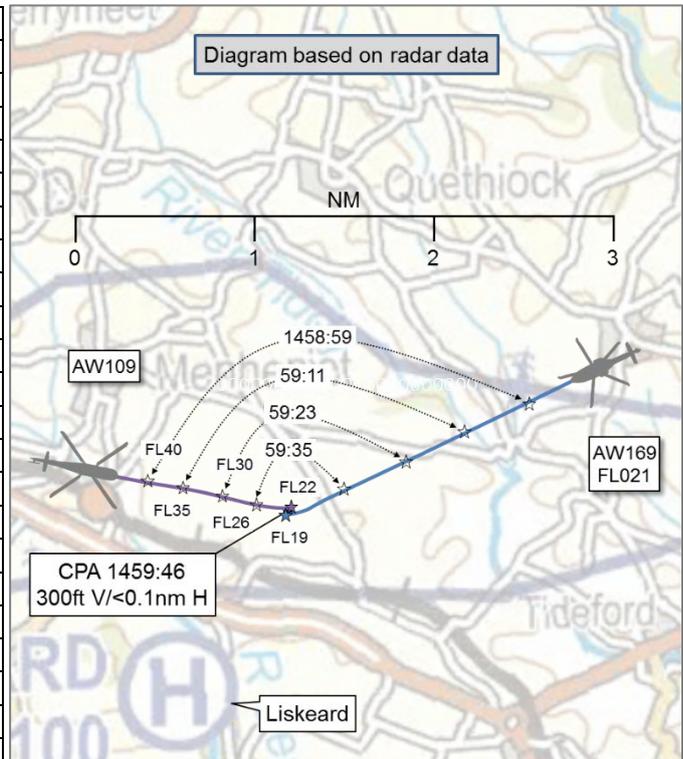


AIRPROX REPORT No 2017251

Date: 20 Oct 2017 Time: 1500Z Position: 5025N 00423W Location: 9nm W Plymouth

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	AW169	AW109
Operator	Civ Comm	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Basic
Provider	London Info	Newquay
Altitude/FL	FL19	FL22
Transponder	A, C, S	A, C, S
Reported		
Colours	Grey	White/blue/black
Lighting	Nav, strobes	Nav, anti-cols
Conditions	VMC	VMC
Visibility	>10km	20km
Altitude/FL	2000ft	2500ft
Altimeter	QNH (1005hPa)	QNH (1017hPa)
Heading	240°	180°
Speed	135kt	70kt
ACAS/TAS	TCAS II	TAS
Alert	Unknown	None
Separation		
Reported	NK V/90m H	300ft V/0m H
Recorded	300ft V/<0.1nm H	



THE AW169 PILOT reports that he saw the other helicopter at a range of 120m, converging above and in the 1 o'clock position. After a quick assessment of the other aircraft's trajectory, he took immediate avoiding action; power off, right turn and descended. A TCAS aural warning was heard after the turn. Having been in contact with the London Information FISO at the time, the pilot subsequently contacted Newquay Approach who informed him that they had twice called the other aircraft [AW109 C/S] to alert them of his presence. The pilot contacted the AW109 pilot who informed him he became visual with him after the second call from Newquay and had adjusted his rate of decent to remain clear. The AW169 pilot stated that after he initiated the right turn he did not see the other aircraft again so it was difficult to know how close the two aircraft came.

He assessed the risk of collision as 'Low'.

THE AW109 PILOT reports that he was conducting a post-maintenance check flight. He contacted Newquay Approach to check for conflicting traffic prior to a climb to 5000ft. A Traffic Service was not requested due to the significant level changes about to be undertaken and his distance from Newquay (two-way communications and a Traffic Service were not feasible at lower levels because Bodmin Moor shields both radar and R/T transmissions, he opined). During initial descent, Newquay made him aware of traffic to the east but visual contact was not achieved. When passing about 3000ft, with about 2500fpm rate of descent, updated Traffic Information was given and he saw a dark-grey helicopter in level flight at a range of 800m. He increased power to reduce the rate of descent and turned left to pass behind. The other aircraft turned right, which resulted in it passing below him.

He assessed the risk of collision as 'Low'.

THE LONDON INFORMATION FISO reports that he was advised that an aircraft on frequency [the AW169] had an Airprox at 1500UTC on 20th October with another aircraft west of Plymouth. He did not speak to the [AW169 pilot] whilst on position, having no known traffic to affect him. The FISO confirmed that he was monitoring the correct frequency at the time of the incident; however, the incident was not notified to him by the AW169 pilot. The FISO commented that the London Information frequency did not have good coverage at lower levels in the vicinity of Plymouth, and that the AW169 pilot left the frequency about 10 minutes later when he signed off with a colleague who had taken over the position.

