

AIRPROX REPORT No 2011154

Date/Time: 26 Oct 2011 1130Z

Position: 5059N 00253W (2¼nm
NE of Merryfield A/D -
elev 146ft)

Airspace: Merryfield ATZ/CMATZ (Class: G)

Reporting Ac Reported Ac

Type: Lynx HAS 3 PA28R

Operator: HQ Navy Civ Trg

Alt/FL: 2000ft 2000ft
QFE (998mb) RPS (999mb)

Weather: VMC CLOC VMC CLOC

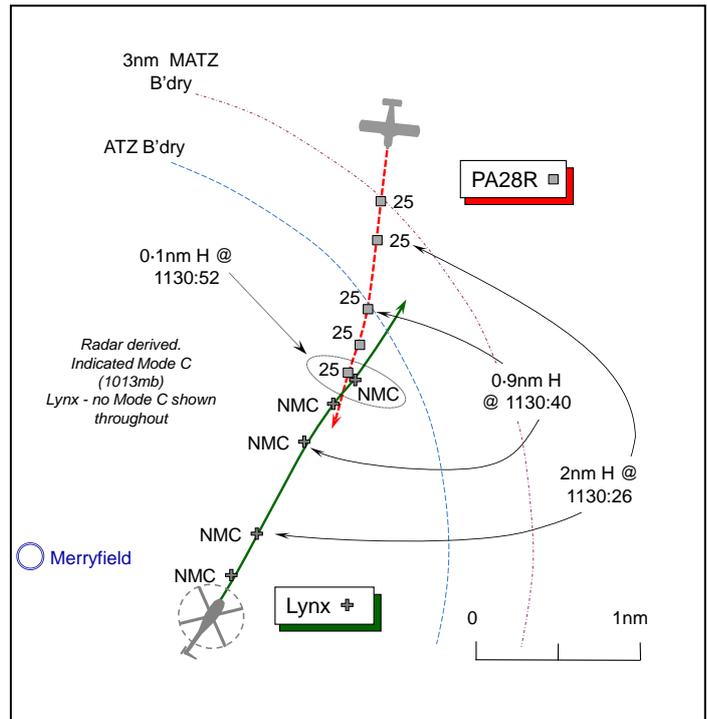
Visibility: 30km 10km

Reported Separation:

Nil V/50-100m H NR

Recorded Separation:

0.1nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE LYNX HAS3 HELICOPTER PILOT, a QHI and the PIC, reports he was operating at Merryfield on a training sortie whilst in communication with Merryfield TOWER on 378.525MHz under a PS he thought - but actually a BS. A squawk of A0203 was selected; Modes C and S are not fitted, nor is TCAS. The helicopter is coloured grey and the red anti-collision beacon was on.

Whilst conducting a practice instrument departure from Merryfield's RW21LHC and within the bounds of the cct pattern, heading 030° at 120kt the helicopter was levelled at 2000ft Merryfield QFE (998mb) in VMC. The PF – who was using an IF hood - conducted his instrument cross-check with the safety pilot [the QHI] monitoring and who was also maintaining the look-out. A MATZ crosser which could have been a conflict had been broadcast on the Merryfield TOWER frequency and although he was actively searching for it he had not spotted it; no indication of the range from Merryfield had been given in TOWER's broadcast, he thought. After he looked in to confirm the correct SSR setting, he looked back up to check the ac was clear to turn L and head N when he saw a white low-wing aeroplane with blue markings at the same height, travelling in the opposite direction wings level just L of the nose about 2-300m away. Taking control of his helicopter and to avoid the other ac – the PA28 – he banked sharply to the R into a level turn as the aeroplane passed about 50-100m to port with a 'high' Risk of collision. Once clear, he turned through 180° to check on the PA28 and saw that it was still maintaining track at the same height. He therefore assumed that the PA28 pilot had not seen his helicopter. He called Merryfield TOWER advising that there had been a 'close shave' with the PA28 crossing the MATZ. On reflection, he assessed that an Airprox had occurred and reported the incident as such on the Yeovilton GROUND frequency about 10min later as they were taxiing into dispersal.

