

## AIRPROX REPORT No 2012135

Date/Time: 31 Aug 2012 0904Z

Position: 5114N 00044W (8nm E  
Odiham - elev 405ft)

Airspace: LFIR (Class: G)

Reporting Ac Reported Ac

Type: Griffin RC114

Operator: HQ Air Trg Civ Pte

Alt/FL: 1500ft 2100ft  
QFE (1015hPa) QNH (1028hPa)

Weather: VMC CLBC VMC CAVOK

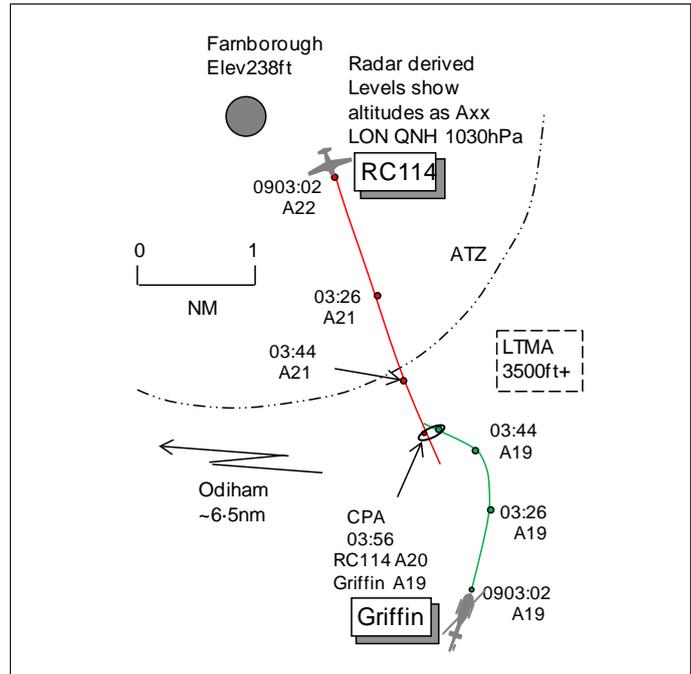
Visibility: 40km NR

Reported Separation:

300m H Not seen

Recorded Separation:

100ft V/0.1nm H



## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

**THE GRIFFIN PILOT** reports flying a local sortie from Odiham and in receipt of a TS from Odiham Approach on 234.35MHz, squawking 3650 with Modes S and C. The visibility was 40km clear below cloud in VMC and the helicopter was coloured black/yellow with nav lights and upper and lower HILSs switched on. The ac was being flown on instruments from the RH seat without using an instrument training visor. The ac Cmdr was conducting lookout as safety pilot from the LH seat assisted by a crewman seated in the RH side of the cabin. The ac was vectored to intercept the LOC for the ILS RW27 at 1500ft QFE 1015hPa. When on a closing heading 300° at 110kt traffic was called to the NW at 2nm tracking S. All 3 crewmembers looked for this traffic but were unable to see it. The ac was manoeuvred in a rate 1 turn to the L to intercept the LOC, QDM 271°. During this turn, flying out of sun, the traffic was called again, this time NE by 0.5nm tracking S which directed the Cmdr and crewman to search for the traffic in their 4 o'clock; the HP then looked out into the forward arc. On returning eyes to the front the Cmdr and HP simultaneously saw the traffic just R of the 12 o'clock at a range of 300m at the same level. The HP rolled-out of the turn and flew behind the traffic by 300m; however, a collision would not have occurred had the ac not been manoeuvred. The conflicting traffic was a white-coloured low-wing monoplane with retractable u/c which did not appear to manoeuvre in response to seeing their ac, he thought. He assessed the risk as medium.

**THE RC114 PILOT** reports en-route from Wycombe Air Park to Le Touquet, VFR and in receipt of a BS from Farnborough on 125.25MHz, squawking an assigned code with Modes S and C. The Wx was CAVOK and the ac was coloured white with strobe lights switched on. They transited the area heading 132° and 135kt at 2100ft QNH 1028hPa. During the flight some TI was received from Farnborough and some traffic (fixed wing and rotary) was observed but no Airprox took place; the second pilot also agreed.

