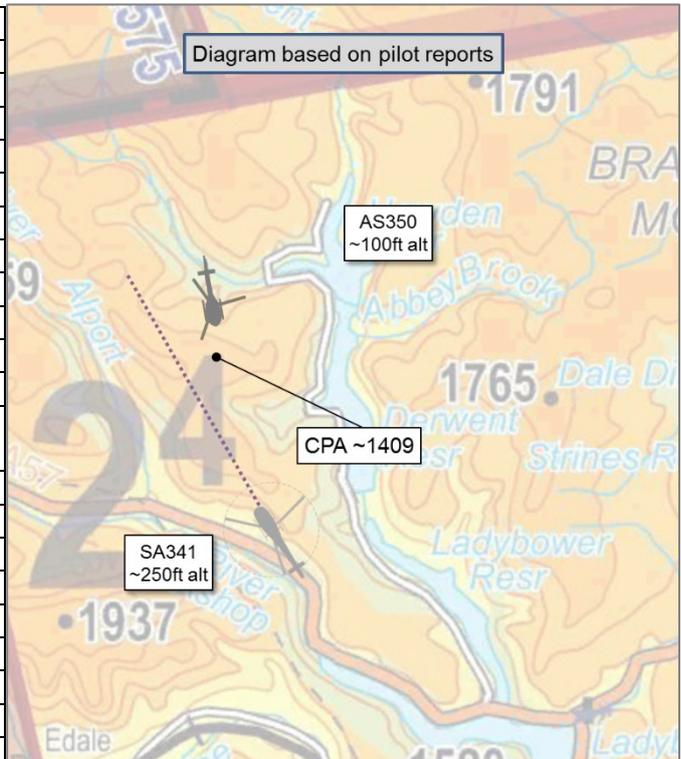


AIRPROX REPORT No 2018305

Date: 18 Nov 2018 Time: 1405Z Position: 5325N 00144W Location: Derwent Reservoir

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AS350	Gazelle
Operator	Civ Comm	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Listening Out
Provider	Manchester	Manchester
Altitude/FL		
Transponder	A, C, S	A, C, S
Reported		
Colours	Maroon	Blue, White, Silver
Lighting	Strobes, HISL, Nav	NR
Conditions	VMC	VMC
Visibility	5km	4nm
Altitude/FL	100ft	250ft
Altimeter	QNH (1029hPa)	NK
Heading	275°	NW
Speed	0kt	90kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	100ft V/0.25nm H	NR
Recorded	NK	



THE AS350 PILOT reports that he was conducting external cargo sling work between the western edges of the Derwent reservoir to Bleaklow Hill and Alport Valley. He had recovered 3 task specialists from the drop site and was in the descent for landing, from the NW of the Alport Valley, intending to land facing west. He was below 100ft and in the hover when a conflicting helicopter appeared in the 10 o'clock position tracking along the eastern edge of the Alport Valley, heading north-west. He landed the aircraft and they stopped operations because the lift track was compromised by the conflict aircraft. Figure 1 is the AS350 pilot's diagram of the Airprox.

He assessed the risk of collision as 'High'.

