

AIRPROX REPORT No 2014183

Date/Time: 17 Sep 2014 1203Z

Position: 5125NN 00010W
(2.5nm S London Heliport)

Airspace: London CTR (Class: A)

Aircraft 1 Aircraft 2

Type: MD902 AS355

Operator: HEMS Civ Club

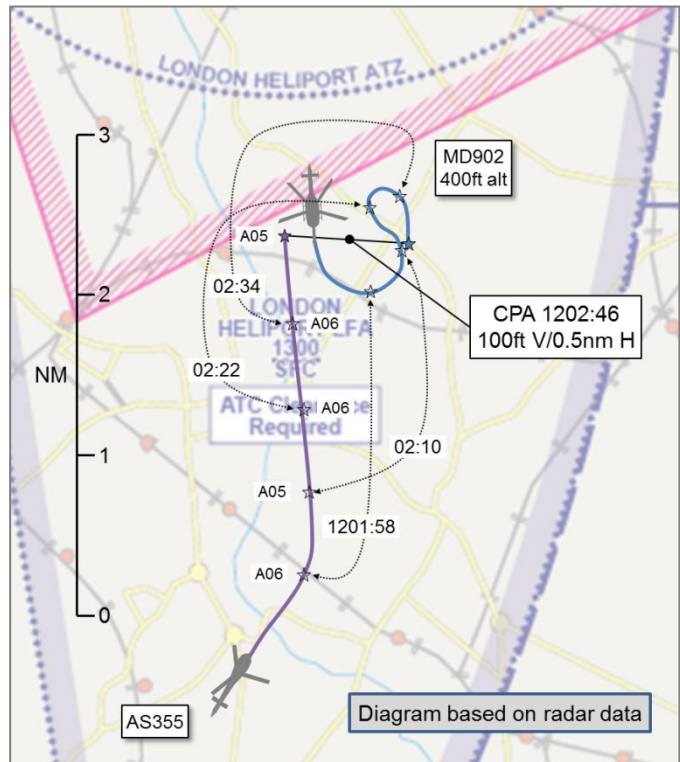
Alt/FL: 700ft 1200ft
QNH (1013hPa) QNH (NK hPa)

Conditions: VMC VMC

Visibility: 3.5km 5km

Reported Separation:
300ft V/500m H 200ft V/800m H

Recorded Separation:
100ft V/0.5nm (925m)H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE MD902 PILOT reports that he had been cleared from The London Heliport to St George's Hospital Helipad. The red helicopter had navigation, anti-collision and landing lights selected on, as was the SSR transponder with Modes A, C and S. The aircraft was not fitted with an ACAS or TAS. The pilot was operating under SVFR in VMC, in contact with 'Battersea Tower'. During the flight, another pilot requested entry into the London Heliport Local Flying Area (LFA) en route to London Heliport. The other pilot was told to hold outside the LFA to allow the MD902 pilot to land at St George's. As the MD902 pilot was approaching St Georges, heading south at 120kt, Battersea ATC warned him that the other aircraft had entered the LFA at 600ft and was flying towards them. The MD902 pilot immediately descended below the level of the inbound aircraft, switched on his landing lights and the crew looked for the aircraft, as well as associated low-level hazards. On seeing and identifying the other aircraft, a dark coloured AS355 or AS350 type helicopter 1km to the south and 300ft above, the MD902 pilot broke off the approach to St George's and took an avoiding turn out of the path of the other aircraft. The MD902 pilot then landed safely at St Georges Helipad. The pilot stated that Battersea Tower would have much better situational awareness if they had an SSR radar feed; reducing their reliance on the Heathrow SVFR Controller; alerting them and in turn the pilots, sooner to hazards and therefore improve flight safety inside the LFA.

He assessed the risk of collision as 'Low'.

THE AS355 PILOT reports in level cruise, heading north at 120kt, transiting to the London Heliport from Le Touquet, via Redhill. The blue helicopter had strobe and navigation lights selected on, as was the SSR transponder with Modes A and C. The aircraft was not fitted with an ACAS or TAS. The pilot was operating under VFR in VMC, in contact with 'Battersea'. The AS355 pilot stated that they did not hear a radio message to wait outside 'the zone'. He saw the other aircraft and crossed with vertical and lateral separation.

He assessed the risk of collision as 'None'.