**THE ODIHAM APPROACH CONTROLLER** reports training on the bandboxed positions of Approach and Director. The Watchman primary radar was U/S and he was using SSR only with radar services reduced to all flights in accordance with CAP413. The Griffin was in the radar pattern on a reduced TS approximately 8nm from Odiham bearing 110°. The ac was heading N when he was about to turn it onto a heading of 310° to intercept the LOC. The flight was instructed to fly at 1500ft QFE and its Mode C confirmed that it was at the assigned height. The Farnborough ATZ was very busy with at least 5 squawking contacts and he spotted a track on the SE edge of the ATZ indicating 1400ft on

Odiham QFE tracking S [the RC114]. He immediately called the traffic to the Griffin flight stating it was, "traffic NE, 2.5nm, tracking S, similar height". He turned the Griffin onto 310° to intercept the LOC and updated the conflicting traffic to the crew stating, "traffic now NE, 0.5nm, tracking S, similar height". The pilot replied stating he had seen the ac as it passed approximately 300yd away. The pilot asked if the reduced TI he was under meant ATC could not see the other ac. He replied that he could see the other ac on SSR only and the reduction was not a reason for not sighting the Farnborough ac. He opined that there were more contacts than normal in the vicinity of Farnborough and their ATC had been informed at least 5min prior to the incident that the Griffin was inbound in the Director's pattern profile yet they did not call Approach to give information on the conflicting traffic tracking through the pattern at a similar height.

**BM SAFETY POLICY & ASSURANCE** reports that this Airprox occurred between a Griffin being vectored for an ILS at Odiham in receipt of a TS from Odiham APP and an RC114 in receipt of a BS from Farnborough Radar.

All heights/altitudes quoted are based upon SSR Mode C from the radar replay unless otherwise stated.

The Griffin was being provided with a reduced ATS as the Watchman PSR was U/S. APP was operating in the bandboxed APP and DIR position, was endorsed as a DIR but training in the APP position. APP was being screened by another controller, who was himself undergoing a screen standards check. The APP trainee described their workload as high to medium, though they did not describe the task complexity.

The incident sequence commenced at 0901:26 as APP turned the Griffin "...left heading 0-1-0 degrees" onto the Radar Training Circuit (RTC) base leg, which was acknowledged by the Griffin pilot. At this point, the Griffin was 7.8nm SE of Odiham, 6.2nm S of Farnborough and 9.3nm SSE of the RC114, heading E at 1500ft Odiham QFE (1950ft Farnborough QNH). The RC114 was tracking SE'ly, indicating 2200ft Farnborough QNH (1750ft Odiham QFE). APP was providing ATS to the Griffin within the RTC, an un-related CH47 departing Odiham IFR to the NW and an unrelated RW of unknown type transiting IFR to the W.

Between 0901:50 and 0902:27, APP was engaged in a landline conversation with Middle Wallop to hand over the unrelated helicopter, of unknown type, transiting IFR to the W. At 0901:54, the Griffin can be observed on the radar replay to have steadied on heading 010°, 8.2nm SSE of the RC114. Between 0902:32 and 0902:48, APP liaised with Odiham Talkdown, briefing them on the intentions of the Griffin. During this exchange, at 0902:44, lateral separation between the RC114 and the Griffin reduced to 5nm.

Between 0902:49 and 0903:15, APP was engaged in an exchange of RT with an additional, unrelated helicopter that had departed Odiham in receipt of a BS. At 0903:20, APP instructed the Griffin to, "*turn left heading 3-0-0 degrees, report localiser established*" which was acknowledged by the Griffin's pilot. At that point, the RC114 was 2.6nm NW of the Griffin indicating 2100ft QNH (equating to 1650ft Odiham QFE), continuing to track SE'ly. Immediately after the Griffin pilot's acknowledgement, APP provided them with accurate TI on the RC114, stating, "*traffic north-west, 2 miles, tracking south, similar height*", which was acknowledged.