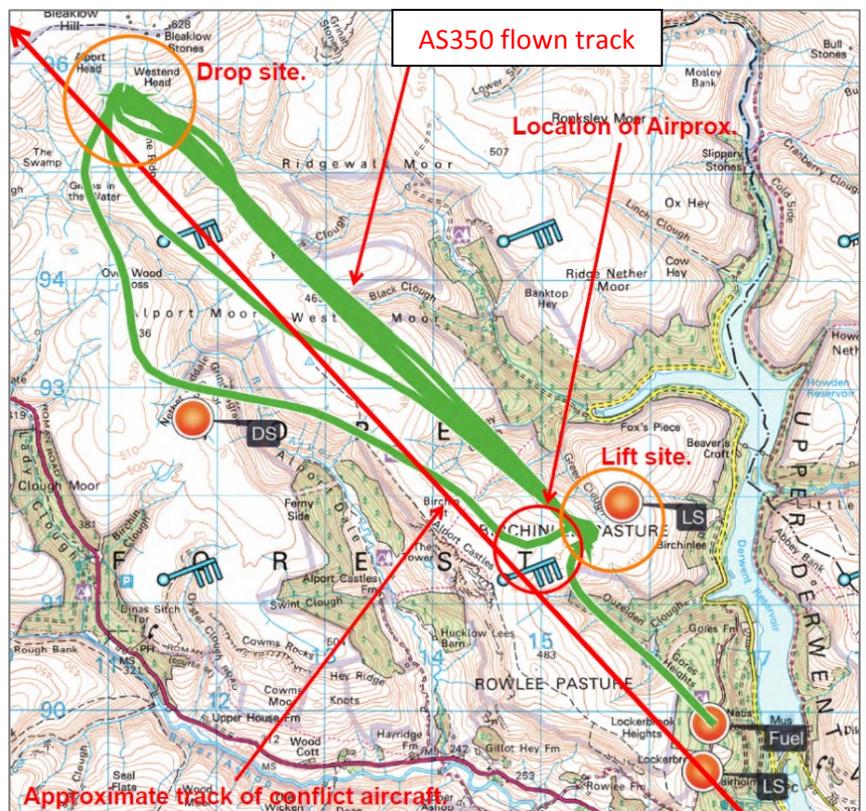


Figure 1

THE GAZELLE PILOT reports that he was flying low-level, below cloud, over the moors in an area that he was very familiar with. He was listening out on the Manchester frequency with a listening squawk set. He commented that he often flew over the moors to practise manoeuvring and, from time-to-time, to land on. The visibility was variable and generally poor, with low cloud over the moors, but improving to the west, so he was low-level at a slow cruise. He noticed a lot of bags on the moors so knew there had been lifting going on and then saw a parked-up Squirrel from about 2nm away. A few mins later Manchester called on the radio asking him to confirm his height and he confirmed that he was inbound to a private site on the moor and did not need to enter their zone or require a service.

He assessed the risk of collision as 'None'.

THE MANCHESTER CONTROLLER reports that the Airprox was not reported on the frequency, but that he received a telephone call from the AS350 pilot complaining about the airmanship of a Gazelle helicopter that 'cut him up' whilst he was engaged in heavy-lifting ops. The controller explained that he wasn't in contact with the Gazelle, but would assist with the filing of an Airprox.

Factual Background

The weather at Manchester was recorded as follows:

METAR COR EGCC 181350Z AUTO 08006KT 040V130 9999 NCD 10/03 Q1029 NOSIG=

A NOTAM was issued covering the AS350's profile as follows:

H8613/18

Q) EGTT/QWELW/IV/BO/W/000/026/5326N00148W004

UNDERSLUNG LOADS WILL OPERATE IN LOW FLYING AREA 8 AND FLOW ARROW 86 (LIVERPOOL/MANCHESTER AVOIDANCE AREA/SHEFFIELD TRANSIT AREA GAP) WI 2NM EITHER SIDE OF TRACK AND 2NM RADIUS OF 532443N 0014605W - 532652N 0015025W, (HOPE FOREST, PEAK DISTRICT). MAX HGT 500FT AGL. ACFT MAY BE RESTRICTED IN ABILITY TO MANOEUVRE AND UNABLE TO COMPLY WITH RAC. OPS CTC 01667 464405. 18/11/034/LFBC

LOWER: SFC

UPPER: 2567FT AMSL

FROM: 14 NOV 2018 08:00 TO: 14 DEC 2018 16:30

SCHEDULE: 0800-1630

Analysis and Investigation

UKAB Secretariat

Unfortunately the incident itself does not show on any of the NATS radars (which are also the radars that are used by the Manchester controllers). What can be seen is that, at 1405:13 (Figure 2), the AS350, squawking 7363, is heading south-east indicating 1600ft. At this time, the Gazelle is squawking 7366 with no Mode C, on a south-westerly heading with the two aircraft 4.3nm apart.