THE NEWQUAY APPROACH CONTROLLER UNDER TRAINING reports that the AW109 pilot was under a Basic Service in the Liskeard area, whilst on a check test flight. The other aircraft involved was not on frequency, was squawking 1177 [London FIS] and was heading southwest-bound in the vicinity of Looe. The AW109 pilot accepted coordination to not above 5000ft due to inbound traffic to Newquay from the east under a Deconfliction Service, and the controller believed the FIS aircraft was indicating 2000ft. The AW109 pilot called 'carrying out an autorotation' and, at the time, there was about 5nm separation between the two aircraft. However, it became apparent that the tracks were converging. The controller passed Traffic Information to the AW109 pilot, who at some point replied with either 'I have the traffic' or 'visual with the traffic' and continued with the autorotation. The controller made a blind transmission to the AW169 pilot to see if he was on frequency, at which point the OJTI stepped in and passed Traffic Information again to the AW109 pilot.

Factual Background

The weather at Newquay was recorded as follows:

METAR EGHQ 201450Z 17021KT 9999 BKN015 13/10 Q1005=

A transcript of the Newquay Approach RTF was provided, as follows:

From	To	Transcription	Time
AW109	NQY	Newquay Approach, good afternoon, [AW109 C/S]	14:44:56
NQY	AW109	[AW109 C/S], Newquay Approach, good afternoon, pass your message.	
AW109	NQY	[AW109 C/S] is an Agusta 109, just on a check test flight out of Liskeard at the moment currently 1800ft on 1005 just to the, well, just overhead Liskeard pretty much, requesting a Basic Service with 3 on board.	
NQY	AW109	[AW109 C/S] basic service squawk 1747 and QNH correct	
AW109	NQY	Squawk 1747, QNH correct [AW109 C/S] Basic Service.	
		No transmissions	
AW109	NQY	[AW109 C/S] returning to base now and request frequency change company on [Company frequency]	14:49:30
NQY	AW109	[AW109 C/S] squawk 7000 and continue with company, bye, bye.	
AW109	NQY	Squawk 7000, bye now, [AW109 C/S]	
		No relevant transmissions	
AW109	NQY	Newquay radar hello again its [AW109 C/S]	14:54:16
NQY	AW109	[AW109 C/S] Newquay radar	
AW109	NQY	Hi there, slight change of plan, we're just looking to climb to 5000ft to do an auto rot check before we land and just wonder if there is any traffic in the area to conflict with that?	
NQY	AW109	[AW109 C/S] I do have traffic inbound from the east shortly, not on frequency yet, basic service squawk 1750	
AW109	NQY	Squawk 1750 and QNH 1005, [AW109 C/S]	
NQY	AW109	[AW109 C/S] request not above 5000ft on that QNH	
AW109	NQY	Affirm, not above 5000ft on 1005, [AW109 C/S]	
		No relevant transmissions	
AW109	RTF	[AW109 C/S] just levelling 5000ft	14:57:39
NQY	AW109	[AW109 C/S] roger and no level restrictions now, thank you.	
AW109	NQY	Roger, thanks, [AW109 C/S] and just about to commence an autorotated descent	
NQY	AW109	[AW109 C/S] roger, QNH 1005	

From	To	Transcription	Time
AW109	NQY	QNH 1005, [AW109 C/S], [AW109 C/S].	
		No relevant transmissions	
NQY	AW109	[AW109 C/S] it is a Basic Service however there is traffic in your left 11 o'clock about a mile and a half indicating 1900ft routing southwest-bound	14:58:51
AW109	NQY	[AW109 C/S], thanks very much	
NQY	AW169	[AW169 C/S] Newquay Radar are you on frequency?	14:59:07
NQY	AW109	[AW109 C/S] previously mentioned traffic, east, half a mile, tracking southwest indicating 2000ft	14:59:20
(OJTI)			
AW109	NQY	[AW109 C/S] visual now, thanks	

Analysis and Investigation

CAA ATSI

An Airprox was reported by an AW169 pilot as a result of the aircraft coming into proximity with an AW109 in the vicinity of Liskeard. The AW169 pilot was on a VFR flight and was in receipt of a Basic Service from London Information at the time of the Airprox. No R/T transmissions were made on the London Information frequency that were of relevance to the Airprox.