The Guidance Material to CAP774 Chapter 3 Para 5 states:-

*'Controllers shall aim to pass information on relevant traffic before the conflicting aircraft is within 5 NM, in order to give the pilot sufficient time to meet his collision avoidance responsibilities and to allow for an update in traffic information if considered necessary.'*

The Guidance Material to CAP774 Chapter 3 Para 6 states:-

*'When providing headings/levels for the purpose of positioning and/or sequencing or as navigational assistance, the controller should take into account traffic in the immediate vicinity, so that a risk of collision is not knowingly introduced by the instructions passed.'*

APP stated in their DASOR that they provided TI to the Griffin flight immediately after they identified the conflicting RC114 on their surveillance display; mentioning that the Farnborough ATZ was 'very busy with at least 5 squawking contacts'. Only the RC114 could be observed on the radar replay within the Farnborough ATZ. Three additional, unrelated, ac could be observed on the radar replay within 7.5nm of the Farnborough O/H, beneath the base of CAS and in receipt of an ATS from Farnborough. Odiham's SSR feed is provided from NATS' Pease Pottage and, occasionally, Heathrow radars. The base of PSR and SSR radar coverage provided by NATS' mosaic radar picture in the Farnborough O/H was assessed as part of this investigation and determined to be approximately 489ft and 505ft respectively.

At 0903:38, the Griffin can be observed on the radar replay turning on heading 300°. At 0903:42, APP updated the TI on the RC114 to the Griffin flight describing it as, "*previously reported traffic, north-east, half a mile, tracking south, same height*" which was acknowledged; however, the RC114 was 1nm NW of the Griffin, maintaining its altitude and track. At 0903:51, the Griffin's pilot reported "*visual*" with the RC114 which was 0.5nm NNW of the Griffin indicating 2000ft (equating to 1550ft Odiham QFE); the Griffin was indicating 1900ft (equating to 1450ft Odiham QFE).

The CPA occurred at 0903:56 as the Griffin passed 0.1nm NE of the RC114, with 100ft vertical separation indicated. The Griffin's pilot has reported however, that the ac were co-altitude at the CPA.

BM SPA discussed the Airprox with the controller conducting the standards check; they related that, due to the continuous nature of the exchange of RT between 0903:20 and 0903:33, the late initial provision of TI by APP and the separation remaining at 0903:33, they had little opportunity to affect the incident. Based upon their information, it is possible that the intervention that they were able to make in the limited time available was what precipitated APP's updated TI at 0903:42.

Notwithstanding that 'a pilot is expected to discharge his collision avoidance responsibility without assistance from the controller' (CAP774, Chptr 3 Para 4 refers), given APP's workload, it is reasonable to suggest that an earlier opportunity existed to provide more timely TI to the Griffin on the RC114. Moreover, although APP's description of the RC114's position as NE, rather than NW, is a typical human error, it occurred at a critical point in the incident sequence and caused the Griffin's crew to focus their visual scan in the wrong area, believing that the RC114 would pass behind them. Finally and critically, the incident was caused by APP's instruction to the Griffin at 0903:20, which introduced the 'risk of collision' between the Griffin and the RC114. This suggests that APP was either unable to perceive that the heading of 300° would conflict with the RC114, that they had not detected the conflict at the time that the instruction was passed, or did not understand the intent within the Guidance Material to CAP774 Chapter 3 Para 6. The timing of the TI immediately after the turn instruction suggests that the controller had not detected the conflict prior to that point, which may be suggestive of a breakdown in their visual scan.

**ATSI** reports that the Airprox was reported by the pilot of a Griffin when it came into proximity with a RC114 8nm E of Odiham at height 1500ft.

