

AIRPROX REPORT No 2012111

Date/Time: 17 Jul 2012 2310Z (Night)

Position: 5103N 00227W
(8nm E Yeovilton)

Reporter: Yeovilton TC

Airspace: Yeovilton MATZ (Class: G)

1st Ac 2nd Ac

Type: Lynx C130 Hercules

Operator: RN HQ Air (Ops)

Alt/FL: 2000ft >250ft
QFE (1018hPa) RPS (1018hPa)

Weather: IMC (Night) VMC CLBL

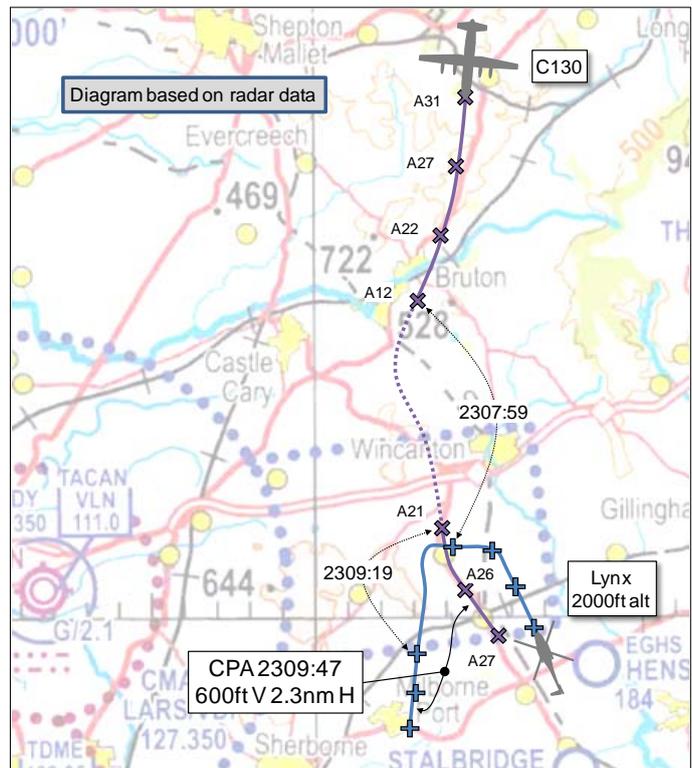
Visibility: 0km 10km

Reported Separation:

NK >1nm

Recorded Separation:

600ft V/2.3nm H



CONTROLLER REPORTED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE RNAS YEOVILTON APP CONTROLLER reports that he was the night supervisor, located in the Radar Room. A Lynx helicopter was conducting a PAR to RWY27 under IFR in IMC, with a DS from Yeovilton TDN [282.050MHz]. The weather was reported as 9000m in mist with cloud BKN at 2000ft and wind 260° at 6kts. When the Lynx was at 9nm [from touchdown] he observed a 'fairly fast moving contact', squawking 7001 and 'indicating 3000ft'. The contact was observed to head S from a position 14.5nm NE of Yeovilton, straight towards the Lynx. He attempted to call the unknown ac on both 234.300MHz (Yeovil APP) and 127.350MHz (Yeovil LARS) but received no reply. When the unknown ac was about 10nm N of the Lynx he issued avoiding action, via the PAR controller, for the Lynx pilot to 'maintain 2000ft [height, QFE 1018hPa] and turn L immediately to heading 120°'. The unknown ac continued to head straight towards the 8nm point on the PAR approach track, whilst descending, and the avoiding action was reissued as an immediate R turn to heading 190° along with instructions to re-contact Yeovil APP. Due to the unknown ac's greater speed, the two contacts converged with less than 0.5nm separation, he thought, 'within the same level as observed on Mode C'. Because of the rapidly unfolding situation, and with only two controllers on duty (APP and PAR controllers), both of whom were involved with the avoiding action, there was no opportunity to attempt to raise the unknown ac on UHF Guard frequency. He 'monitored the ac on radar' and, at 0022L, the Lynx pilot reported that the unknown ac in question appeared to be large and fast moving and that he believed it was a C130.

He assessed the risk as 'Very High'.

[UKAB Note(1): The weather for RNAS Yeovilton was reported as follows:

METAR EGDY 172318Z 19006KT 9000 BR FEW020 BKN045 14/14 Q1021 BLU BECMG SCT020 WHT]

THE LYNX PILOT reports that he was established on the PAR to RWY27. The SSR transponder was selected on with Modes A and C and a discrete squawk. The ac was not fitted with Mode S or an ACAS. He was operating in IMC, under IFR, with a DS from Yeovilton TDN. As he was

approaching the initial descent point at altitude 2000ft [QNH 1018hPa], TDN issued avoiding action turns, initially on to heading 120° and then on to heading 190°, against unknown traffic N of him, tracking S at a similar height. The traffic was tracking through the Yeovilton MATZ stub but was not in RT contact with Yeovilton. He was transferred back to Yeovilton APP, on a DS, as the TDN controller lost radar contact but APP was unable to maintain 3nm separation. Shortly thereafter, he was advised that the conflicting traffic had cleared to the SE.