THE BATTERSEA CONTROLLER reports he was providing an Aerodrome Control Service at London Heliport, Battersea. At 1159, the MD902 departed southbound, in the Battersea LFA, to St George's Hospital rooftop landing site, under SVFR. Whilst coordinating the LFA airspace with Heathrow SVFR, the radar ATCO asked if he was working the MD902 at Banstead. The Battersea

controller replied that he was not, but was expecting an aircraft inbound from Redhill for a familiarisation flight¹. The AS355 pilot then called, was passed a squawk and the QNH, and was instructed to remain outside controlled airspace. Traffic Information was passed on the MD902 departing London Heliport to a hospital landing site south of Battersea and within the LFA. The Heathrow Radar controller called about the AS355, stating it was inside the LFA. The Battersea controller replied that it shouldn't be as the pilot was instructed to remain outside controlled airspace. Heathrow Radar controller gave a position report of the AS355 as 600ft, 3 miles south of the MD902. The Battersea controller passed Traffic Information to both pilots but neither reported visual. The Battersea controller called the Heathrow Radar controller back for further information and, with the AS355 at 600ft and MD902 at 400ft, the AS355 pilot reported visual with the MD902. The MD902 pilot descended onto the hospital rooftop helipad. The AS355 pilot was informed that he had entered controlled airspace without permission and joining instructions were then passed as a straight-in join for RW02, which the AS355 pilot appeared not to understand. The AS355 landed at 1205 and both pilots were given a full debrief.

Factual Background

The weather at Heathrow was recorded as follows:

METAR EGLL 171150Z 07007KT 6000 BKN014 18/14 Q1012 BECMG SCT014
 METAR EGLL 171220Z 06009KT 6000 BKN013 18/14 Q1012 BECMG SCT014

A transcript of the relevant transmissions on Battersea Tower frequency is reproduced below:

From	To	Speech Transcription
MD902	Tower	(1157:10) [MD902 C/S] ready for clearance please er to Saint George's
Tower	MD902	[MD902 C/S] hold position and after departure cleared direct to Saint George's, not above altitude one thousand feet (1157:20) special V F R and your designated squawk, Q N H one zero one two
MD902	Tower	After departure route direct to George's, not above a thousand feet, special V F R, we've got our own squawk one zero one two, [MD902 C/S] is holding (1157:30) position
Tower	MD902	[MD902 C/S] read back is correct, taxi zero two, cleared for take-off, surface wind zero eight zero, seven knots
MD902	Tower	Taxi zero two, clear take-off, request group A, [MD902 C/S] (1157:40)
Tower	MD902	Roger group A ?????
MD902	Tower	????? thanks [MD902 C/S]
No relevant transmissions		
AS355	Tower	Er Battersea from helicopter [AS355 C/S] good afternoon (1159:30)
Tower	?	(1159:40) station calling Battersea say again
AS355	Tower	Er Battersea from helicopter [AS355 C/S] ????? Helicopter ????? ????? ????? We're from Redhill to your field (1159:50) and we are just er five minutes in the south of er Battersea er one thousand feet
Tower	AS355	[AS355 C/S] (1200:00) Battersea Tower, squawk seven zero seven seven, Q N H one zero one two, remain outside controlled airspace, traffic information explorer helicopter just departed Battersea (1200:10) to the south to a landing site inside the L F A
AS355	Tower	Roger, we have the information of er the explorer helicopter er squawk seven zero (1200:20) seven seven, can you give me er again the Q N H please?
Tower	AS355	Q N H one zero one two
AS355	Tower	- N H one zero one two, [AS355 C/S] (1200:30) roger
Tower	MD902	[MD902 C/S] report letting down at Saint George's, surface wind at Battersea zero seven zero degrees seven knots, traffic information twin squirrel just holding outside (1200:40) controlled airspace

¹ One experienced pilot bringing a second pilot into the heliport for a full brief.