The AW109 pilot was on a local VFR flight from and to Liskeard. The pilot was conducting an autorotation descent at the time of the Airprox and was in receipt of a Basic Service from Newquay Radar. Newquay Radar services were being delivered by a controller under training (U/T) under the supervision of an on the job training instructor (OJTI).

At 1457:39 (Figure 1), the AW109 pilot reported reaching 5000ft and advised the controller that he was about to commence an autorotation descent, which was acknowledged by the controller. The controller then turned his attention to an aircraft inbound to Newquay.

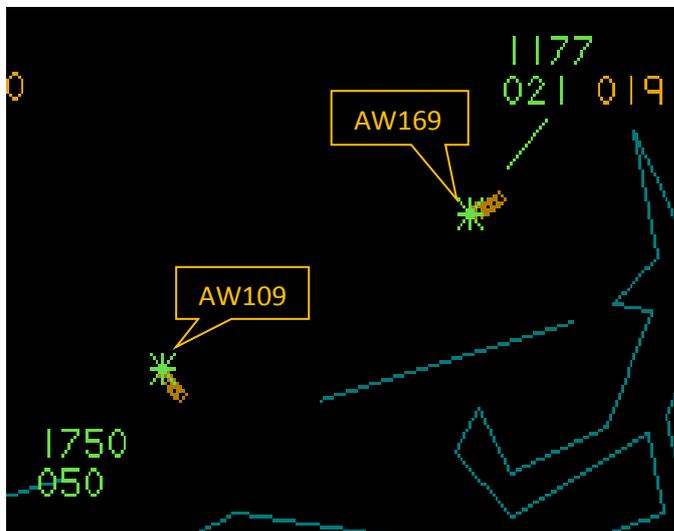


Figure 1 - 1457:39

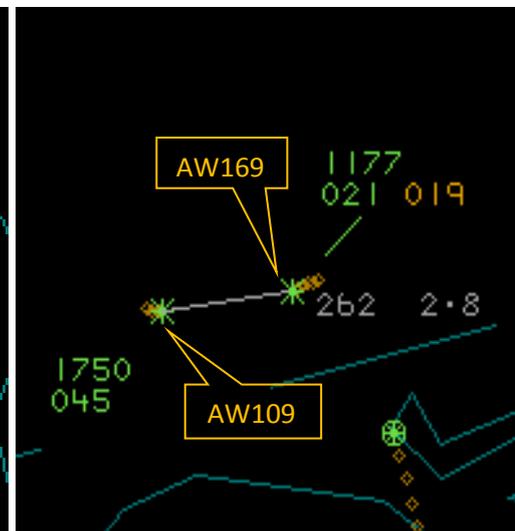


Figure 2 - 1458:51

At 1458:51, the AW109 pilot had commenced descent and the controller advised him of traffic in the 11 o'clock at about a mile and a half, indicating 1900ft and routing southwest-bound. The distance between the aircraft as displayed on the area radar replay at this time was 2.8nm. The AW109 pilot acknowledged the Traffic Information call (Figure 2).

At 1459:07, the controller tried to call the AW169 pilot to establish whether he was listening out on the Newquay frequency, there was no response.

At 1459:20, the OJTI stepped in on the frequency and advised the AW109 pilot that the conflicting traffic was now half a mile east, tracking southwest, indicating 2000ft (Figure 3). The pilot responded that he was visual with the traffic.

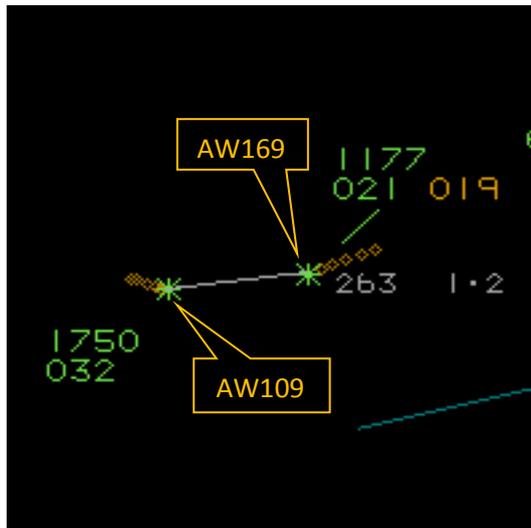


Figure 3 – 1459:20

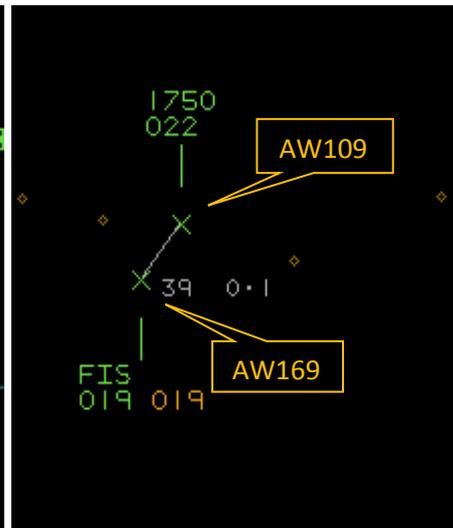


Figure 4 - 1459:48

CPA occurred at 1459:48 and the aircraft were displayed as being 0.1nm laterally and 300ft vertically separated (Figure 4).