He assessed the severity of the occurrence as 'High'.

[UKAB Note(2): In a subsequent conversation with the Lynx pilot he stated that he was instructing a student crew, whilst seated in the rear of the ac. Following the TI calls he donned his NVG in an attempt to gain visual contact with the conflicting traffic but was unable to do so as he was in IMC.]

THE LYNX SQUADRON DUTY AUTHORISER reports he had noted that 2 x C130 were booked in to Night Rotary Region (NRR) 2 but with no route details. A NOTAM detailed entry timings for the 2 x C130 but they took the form of a block booking of 7 NRRs, all with the same entry time. He checked the Centralised Aviation Data Service (CADS) and noted that the 2 x C130 were shown as routing from their home base to the Salisbury Plain Training Area (SPTA) but with no further route detail. The C130 Sqn was contacted but he was informed that the crews were not available as they were not yet on duty for their planned night flying. Additionally, he was informed that the C130 Sqn block-booked areas, with the final decision on routing being made on the evening of the sortie.

THE C130 PILOT reports that he spoke with the Lynx crew by phone after the incident. It was agreed that safety of flight had not been compromised and therefore he did not feel obliged to submit an Airprox. He was informed some weeks later, after his return from Operations, that a controller Airprox had been filed and he then submitted the information he could recall through the Station FSO.

THE BRIZE NORTON STATION FSO reports the following, made after consultation with the Hercules crew and agreed 'by a representative' of the crew as an accurate reflection of events.

The [C130] crew were conducting low-level NVG training on a sortie that included operations over a number of 'dummy DZs', operating autonomously under VFR and IFR, using NVG, with the ac navigation and 'Grime' lights selected on. The SSR transponder was selected on with Modes A, C and S; the ac was fitted with TCAS and the RPS was set [1018hPa]. An approach reference for one of the DZs was located approximately 6.5nm E of Yeovilton, underneath the E [MATZ stub], with the DZ itself located approximately 1.5km W of the village of Stalbridge [10nm ESE of Yeovilton]. The crew planned to fly to the DZ at low-level [250ft MSD], transiting underneath the E'ly Yeovilton MATZ stub as they did so. They approached from the NE, through intermittently marginal Wx conditions. The Lynx helicopter was seen in the crew's L 11 o'clock at a range estimated at 4-5nm, they thought; however, at a position under the Yeovilton E'ly MATZ stub, the Wx deteriorated below minima and the ac captain executed a low-level Wx abort, iaw SOPs, which took them through the MATZ stub. The crew maintained visual contact with the Lynx helicopter during the Wx abort, which moved from the L 11 o'clock to the L 10 o'clock position and appeared to turn away from their track, they thought. Although the crew noted the proximity of the Yeovilton MATZ, they believed that the A/D was closed and that the MATZ was therefore inactive. Hence they did not attempt to establish RT contact with any Yeovilton agency. The crew also reported that TCAS was fitted but was 'working only intermittently' during the sortie and was not operating at the time of the incident. The crew did not perceive this event as an Airprox.

The Brize Norton Station FSO commented that this event raised a number of concerns and that investigation was ongoing. It was unclear why the crew thought the airfield would be inactive; the BINA entry is unambiguous on this point. The intermittent nature of the TCAS serviceability was also under investigation. The crew's perception of severity had been changed from the original submission of 'High' to one of 'Low', in order to reflect that the crew did not at any stage perceive this event as an Airprox.

The Brize Norton Station FSO further commented on why the C130 crew believed Yeovilton A/D to be shut. Yeovilton routinely closed at the end of the normal working day and reopened at a later time to cater for night flying and it would appear that the co-pilot phoned the station during this hiatus. It was further established that Yeovilton regularly operates night flying on 3 nights per week and, while they get the details of other flying activity that may affect them they do not, as a matter of course, promulgate their own flying activity. They would, however, expect ac transiting in their vicinity to contact them.

THE RNAS YEOVILTON DSATCO reports that, based on the findings of the RAF Brize Norton investigation there was no further action required to resolve this matter. Essentially, the C130 crew assumed that Yeovilton was closed and flew through the MATZ without clearance. Having seen the Lynx, the C130 crew remained visual at all times and were content that there was no risk of collision. However, they subsequently did not contact Yeovilton ATC, which was a cause for concern.

