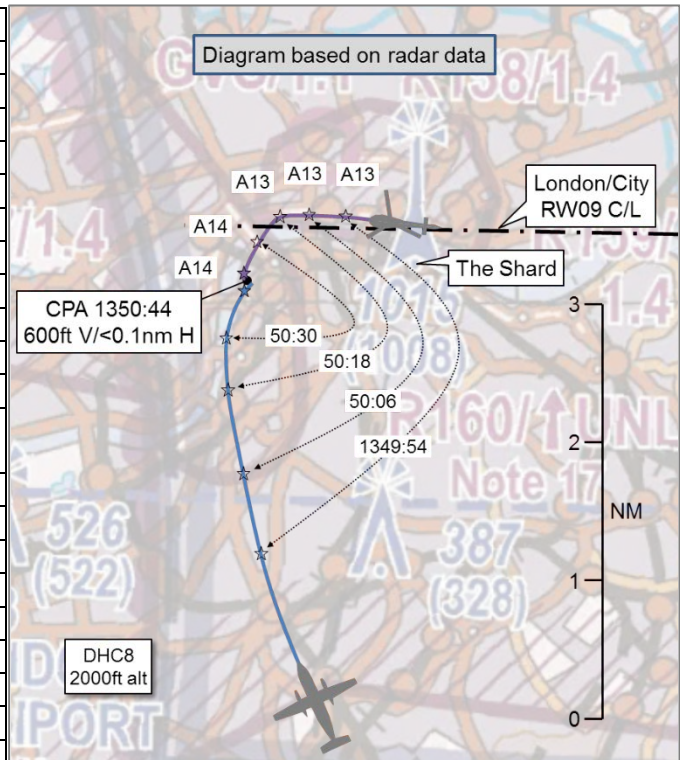


AIRPROX REPORT No 2018247

Date: 02 Sep 2018 Time: 1350Z Position: 5130N 00007W Location: W London City airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DHC8	AS355
Operator	CAT	Civ Helo
Airspace	London CTR	London CTR
Class	D	D
Rules	IFR	VFR
Service	Radar Control	Radar Control
Provider	Thames	Heathrow S/VFR
Altitude/FL	2000ft	1400ft
Transponder	A,C,S	A,C,S
Reported		Not reported
Colours	Company	
Lighting	Landing; white anti-coll; position	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	2000ft	
Altimeter	QNH	
Heading	°270	
Speed	100kt	
ACAS/TAS	TCAS II	
Alert	RA	
Separation		
Reported	Not seen	
Recorded	600ft V/0.1nm H	



THE DHC8 PILOT reports that, according to ATC, there was a helicopter operating at 1300ft MSL and below, near ODLEG point. During his turn onto final, TCAS issued a TA, almost immediately followed by an ‘adjust vertical speed’ RA. He disconnected the autopilot, but concentrated too much on gaining the centreline of RW09, so he climbed about 200ft. When established on centreline, he subconsciously picked up a normal 3° glide path. He stopped the descent when the First Officer pointed the low altitude out to him and then descended later with the PAPI glide-path to a normal landing. The RA was issued when they were in a high-workload situation with changing heading, autopilot modes, and aircraft configuration, all whilst at a fairly low altitude and comparatively low speed.

THE AS355 PILOT was incorrectly advised by the Radar Analysis Cell about the time of the Airprox and the other aircraft involved. Consequently, his initial report referred to another aircraft rather than the DHC8. He was informed about the correct information but a revised report was not received.

Factual Background

The weather at London City was recorded as follows:

METAR EGLC 021350Z AUTO 09009KT 9999 NCD 23/09 Q1023=

Analysis and Investigation

CAA ATSI

ATSI had access to the report from the pilot of the DHC8, the local area radar replay data, and the Thames Director and Heathrow Special VFR radio recordings. All times are UTC.

The DHC8 was an IFR flight inbound to London City Airport in receipt of a Radar Control Service from the Thames Director at the time of the Airprox. The AS355 pilot was on a VFR flight crossing the London City final approach path from north to south in receipt of a Radar Control Service from Heathrow Special VFR.