THE PIPER PA28R PILOT reports that he had departed from Bournemouth on a VFR training flight and was in receipt of a BS from Yeovilton LARS on 127.350MHz in VMC. The assigned squawk [A0242] was selected with Mode C; neither TCAS nor Mode S is fitted. Overhead Merryfield heading 200° at 120kt in a level cruise at 2000ft RPS, he has a vague recollection with one Lynx low to his L and one Sea King low operating in the Merryfield cct. He does not recall any Risk and therefore no avoiding action was necessary.

His aeroplane is coloured white, red and blue; the strobes were on.

THE MERRYFIELD AERODROME CONTROLLER (ADC) reports that during a busy period at Merryfield with 6 helicopters in the cct in total, 2 helicopters were given visual departure instructions. Immediately afterwards, the subject Lynx pilot called to say he was 'exercise complete' and requested an IFR release to return to Yeovilton via a PAR. In accordance with SOPs, he obtained a release from Yeovilton APP [at 1127:20] and read back the instruction 'released standard VFR squawk 0203'. This was then passed to the Lynx crew, who duly read it back, asking additionally, 'will that be for RW09 or RW22'. Advising the crew to standby whilst he contacted YEOVIL APPROACH (APP), the LARS controller answered the line and immediately asked for a MATZ Crossing, N – S 1nm E of Merryfield A/D at 2000ft. He approved the MATZ Crossing and asked the controller to confirm which RW was being used for the Lynx's PAR. The reply from LARS was a bit woolly, with the controller unable to confirm, but he thought it would be RW22. As other transmissions were being made on his Merryfield TOWER frequency his attention was divided but RW22 made sense in view of the recovery state and prevailing wind so he passed 'expect RW22' to the Lynx crew, who acknowledged. Once he had confirmed the positions of his remaining cct traffic, he broadcast 'all stations, MATZ crosser North to South, passing 1 mile East at 2000 feet'. About 2min later, the Lynx crew called on the RT, '[Lynx C/S] is MATZ boundary to the North, channel 3, be advised, we've just had a fairly close shave with the MATZ crosser'. He asked the Lynx pilot to advise the APPROACH controller if he wished to pursue the issue, but he was not visual with the MATZ crossing ac at any point.

THE YEOVILTON LARS CONTROLLER (LARS) reports that the PA28R was operating to the N of Yeovilton on a VFR NAVEX under a BS at 2000ft Portland RPS (999mb), squawking A0242. At a position about 14nm N of Merryfield the pilot asked for a MATZ penetration of Merryfield. Initially, the PA28R pilot was told to expect approval in 10nm in order to make the MATZ crossing information more relevant and accurate for the Merryfield ADC. When the PA28 was 4nm NE of Merryfield a MATZ crossing was requested, N to S to pass 1nm E of Merryfield at 2000ft (999mb) and approved by Merryfield TOWER; this MATZ crossing approval was relayed to the PA28R pilot. With the PA28R at a range of between 1-2nm NE – maintaining about 1nm lateral clearance to the E of Merryfield an ac squawking A0203 – the Lynx – was observed about ½nm S of the PA28R's position, tracking NE. As it was known from the pre-note and APP controller's fps to be climbing to 2000ft, under a 'duty of care' he called this traffic to the PA28R pilot who reported visual with the traffic [at 1130:49 from the RT transcript]. Once the PA28R was clear of the MATZ Merryfield TOWER was informed. The PA28R pilot reported changing en-route when the aeroplane was about 5nm S of Merryfield A/D.

THE YEOVILTON APPROACH CONTROLLER (APP) reports he had no traffic under service, but was expecting an ac from TALKDOWN shortly to overshoot for a further approach, when he answered a call from the Merryfield ADC for a release on the Lynx. After checking the radar for conflicts he issued a standard VFR release from Merryfield - to depart on a heading of N climbing to 2000ft Merryfield QFE iaw Yeovilton Air Orders (YAvOs) Art 0304.5 - and to squawk A0203. There was an ac squawking A0242 [the PA28R] to the NE of Merryfield heading S at about 2300ft, but no confliction for the procedure. The Lynx pilot finally called him to the NNE of Merryfield at 2000ft heading 030°, complaining of close proximity with another ac, but the pilot did not report an Airprox to the Merryfield controller or APP at the time.