Seconds afterwards both aircraft fade from radar.

At 1409, (Figure 3), which is after the reported Airprox at 1405, the Gazelle then reappears on radar northwest of the Derwent reservoir, heading northwest.

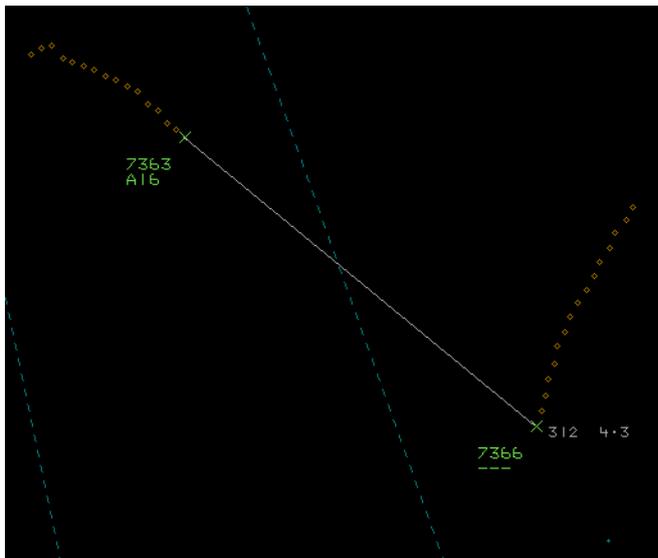


Figure 2 1405:13

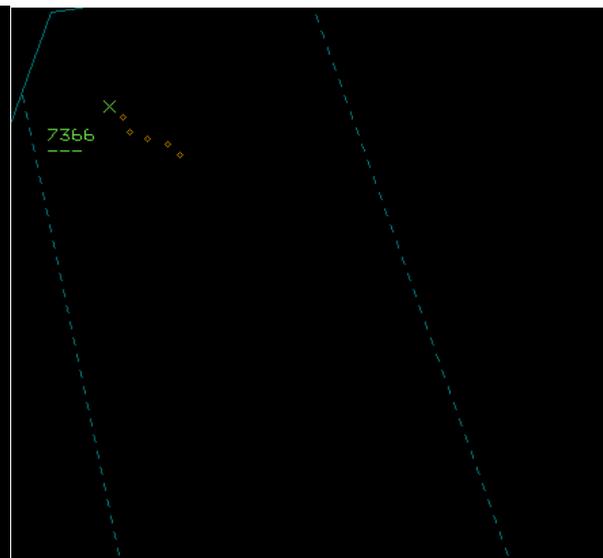


Figure 3 1409:38

The AS350 and Gazelle pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right². If the incident geometry is considered as converging then the Gazelle pilot was required to give way to the AS350³.

Summary

An Airprox was reported when an AS350 and a Gazelle flew into proximity near Derwent reservoir at around 1409hrs on Sunday 18th November 2018. Both pilots were operating under VFR in VMC, the AS350 pilot in receipt of a Basic Service from Manchester and the Gazelle pilot was listening out on the Manchester frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and reports from the air traffic controllers involved.

The Board first looked at the actions of the AS350 pilot and noted that he was undertaking a technical task, in difficult weather conditions, and that operations with an underslung load would make manoeuvring difficult. As a result, he had issued a NOTAM which he thought would inform other users of his tasking so that they had the opportunity to ensure they gave him a wide berth. On sighting the Gazelle as it flew close by, he clearly felt that its pilot should therefore have given him a wider berth. Members had some sympathy for his view, but also noted that although a NOTAM provided other pilots with information, it did not confer any specific segregation in itself, and so pilots should not expect that it would guarantee protection. It seemed likely that the AS350 pilot was aware of this but it highlighted to all the need to ensure a robust lookout was maintained even when operating under the auspices of a NOTAM.