At 1344:50, the AS355 pilot called the Heathrow Special VFR controller and was cleared as far as London Bridge not above altitude 1300ft, the pilot provided an accurate readback of the clearance.

At 1346:00, the DHC8 pilot was given clearance by the Thames Director to descend to altitude 2000ft and was instructed to report base leg for an ILS Approach to RW09.

At 1346:00 (Figure 1), the Heathrow Special VFR controller passed Traffic Information to the AS355 pilot on a helicopter unrelated to the Airprox, and then asked the pilot if they only needed to go as far as London Bridge. The pilot advised that they needed to go to a position that was a quarter of a mile beyond Tower Bridge, the controller responded with *“that’s fine and you are cleared for the reverse route as well.”* The pilot responded with *“approved and cleared for the return route as well”*.

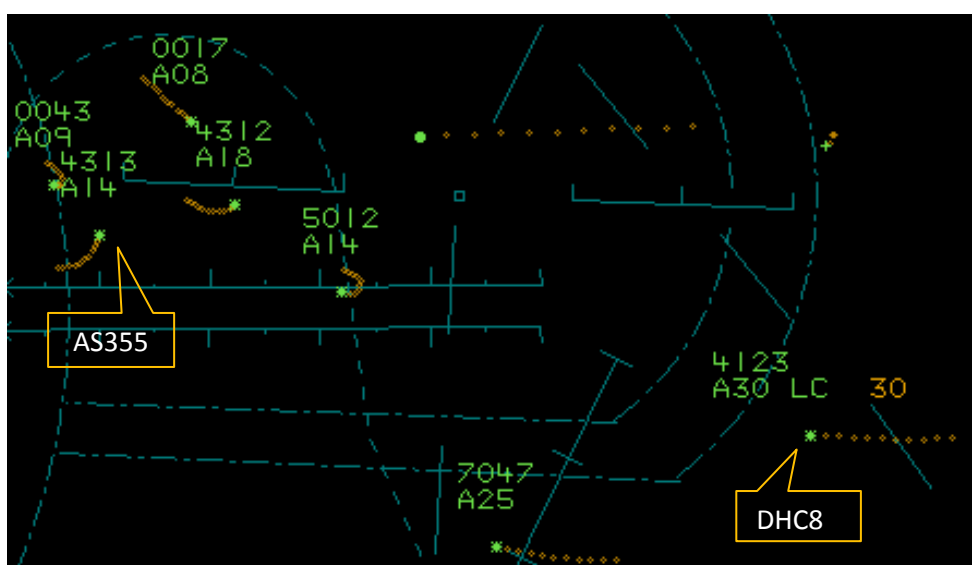


Figure 1 - 1346:00.

At 1348:10 (Figure 2), the Thames Director passed Traffic Information to the DHC8 pilot on an unrelated helicopter at 7nm final and advised the pilot that there was further helicopter traffic that would be updated when the DHC8 was on base leg. The pilot acknowledged.