The Griffin flight was on a training exercise, making an approach to Odiham, and the pilot reported in receipt of a reduced TS from Odiham.

The RC114 flight was on a VFR flight from Wycombe Air Park/Booker to Le Touquet, France and was in receipt of a BS from Farnborough LARS (W) on 125.250MHz.

The Farnborough LARS (W) controller was providing combined Approach and LARS (W) services with the aid of surveillance equipment and had no recollection of either of the ac when the Airprox was notified to the unit. The controller noted that no Airprox was filed on the RT or by telephone.

ATSI had access to the reports of both pilots, the Farnborough controller's report, the Odiham controller's report, recorded area surveillance and transcription of frequency 125.25MHz Farnborough LARS (W).

Farnborough METAR was: EGLF 310850Z 34008KT 310V010 CAVOK 12/04 Q1030=

At 0857:00 the RC114 flight called Farnborough LARS (W) and was requested to standby. At 0858:40 the RC114's message was passed, giving a routing via MID – LYD to Le Touquet. The RC114 reported at 2000ft on 1030hPa. A BS was agreed and the flight was requested to squawk 0435. The RC114 was on a direct track to MID.

At 0900:40 the RC114 pilot requested, "do you wish me to avoid the Odiham overhead?" The RC114 was 5nm N of Farnborough at 2100ft. At 0901:00 the Farnborough controller informed the RC114 flight, "you're going to avoid the Odiham overhead there's the Farnborough overhead in your 12 o'clock you are clear to transit that." The RC114 was observed to amend its track slightly to the L before routing O/H via the threshold end of Farnborough RW24 at 2100ft. There were no further transmissions between the RC114 flight and Farnborough LARS (W) until 0911:20 when the RC114 flight passed MID and requested QSY to Farnborough LARS (E).

At 0903:02 as the RC114 cleared the Farnborough aerodrome boundary at 2200ft there was an ac displaying Mode A code 3650 in the RC114's 12 o'clock range 3-7nm crossing R to L. This was the Griffin, which was at 1900ft.

Figure 1 below shows the Pease Pottage radar picture at 0903:26. The RC114 (#0435) is on track MID and the Griffin (#3650) was now slightly through the RC114's 12 o'clock at 2.1nm, altitude 1900ft.

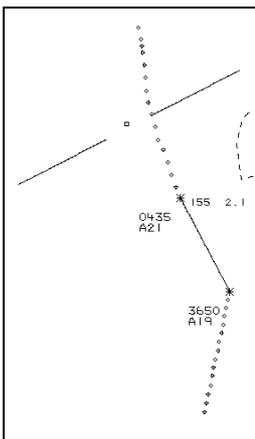


Figure 1: Pease Pottage 0903:26 UTC

At 0903:44 (Figure 2) the Griffin had begun to turn left towards the track of the RC114. Distance between the 2 ac was 0.9nm and 200ft.

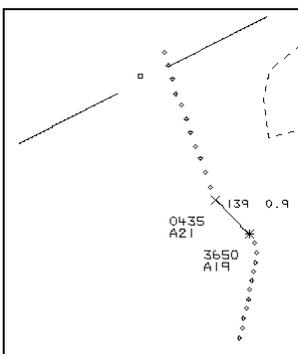


Figure 2: Pease Pottage 0903:44 UTC

At 0903:56 the ac were 3nm SSE of Farnborough at the CPA. The Griffin was now 0.1nm abeam the RC114 and 100ft below (Figure 3). The Griffin then passed behind the RC114 by 0.3nm (Figure 4). The Griffin pilot report indicates that the crew became visual with the RC114 as the Griffin turned to intercept the LOC. The RC114 pilot's report does not specifically note that the Griffin was sighted visually.