Under the requirements stated in CAP493 and CAP774, the provider of a Basic Service is not required to monitor the flight and pilots should not expect any form of traffic information from a controller. However, where a controller has information that indicates that there is aerial activity in a particular location that may affect a flight, they should provide information in general terms to assist with the pilot's situational awareness. This will not normally be updated by the controller unless the situation has changed markedly, or if requested by the pilot.

The Newquay Radar Controller U/T and the OJTI identified the hazard presented by the AW169 transiting the area in which the AW109 was carrying out the auto-rotation descent and passed Traffic Information on two occasions to the AW109 pilot. The AW109 pilot subsequently reported as having the traffic in sight. Whether Traffic Information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.

The London FISO does not have access to surveillance equipment to enable monitoring of flights and was unaware of the presence of the AW109.

UKAB Secretariat

The AW169 and AW109 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 converging then the AW169 pilot was required to give way to the AW109².

Under the provisions of a Basic Service, CAP774 (UK Flight Information Services) states:

'If a controller/ FISO considers that a definite risk of collision exists, a warning shall be issued to the pilot (SERA.9005(b)(2) and GM1 SERA.9005(b)(2)).'³

SERA 9005(b)(2) states:

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(2) Converging.

³ CAP774, Chapter 2 (Basic Service), Traffic Information, paragraph 2.8.

'(b) Flight information service provided to flights shall include, in addition to that outlined in (a), the provision of information concerning:

- (1) ..;
- (2) collision hazards, to aircraft operating in airspace Classes C, D, E, F and G;
- (3) ...'

GM1 SERA.9005(b)(2)) states:

'INFORMATION RELATED TO COLLISION HAZARDS

Information relating to collision hazards includes only known activities that constitute risks to the aircraft concerned. The availability of such information to air traffic services may sometimes be incomplete (e.g. limitations in radar or radio coverage, optional radio contact by pilots, limitations in the accuracy of reported information by pilots, or unconfirmed level of information) and, therefore, air traffic services cannot assume responsibility for its issuance at all times or for its accuracy.'

Summary

An Airprox was reported when an AW169 and an AW109 flew into proximity at 1500hrs on Friday 20th October 2017. Both pilots were operating under VFR in VMC and both were in receipt of a Basic Service, the AW169 pilot from London Information and the AW109 pilot from Newquay.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, a transcript of the relevant R/T frequency, radar photographs/video recordings, reports from the FISO and ATCO involved and a report from the appropriate ATC authority.

The Board first discussed ATM aspects of the incident and commended the Newquay trainee controller and OJTI for proactively attempting to establish contact with the AW169 pilot and for providing timely Traffic Information to the AW109 pilot, who was in receipt only of a Basic Service. Members noted that the AW169 pilot's non-surveillance based Basic Service with London Information afforded no possibility of Traffic Information, and that he may have been better served by contacting Newquay in that area; that he did so following the Airprox indicated that he was aware of the service available. Members also commented that Airprox often involve pilots who do not request a Traffic Service on the basis of perceived ATC factors, such as controller workload or base of radar cover. The Board re-iterated that it was for pilots to ask for and negotiate the service they desired rather than second-guess the controller's ability to comply; if the controller was only able to offer a lesser service then they would make that known. In particular, in-cockpit assessments based on perceived R/T levels or suppositions of radio and radar coverage were not a reliable indication of the ability of a controller to provide a surveillance-based service. More specifically, in previous Airprox involving air test aircraft, the Board had commented that their often dynamic nature and associated high degree of in-cockpit activity warranted careful consideration of the extent to which the test should be completed in light of the local traffic environment and the use of a surveillance-based FIS. Significant level changes could be accommodated by agreeing a height block as part of the Traffic Service. In the event, the AW109 pilot effectively received a Traffic Service, but this was due to the controller's diligence rather than being a pre-planned aspect of the air test.