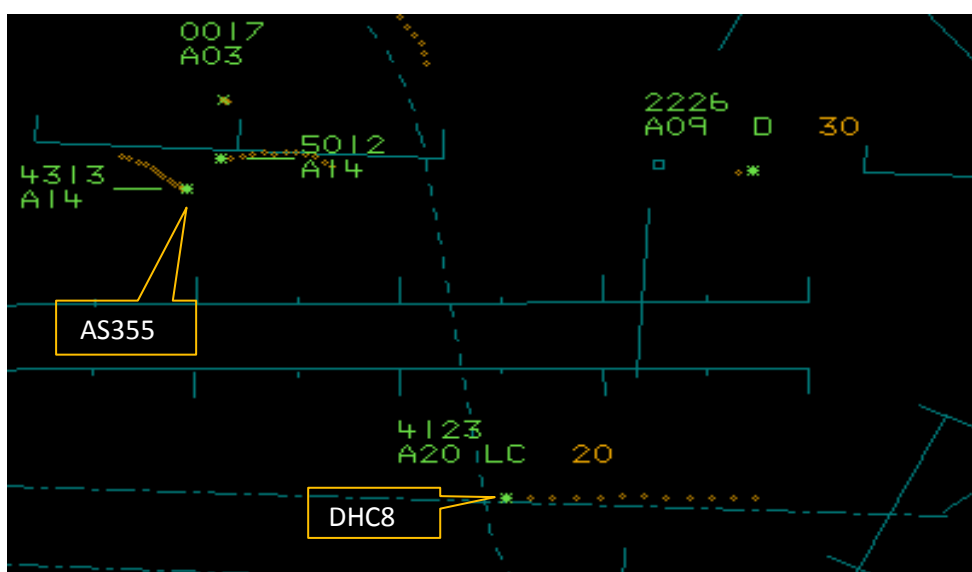


Figure 2 - 1348:10.

At 1349:10 (Figure 3), the DHC8 pilot reported turning base leg and the Thames Director passed Traffic Information on 2 helicopters, advising that they would be south side, at Westminster, not above 1300ft, routing south, and would pass underneath the DHC8 by 700ft. The controller cleared the pilot for the ILS Approach RW09. The pilot acknowledged the traffic and read back their clearance.

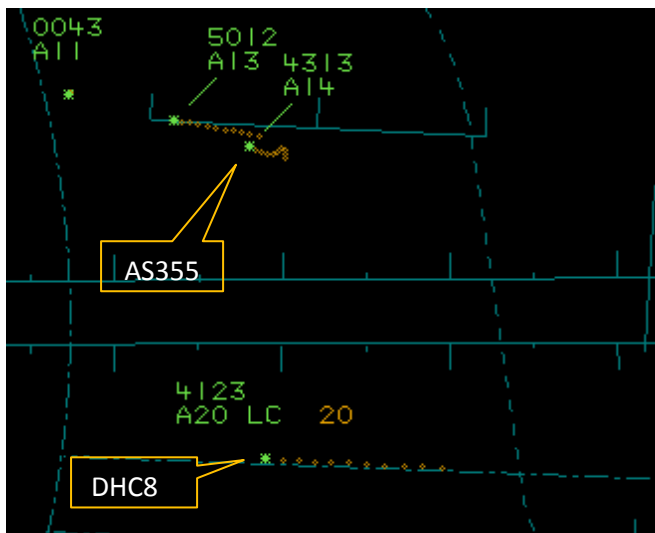


Figure 3 - 1349:10.

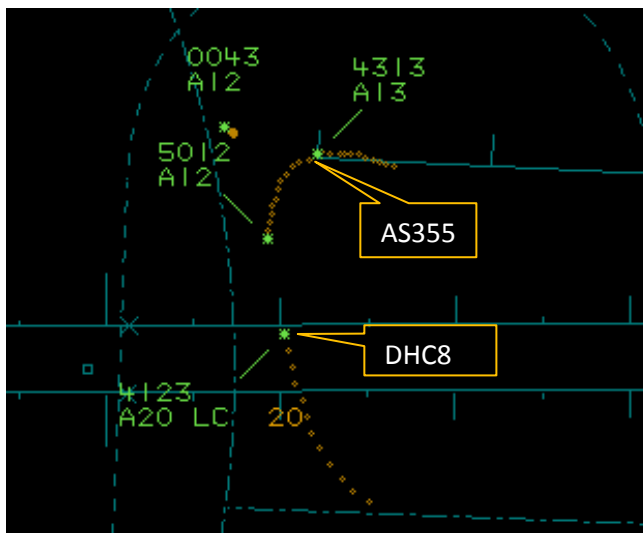


Figure 4 - 1350:10.

At 1350:10 (Figure 4), the Thames Director updated the Traffic Information and advised the DHC8 pilot that they were passing 700ft over the top of the first helicopter, the second one was a mile [undetermined word], with another helicopter well to the west. The pilot acknowledged the traffic.

At 1350:30 (Figure 5), the DHC8 pilot reported a TCAS RA which was acknowledged by the controller.