For his part, the Gazelle pilot reported that was flying along the moors in fairly poor weather conditions and members wondered whether he was fully aware of the NOTAM given that it might be challenging to see other helicopters carrying underslung loads in poor conditions. That being said, by his own admission he could see the bags on the moor which told him there was likely to be an aircraft conducting underslung load tasking and, with this in mind, members thought that he would have been better advised to have given the area a wider berth once he saw them. Noting that he reported seeing the

¹ SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

² SERA.3210 Right-of-way (c)(1) Approaching head-on. MAA RA 2307 paragraph 13.

³ SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

AS350 at 2nm and perceived that it was on the ground, the Board thought that although it probably looked like it was on the ground from a distance, in line with the AS350 pilot's report it was likely to have been in a low hover at the time. [UKAB Secretariat Note: the Gazelle pilot has since confirmed that he could see that the blades were not moving and that there was ground crew in high-vis jackets close to the aircraft, confirming that the AS350 could not have been in the hover at the time that he saw it]. Overall, helicopter members commented that because of the difficulty in manoeuvring an aircraft with an under-slung load, it was generally considered good practice to give such aircraft a wide-berth, although what defined a 'wide-berth' depended somewhat on individual perceptions; they went on to say that, to some, the AS350 pilot's estimate of 0.25nm horizontally (463m) as the Gazelle flew past could be considered enough.

In determining the cause of the Airprox, the Board quickly agreed that the Gazelle pilot had flown close enough to the AS350 to cause its pilot concern. They briefly discussed the risk, with some members arguing that the reported separation between the 2 aircraft represented normal helicopter operations and that therefore the risk was Category E. However, because a NOTAM had been issued providing a warning of the task, the majority felt that, although there had been no risk of collision, safety had been degraded; risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Gazelle pilot flew close enough to the AS350 to cause its pilot concern.

Degree of Risk: C.

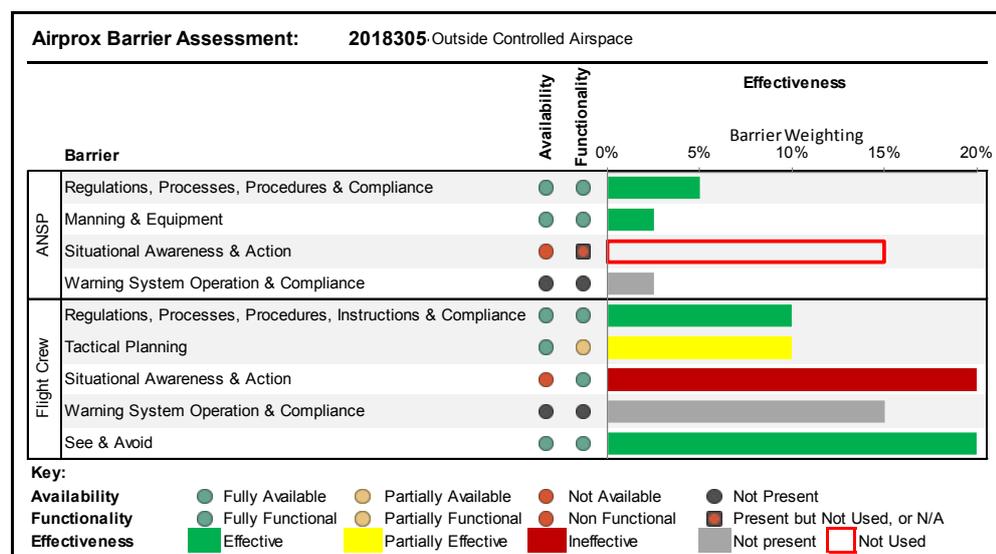
Safety Barrier Assessment⁴

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

Flight Crew:

Tactical Planning was assessed as **partially effective** because a NOTAM had been issued which should have prompted the Gazelle to confer a wider berth around the AS350's activity.

Situational Awareness and Action were assessed as **ineffective** because neither pilot had any information on the position of the other until they saw each other.



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