, the Board noted that the drone operator always maintained a safe distance from the AS355 and, in so doing, had ensured that there was no risk of collision. As such, normal procedures and safety standards were considered to have pertained, and the risk of collision was accordingly assessed as Category E.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in class G resolved by the drone operator.

Degree of Risk: E.

Safety Barrier Assessment[3]

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

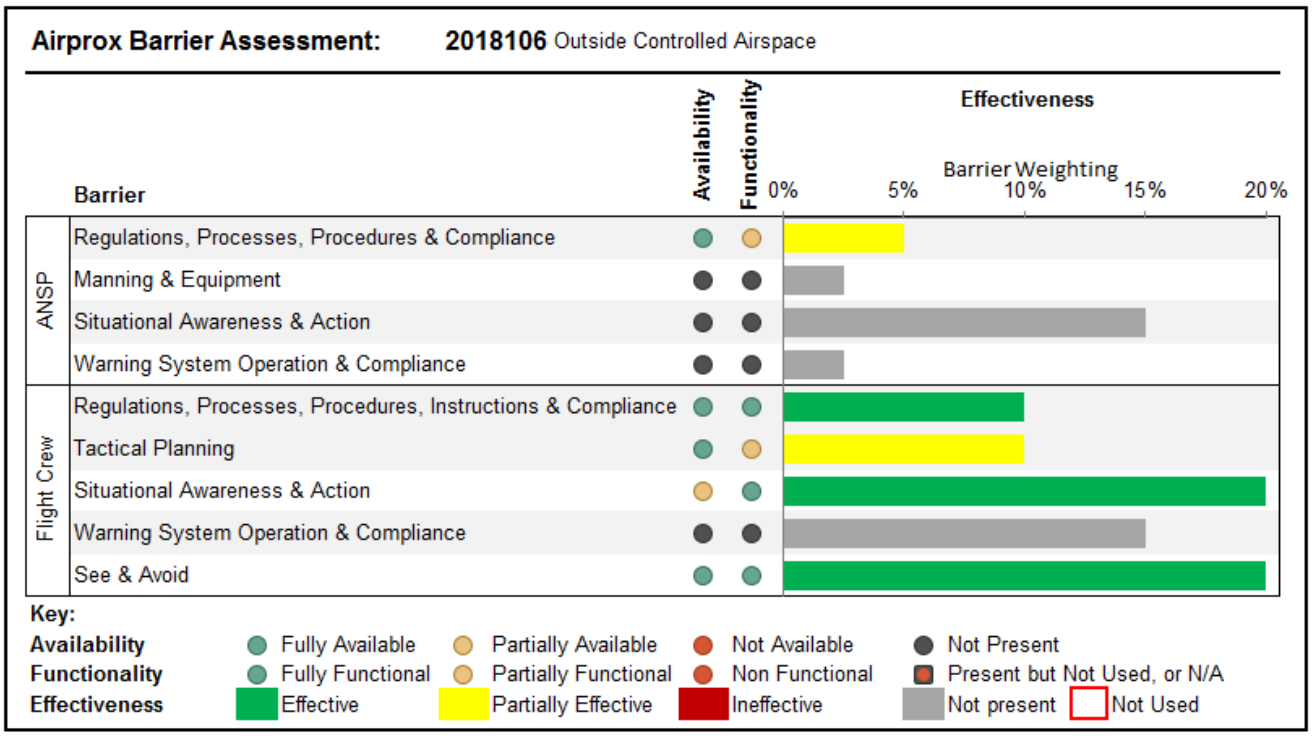
ANSP:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the method used for notifying other airspace users of the helicopter filming operations did not provide a suitable level of detail.

Flight Crew:

Tactical Planning was assessed as **partially effective** because the AS355 pilot should have ensured that he took the drone NOTAM into account and either avoided the location or modified his routing to ensure greater separation without relying on the drone operator to act.

Situational Awareness and Action was assessed as **partially available** but **fully effective** because although the issued helicopter NOTAM did not provide the drone operator with accurate information for the route and timings of the AS355, the drone operator had acted appropriately in assuming that such activity would be generically present.



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