From	To	Speech Transcription
MD902	Tower	Copied thanks traffic, we've got a mile and a half to Saint George's, wilco [MD902 C/S] and do you want us to call you for lift?
Tower	MD902	[MD902 C/S] affirm, (1200:50) do you know how long you'll be?
MD902	Tower	Er not sure, hopefully not too long [MD902 C/S]
Tower	MD902	Roger yes call before lift
Tower	MD902	Er [MD902 C/S] traffic information, I believe the twin squirrel has actually (1201:20) entered controlled airspace and is six hundred feet, are you visual?
MD902	Tower	Negative [MD902 C/S]
Tower	AS355	[AS355 C/S] you were re- instructed to remain outside controlled airspace, (1201:30) er are you visual with the explorer helicopter
AS355	Tower	Er not for the moment not er visual on the helicopter [AS355 C/S] (1201:40)
AS355	Tower	Okay, we have er the explorer in sight (1202:10) [AS355 C/S]
Tower	MD902	[MD902 C/S] traffic information from radar, the er twin squirrel is just a mile south of you at six hundred feet
MD902	Tower	(1202:20) [MD902 C/S]'s visual with the squirrel
Tower	MD902	[MD902 C/S] roger are you landing now are y-, land at your discretion, surface wind at Battersea zero eight zero degrees seven knots
MD902	Tower	(1202:30) er we're just avoiding him and then er we're just going to land now [MD902 C/S]
Tower	MD902	Roger thank you
AS355	Tower	Okay and it's clear for the (1202:40) explorer helicopter [AS355 C/S]
AS355	Tower	And er [AS355 C/S] we are just one minute before er your field
Tower	AS355	Er can you hear me [AS355 C/S] (1203:20)
Tower	AS355	[AS355 C/S] make straight in approach for runway zero two, surface wind zero seven zero degrees seven knots
AS355	Tower	Okay er (1203:30) I call you back in er er um left er downwind
Tower	AS355	(1203:40) [AS355 C/S] I do not have you visual, you were inbound from the south, make a straight in approach to zero two, nothing else in the A T Z at the moment
AS355	Tower	Okay straight approach (1203:50) for the runway zero two, [AS355 C/S] roger

Analysis and Investigation

CAA ATSI

An Airprox was reported when a McDonnell Douglas MD-900 Explorer (MD902) and an Aerospatiale AS-355N (AS355) flew into proximity in the Class A airspace of the London CTR encompassed by the Battersea Local Flying Area (LFA). ATSI had access to reports from both pilots, the Battersea Tower controller, area radar recordings and transcription of the Battersea Tower frequency. The AS355 pilot was operating under VFR on a flight from Redhill to Battersea, and was in receipt of an Aerodrome Control Service from Battersea Tower. It appeared from the AS355 pilot's accent that English was not his first language. The MD902 pilot was operating under SVFR on a flight from Battersea to St. George's Helipad, and was in receipt of an Aerodrome Control Service, also from Battersea Tower.

At 1156:11, the Battersea Tower controller initiated a phone call to London Terminal Control Heathrow SVFR to request the Battersea Low Flying Area due to a departing helicopter to St. George's hospital. The SVFR controller approved this. At 1157:10, the MD902 pilot called Battersea Tower stating that he was ready for clearance. The MD902 pilot was cleared direct to St. George's not above altitude 1000ft under SVFR. The clearance was read back correctly and the MD902 pilot was cleared for take-off.

At 1159:04, the SVFR controller rang the Battersea Tower controller to enquire about an aircraft inbound to Battersea. The Battersea Tower controller replied that they weren't talking to anyone

and the SVFR controller responded that the aircraft was wearing a Battersea squawk, 7077. The SVFR controller then commented that the aircraft had turned away from the LFA and was tracking northeast. The Battersea controller replied that they knew who the aircraft was as they were expecting someone but that no-one had called yet. The SVFR controller said that they would keep Battersea updated.

At 1159:26, the AS355 pilot called Battersea Tower stating that they were five minutes south of Battersea at 1000ft. The AS355 pilot was given a squawk and the QNH, and instructed to remain outside controlled airspace; Traffic Information was passed on the MD902. The AS355 pilot acknowledged the Traffic Information, read back the squawk and requested the QNH again. The AS355 pilot did not read back the instruction to remain outside controlled airspace and at the time the instruction was issued (1200:07) was just about to cross the boundary of the LFA (Figure 1).



Figure 1

The Battersea Tower controller instructed the MD902 pilot to report letting down at St. George's and passed Traffic Information on the AS355 pilot holding outside controlled airspace. This was acknowledged by the MD902 pilot.

At 1201:02 (Figure 2), the SVFR controller telephoned the Battersea Tower controller to check whether they were aware that the AS355 pilot was inside the LFA. The Battersea Tower controller replied that he had instructed the AS355 pilot to remain outside controlled airspace. The SVFR controller replied that the AS355 pilot had not done as instructed, that the AS355 was 3nm south of the MD902 at 600ft and asked that Battersea Tower pass Traffic Information.