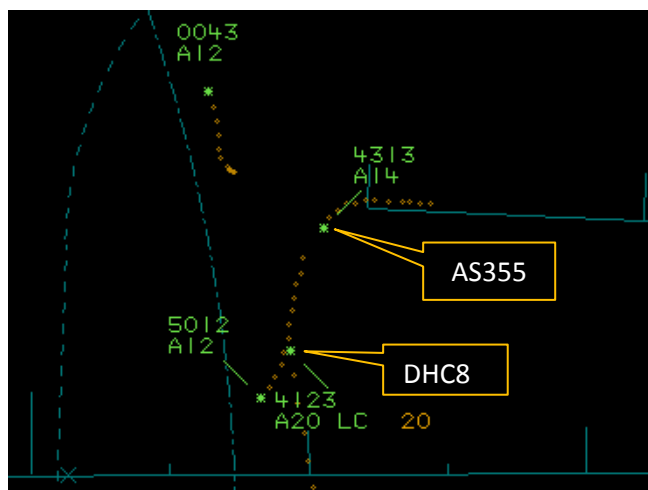


Figure 5 - 1350:30.

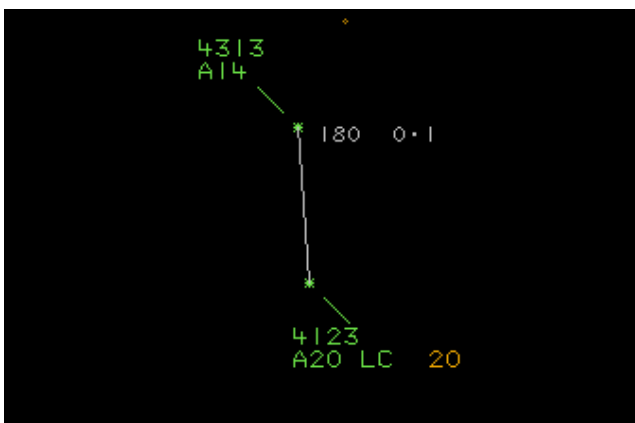


Figure 6 - 1350:42.

CPA occurred at 1350:42 (Figure 6), 0.1nm laterally and 600ft vertically between the two aircraft. The AS355 pilot was cleared for the route to and from the Tower Bridge area not above altitude 1300ft but appears on the area radar replay intermittently at 1300ft and 1400ft indicating that he was at the threshold of the SSR displayed height changeover.

At 1351:10, the DHC8 pilot reported clear of conflict and was re-cleared for the ILS Approach.

The Thames Director passed Traffic Information to the DHC8 pilot on the AS355 on three occasions. The Traffic Information passed was timely, accurate and relevant.

The Heathrow Special VFR controller issued the AS355 pilot with an inbound and return route clearance to and from the Tower Bridge area at the same time and passed Traffic Information in accordance with the traffic situation at that time. By the time the AS355 was crossing the final approach path on the return route, the traffic situation had changed and the DHC8 had become relevant traffic to the AS355. The controller did not pass Traffic Information to the AS355 pilot on the DHC8 traffic, indicating that they may not have noticed the DHC8.

The Heathrow Special VFR controller was providing a Radar Control Service in Class D airspace. Separation standards are not prescribed for application by ATC between VFR and IFR flights in Class D airspace. However, ATC has a responsibility to prevent collisions between known flights and to maintain a safe, orderly and expeditious flow of traffic. This objective is met by passing sufficient Traffic Information and instructions to assist pilots to 'see and avoid' each other. Within Class D Airspace controllers are required to pass Traffic Information to aircraft operating IFR on VFR traffic and to pass Traffic Information to aircraft operating VFR on IFR traffic, and in both circumstances, provide avoidance advice if requested.

The Thames Director discharged their responsibilities appropriately in the provision of a Radar Control Service within Class D airspace to the DHC8 pilot. The Heathrow Special VFR controller did not pass Traffic Information to the AS355 pilot on the DHC8 in accordance with the minimum services to be provided to aircraft within Class D airspace.

UKAB Secretariat

The DHC8 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 hazard¹. Both pilots were operating in Class D airspace in receipt of a Radar Control Service.