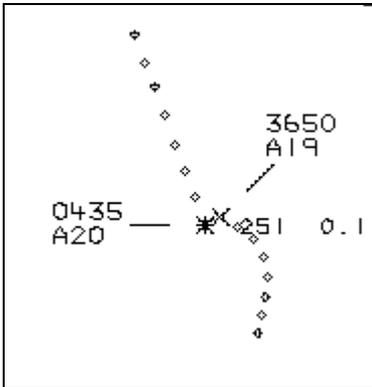


Figure 3: Pease P. 0903:57 UTC

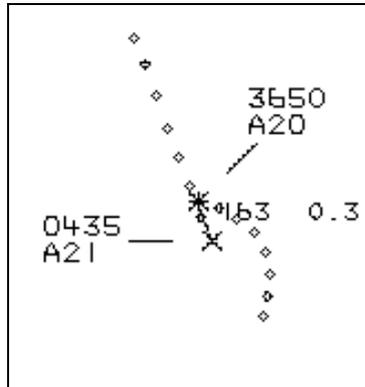


Figure 4: Pease P. 0904:02 UTC

Both ac were in Class G uncontrolled airspace where the responsibility for collision avoidance rest solely with the pilots of each ac.

The RC114 was in receipt of a BS under which pilots should not expect any form of TI from a controller. A controller with access to surveillance-derived information shall avoid the routine provision of TI on specific ac. Identification of an ac in receipt of a BS, e.g. by allocation of a specific SSR code, does not imply that any subsequent monitoring of the flight will take place.

The Airprox occurred in Class G uncontrolled airspace 3nm SSE of Farnborough at altitude 2000ft when the Griffin turned into proximity with the RC114. Minimum distance between the 2 ac was recorded as 0.1nm/100ft. The RC114 was under a BS from Farnborough LARS (W).

**HQ AIR TRG** comments that the Griffin crew discharged their responsibility to see and avoid the RC114. Their decision to operate under a TS, and to dispense with any IF screens was sensible. Only operating under a DS would have provided more protection in this instance by requiring the controller's first response to detecting the RC114 in conflict to be to provide a deconfliction turn. In the event, having apparently turned the Griffin into a conflict the subsequent inaccurate TI delayed acquisition of the conflict. Air Cmd recently required all units to consider mandating use of a DS for their ac, where practicable, when operating in the radar cct under ATC vectors.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

A CAT pilot Member noted that the RC114 pilot had reported receiving TI from Farnborough whilst under a BS. However, pilots are sometimes under the misapprehension that they are under a radar surveillance service when they are issued a squawk code and told they are identified and a BS is agreed; this is not the case. Pilots under a BS are responsible for collision avoidance through see and avoid and should not expect to receive specific TI but may receive a traffic warning if the controller sees a potential conflict and believes that a risk of collision exists. The HQ Air Trg Member informed the Board that the RAF Flight Safety suggestion of making a DS the default service to traffic in the RTC was rejected by units as impractical. The BMA SPA Advisor added that the FOBs

for most units specify that traffic arriving and departing IFR will be given a TS. A Military controller Member added that in busy AIAs with several adjacent aerodromes it would be impossible to vector an ac in a RTC under a DS and maintain deconfliction minima. In this case, the Griffin was receiving vectors for an ILS under a TS. However, the L turn issued by DIR onto 300° towards the ILS LOC turned the Griffin into conflict with the RC114 and this had caused the Airprox. It appears that DIR only noticed the RC114's presence at this time and this triggered the passing of TI to the Griffin crew. As the ac closed the updated TI passed by DIR was erroneous which delayed the Griffin crew from visually acquiring the RC114. It was only when the ac were about 0.5nm apart that the Griffin crew saw the conflicting ac and were able to stop their turn so that they passed 0.1nm behind the RC114. It was unclear from his report whether the RC114 pilot saw the Griffin. Taking all of these elements into account, the Board concluded that the actions taken by the Griffin crew had been enough to remove the actual collision risk but the safety of the ac had not been assured during the encounter.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: Odiham DIR vectored the Griffin into conflict with the RC114.

Degree of Risk: B.