HQ NAVY COMMAND comments that it was disappointing to see that an assumption was made that Yeovilton was closed and therefore no attempt was made to call the unit when flying in such close proximity. This was fundamentally flawed and resulted in an infringement of the MATZ whilst station-based traffic was conducting an IFR recovery in IMC under a DS. Yeovilton routinely conduct Night Flying every Monday, Tuesday and Wednesday with Thursday used as a reserve night. This Airprox occurred on a Tuesday and the default assumption should have been that the airfield would be open. C130s have been operating in this area for many years and in my own experience of several tours at Yeovilton they have normally called on the ICF to alert the unit of their position. Had that been done on this occasion, the Airprox is unlikely to have occurred. It is understood that the C130 procedures have been reviewed and the correct NOTAM and CADS action has now been resumed. Several barriers to safety failed on this occasion, including an intermittent unserviceability to TCAS; notwithstanding the recorded separation achieved, this incident has served to highlight these failings.

HQ AIR (OPS) commented that they echo the concerns of the RAF Brize Norton SFSO and hoped that the Occurrence Safety Investigation (OSI) made recommendations that would prevent a repeat of this situation. In addition, it was disappointing to note that, although the Lynx Sqn Authoriser tried to use CADS to highlight any possible conflicts, the lack of detail on the Hercules task meant this barrier to MAC was not effective in this case.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included a report from the pilot of one ac and an 'agreed narrative' from the pilot of the other, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board first considered the degree of pre-flight coordination between RAF Brize Norton and RNAS Yeovilton. It was established that previous coordination had been achieved by a NOTAM, in this case the C130 Sqn, detailing the planned route Way Points (WPs) with location and timing. However, the constraints of the NOTAM required the C130 crew to fly the route to within ± 5 nm of the planned track and to within ± 15 mins of each planned WP arrival time. It was felt that this imposed an onerous degree of restraint to the requirement to achieve effective operational training; indeed a degree of restraint that prevented effective operational training in many instances. Additionally, other airspace users were often confronted with a NOTAM consisting of dozens of WPs, along with their associated data, against which it was often impractical to achieve deconfliction. Consequently, it was decided to undertake a one year trial whereby C130 crews would submit an area NOTAM, with entry and exit times to low flying areas, rather than a specific route. The Board agreed that whilst this undoubtedly increased flexibility for the C130 crews, to a large degree it removed any effective deconfliction from within the areas. The Military Low Flying Advisor commented that deconfliction had now reverted to the previous NOTAM system pending a review of procedure. It was also noted that at least 2 opportunities to achieve additional deconfliction had been missed and that personnel from both RAF Brize Norton and RNAS Yeovilton had attempted to coordinate with the other, to no

avail. The Board expressed disappointment that neither organisation had sufficiently robust processes in place to capture and act on these attempts at coordination, especially in light of routine night flying at RNAS Yeovilton and the regular use of adjoining low flying area by C130 crews.

The Board then considered deconfliction action carried out on the night. It was agreed that neither crew was best served by the failure to achieve meaningful deconfliction before flight but the Board felt that on this occasion the onus of responsibility fell to the C130 crew. Some Members opined that routeing under the E stub of the RNAS Yeovilton MATZ amounted to poor planning, albeit understandable given the C130 crew's mistaken belief that Yeovilton was shut, and that they would have been better advised to attempt RT contact with Yeovilton as they neared the MATZ in marginal Wx conditions. In the event it was the C130 crew's climb into the Yeovilton MATZ stub without clearance that caused the Airprox.

The Board was unable to reconcile a disparate element of the reports, namely that the C130 crew maintained visual contact with the Lynx having aborted from LL due to the Wx but that the Lynx pilot was unable to establish visual contact with the C130 using his NVG. It was felt that this may have been a combination of the limited field of view of NVG, the dynamic environment of the helicopter changing heading whilst the Lynx pilot was attempting to scan along a line of bearing, given by Yeovilton APP TI, and the variable Wx conditions.

Additionally, The Board agreed that the information required to conduct an accurate analysis of this incident had not been satisfactorily captured as evidenced by the lack of an Airprox report from the C130 pilot. The Board Secretariat noted that a total of 8 Defence Aviation Safety Occurrence Reports (DASOR) were associated with this incident. The MAA Advisor stated that whilst the elements concerned had all provided meaningful and valuable data, some had not carried out Airprox reporting in accordance with the relevant MAA regulations and that this error would be followed up.

Finally, the Board considered the disparate risk assessments from the Yeovilton APP Controller and the C130 crew. A Military ATC Member stated that this was probably due to an incorrect assessment of the miss-distance by the APP Controller as he looked across at the PAR scope and saw the contacts converging but without fully appreciating the non-linear scale of the display. The Board agreed that the available radar information strongly indicated a CPA of the order of 2.3nm and that consequently safety margins were not 'much reduced below the normal'.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The C130 crew penetrated the Yeovilton MATZ without clearance.

Degree of Risk: C.