Turning to the actions of the pilots, the Board noted that the AW109 pilot had twice received Traffic Information on the AW169, and had reported that he had reduced his rate of descent after the second Traffic Information when he saw the AW169 at 800m. He had then turned left to pass behind the AW169 whilst levelling off at FL020, but the AW169 then turned sharply right and passed underneath. For his part, the AW169 pilot only saw the AW109 at a reported range of 120m and, although he reported making 'a quick assessment of the other aircraft's trajectory', members wondered to what degree his actions were dominated by a startle response. Members noted that the AW169 pilot was required to give way to the AW109, but acknowledged that he had probably not seen it early enough to do so in a timely manner. The Board then commented on the fact that both pilots had an equal responsibility not to operate in such proximity to other aircraft as to create a collision hazard and

members discussed at some length whether the AW169 pilot had inadvertently flown into conflict with the AW109 by turning right, or whether the incident could simply be considered a conflict in Class G. After further discussion the Board agreed that, in this instance the AW109 pilot had been in possession of sufficient Traffic Information on the AW169, and that by continuing his rapidly descending autorotation towards it he had flown into conflict with the AW169. Some members felt that the AW109 pilot had seen the AW169 at sufficient range and had taken sufficient avoiding action that there was no risk of collision, pointing out that neither aircraft's collision warning system had alerted until the AW169 pilot received a TCAS aural warning after turning towards the AW109. However, the majority of the Board felt that with only 300ft vertical separation at CPA, and with the AW109 descending rapidly beforehand, safety had been much reduced below the norm.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The AW109 pilot descended into conflict with the AW169.

Degree of Risk: B.

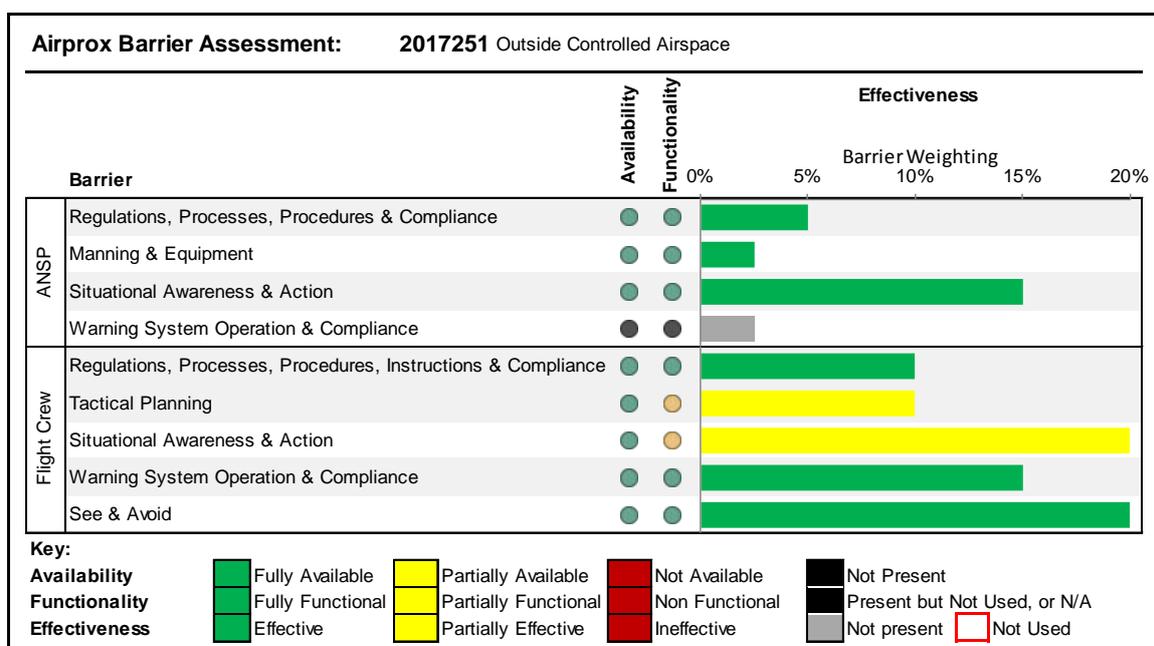
Safety Barrier Assessment⁴

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

Flight Crew:

Tactical Planning was assessed as **partially effective** because the AW169 pilot elected to obtain a non-surveillance based service from London Information, and the AW109 had elected to obtain only a Basic Service from Newquay for his air-test.

Situational Awareness and Action were assessed as **partially effective** because the AW169 pilot was not aware of the location of the AW109 and the AW109 pilot elected to continue with the autorotation manoeuvre after receiving Traffic Information which indicated an aircraft closing on a converging track.



⁴ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](http://www.ukab.co.uk).