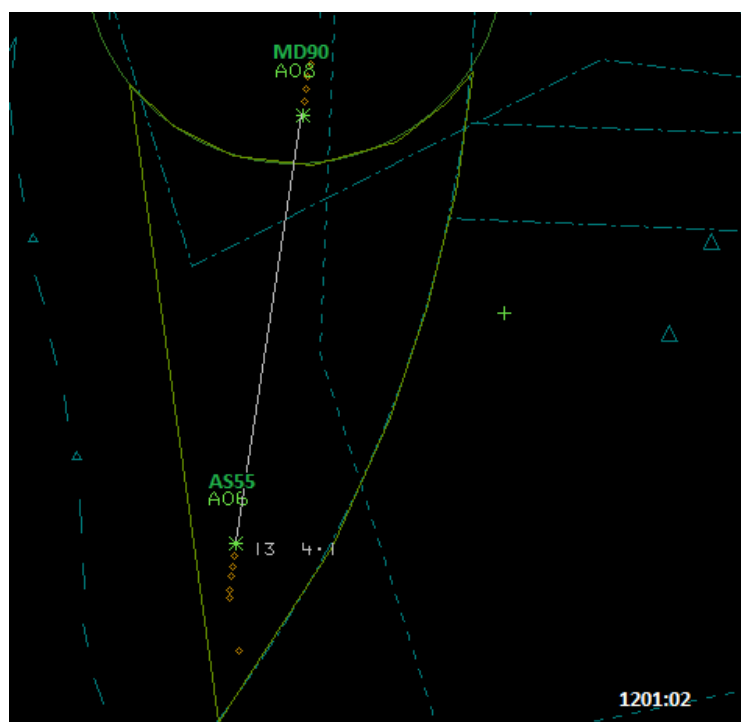


Figure 2

At 1201:20, the Battersea Tower controller informed the MD902 pilot that the AS355 pilot had entered controlled airspace at 600ft and asked if the MD902 pilot was visual. The MD902 pilot replied that he was not. The Battersea Tower controller then informed the AS355 pilot that he had been instructed to remain outside controlled airspace and asked if he was visual with the MD902. The AS355 pilot replied that he was not.

At 1201:44, the Battersea Tower controller telephoned SVFR again stating that the two pilots were not visual with each other. The SVFR controller informed the Battersea Tower controller that the MD902 pilot was at 400ft with the AS355 pilot 1nm south at 600ft. As the conversation ended the AS355 pilot reported the MD902 in sight (Figure 3).

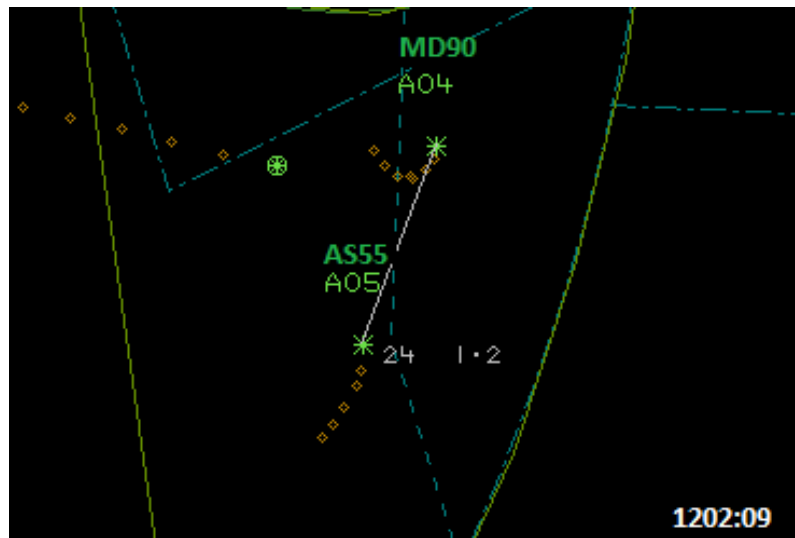


Figure 3

The Battersea Tower controller informed the MD902 pilot of Traffic Information from radar that the AS355 was a mile south of him at 600ft.

At 1202:24, the MD902 pilot reported visual with the AS355 and the Battersea Tower controller asked if the MD902 pilot was landing. The MD902 pilot replied "*er we're just avoiding him and then er we're just going to land now*" (Figure 4). The AS355 pilot reported that "*it's clear for the Explorer helicopter*". CPA occurred after both pilots reported visual and the recorded minimum distance was 100ft V/0.5nm H.