Summary

An Airprox was reported when a DHC8 and an AS355 flew into proximity near London City Airport at 1350hrs on Sunday 2nd September 2018. The DHC8 pilot was operating under IFR in VMC, the AS355 pilot was operating under VFR in VMC. Both pilots were in receipt of a Radar Control Service, the DHC8 from Thames Radar and the AS355 from Heathrow Special VFR.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included a report from the DHC8 pilot, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

Although the Board were disappointed that there was not an updated report from the AS355 pilot it was considered understandable because he had only found out the identity of the other aircraft involved some 4 months after the event. Board members reminded all those conducting incident investigations of the need to pass timely and accurate information to those involved so that valuable information was not lost through errors of process.

The NATS advisor first explained the normal ATC procedures for controlling IFR and VFR flights with respect to inbound flights to London City airport in the Class D airspace of the London CTR. IFR flights like the DHC8, are descended to 2000ft on a right-hand base-leg when RW09 is in use and flights under VFR in the vicinity are instructed not to climb above 1300ft to ensure that they are 700ft separated from the IFR traffic and at least 500ft above the higher buildings. He explained that, from experience, this also generally prevents the traffic under IFR receiving TCAS RAs. On this occasion, and in accordance with normal procedures, the DHC8 pilot was positioned on right base for RW09 at 2000ft.

¹ SERA.3205 Proximity.

There were 3 VFR helicopters operating in the vicinity that were in receipt of a Radar Control Service from the Heathrow S/VFR controller, one of which was the AS355. All 3 pilots had been instructed not to climb above 1300ft. As the DHC8 approached the position of the AS355, the helicopter's Mode C reading briefly displayed 1400ft on the radar recording. Shortly afterwards the DHC8 pilot received a TA followed by an RA. The Board assessed that the AS355 pilot was probably flying at near the threshold for the SSR height readout to increase, and that a probable inadvertent climb had caused the DHC8's TCAS to alert; this climb was considered a contributory factor to the Airprox. Notwithstanding, the Board was aware that there can be +/- 200ft tolerance for Mode C returns on a radar display, so it could not be conclusively stated that the helicopter was at 1400ft. Given the increased SSR readout, information available to the Board indicated that, in such circumstances, TCAS RAs can be generated when the vertical distance between the aircraft reduces to 600ft. Members deduced that this was what had occurred in this case.

The Board questioned why the S/VFR controller had not issued Traffic Information to the AS355 pilot and whether this was a causal factor to the Airprox. The NATS advisor commented that the controller was busy issuing Traffic Information to a number of other pilots at the time. Considering this, the Board decided that the only effect that Traffic Information might have had anyway was for the AS355 pilot to closely monitor his level whilst he passed close to the DHC8. As such, the lack of Traffic Information was not considered to be a causal factor. During this discussion, the Board noted that ATC do not have to provide standard separation between IFR and VFR flights in Class D airspace. ATC's responsibility was to pass Traffic Information to the pilots concerned and to provide avoidance advice if requested. A GA member commented that, from his experience, most pilots were not aware that they could request avoidance advice in Class D airspace if they wished it.

Turning to the cause and risk, although the generation of warnings at critical phases of flight was undesirable, the Board considered that a TCAS RA in Class D airspace, where IFR and VFR flights were involved, was not an unprecedented event in the circumstances. Noting that pilots were mandated to follow TCAS RA instructions, they nonetheless agreed that this had been done within normal safety standards and procedures. That the DHC8 pilot had then ballooned in height by 200ft and had then been unsettled in his subsequent initial approach was clearly undesirable, but the encounter itself was classified as a TCAS sighting report. Furthermore, whilst there may have been associated risk from an unstable approach, the collision risk itself was considered to be benign. Accordingly, the risk of collision was assessed as a Category E because the two aircraft were separated by 600ft vertically at the CPA.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	A TCAS sighting report.
<u>Degree of Risk:</u>	E.
<u>Contributory Factor:</u>	The AS355 briefly indicated a climb above the cleared level.

Safety Barrier Assessment²

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 Special VFR controller did not pass Traffic Information to the AS355 pilot as required in Class D Airspace for IFR/VFR traffic.

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