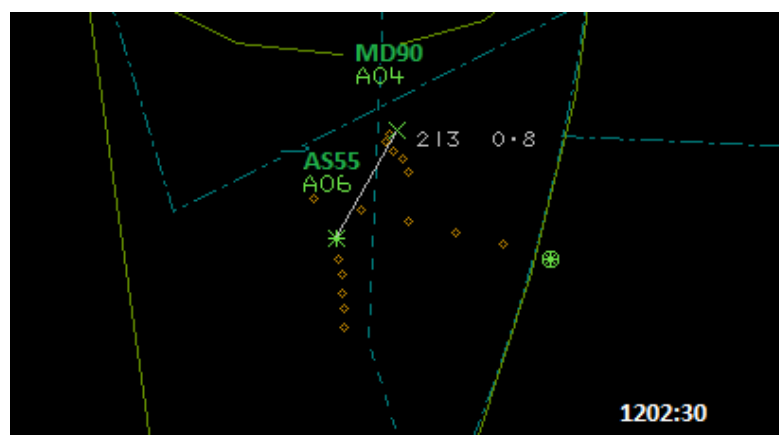


Figure 4

The Battersea Tower controller instructed the AS355 pilot to remain outside controlled airspace on first contact. At the end of this transmission the AS355 pilot was already crossing the boundary of the LFA and the pilot did not read back the instruction. The pilot subsequently reported that

they did not receive the instruction. It is possible that, as the instruction to remain outside controlled airspace was passed in conjunction with the squawk, QNH and traffic information on the MD902, the instruction 'got lost' in the other information and instructions, particularly as it was evident that English was not the pilot's first language. However, the AS355 pilot did not receive a positive clearance to enter controlled airspace which was required prior to entering the Class A airspace of the LFA.

Without the aid of surveillance equipment there was no way for the Battersea Tower controller to know that the AS355 pilot had entered controlled airspace, and he only became aware of this when the SVFR controller telephoned to advised that this was the case. The Battersea Tower controller and the SVFR controller worked together to ensure that accurate Traffic Information was passed to both pilots.

UKAB Secretariat

The MD902 and AS355 pilots shared an equal responsibility for collision avoidance and not to fly into such proximity as to create a danger of collision². If the incident geometry is considered as converging then the MD902 pilot was required to give way to the AS355³. If the incident geometry is considered as head-on then both pilots were required to turn to the right⁴, notwithstanding their overriding responsibility to avoid collision. The AS355 pilot was required to remain clear of the pattern formed by traffic intending to land at St George's Hospital helipad⁵.

Summary

An Airprox was reported when an MD902 and an AS355 flew into proximity at 1203 on Wednesday 17th September 2014. Both pilots were operating under SVFR in VMC and both were in receipt of an Aerodrome Control Service, without the aid of surveillance, from Battersea Tower.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both aircraft, a transcript of the relevant RT frequency, radar photographs/video recordings, a report from one of the air traffic controllers and a report from the appropriate ATC operating authority.

Board members quickly agreed that the incident had been caused by the AS355 pilot flying into conflict with the MD902, and that his entry into the Class A London CTR, in contravention of his ATC clearance, was contributory to the incident. It was apparent that the AS355 pilot was operating in a new environment, and was not using his native language. Members agreed that this could present a challenging workload in any circumstances, but that the purpose of the 'familiarisation flight' was to introduce the procedure under controlled conditions, with the assistance of an experienced pilot, in order to ensure safety. Unfortunately, it appeared to the Board that the other AS355 pilot had not challenged the PF when he entered CAS without clearance: a regrettable omission that the Board felt would have been an expected part of his role. Nevertheless, his presence in the cockpit was not the principle procedural safety barrier; the Board felt that, instead, it was the Battersea controller's lack of challenge to the AS355 pilot's read-back omission that was key (because it was the Battersea controller's task to control the flow of traffic through the LFA). Fortuitously, the Heathrow SVFR controller had maintained situational awareness on the AS355, had informed the Battersea controller of the developing conflict, and had relayed Traffic Information for the Battersea controller to pass on. The Board commended the Heathrow SVFR controller for his proactive and effective monitoring of the developing incident.

² Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

³ *ibid.*, Rule 9 (Converging).

⁴ *ibid.*, Rule 10 (Approaching head-on).

⁵ *ibid.*, Rule 12 (Flight in the vicinity of an aerodrome).

Members also quickly agreed that, despite the less than ideal visibility, the MD902 and AS355 pilots had seen each other in time for effective avoiding action to be taken; they therefore assessed the risk as Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	The AS355 pilot flew into conflict with the MD902.
<u>Contributory Factors:</u>	<ol style="list-style-type: none">1. The AS355 pilot entered the London CTR Class A airspace in contravention of his ATC clearance.2. The Battersea controller did not challenge the AS355 pilot's omission of read-back.
<u>Degree of Risk:</u>	C.
<u>ERC Score⁶:</u>	2.

⁶ Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.