THE YEOVILTON RADAR SUPERVISOR (SUP) reports he was informed of this incident by the OIC Merryfield on the direct landline. He was advised that the Lynx pilot, on climb out for a radar pick up for GCA at Yeovilton had reported a 'close shave' with the civilian Merryfield MATZ crossing traffic that was passing 1nm E of Merryfield N – S at 2000ft. The PA28R MATZ crosser was shown on his radar display flying this profile. When the Lynx pilot initially called APP the helicopter was clear of the Merryfield MATZ. When he discussed the incident with the Lynx pilot about 15min after the incident he enquired whether the pilot was VFR on his climb out and questioned his departure on a NE track as opposed to the standard VFR release profile to the N, which the pilot replied would have

infringed the cct pattern at Merryfield. He then clarified that the Lynx pilot was declaring an Airprox as this had been mentioned whilst he was taxiing to dispersal.

UKAB Note (1): The UK AIP at ENR 2-2-2-3, promulgates the Merryfield ATZ as a circle radius 2½nm centred on RW09/27 extending to 2000ft above the A/D elevation of 146ft.

UKAB Note (2): The UK AIP at ENR 2-2-3-2, promulgates the non-standard Merryfield MATZ as a circle radius 3nm centred on RW09/27 extending to 3000ft above the A/D elevation of 146ft.

UKAB Note (3): The LAC System recording shows the Lynx departing from the vicinity of Merryfield on a NNE'ly track – NMC fitted – as the PA28R is shown approaching from the NNE level at 2500ft (1013mb) – about 2050ft Merryfield QFE (998mb). The two ac converge on a point 2¼nm NE of Merryfield at 1130:52, before passing port-to-port with 0.1nm horizontal separation evident.

YEOVILTON reports that in accordance with YAvOs 0304.5, aircraft departing Merryfield for radar pick up for PAR are to depart VFR. The flight is subject to a radar release from APP or SUP, which is then relayed to the pilot prior to him being given clearance to depart the Merryfield cct. Aircraft released 'standard VFR' are to carry out a normal VFR cct departure and, when clear of the Merryfield cct, fly heading 360°, climb to 2000ft Merryfield QFE and call APP on Channel 3. Pilots must maintain VMC until the ac has been identified and placed under an ATS by APP. Additionally, YAvOs specifically states at article 0304.4 that if a departure from Merryfield is required on a track between 030° and 150°, a clearance must be obtained from the SUP. The Lynx was released 'standard VFR', so APP was expecting the Lynx to depart Merryfield heading 360°. Radar releases to departing traffic are given to ensure the protection of IFR traffic flying outside of the Merryfield cct; this is especially prevalent when Yeovilton is operating on RW09RH. The Lynx called APP level at 2000ft heading 030°, which directly contravenes YAvOs.

UKAB Note (4): DSATCO YEOVILTON advises that following the Station's review of this Airprox the existing procedure was clarified in order to remove any potential for ambiguity. The applicable order within YAvOs relating to departures from Merryfield requiring a radar pickup for GCA was slightly reworded. However, in this case the Lynx pilot did not follow that procedure.

HQ NAVY COMMAND comments that the practice instrument departure procedure from Merryfield (a VFR only A/D) has been in YAvOs for many years and is used routinely. It is defined as being a VFR procedure and allows the helicopters to depart to the N for a radar pick-up by APP before being turned into the radar pattern for whichever runway is in use at Yeovilton. There are laid down procedures for the use of dual runways at Yeovilton when in certain configurations with practice IFR recoveries able to be conducted to RW22 when RW09 or RW27 are the duty RW. The pilot of an ac leaving Merryfield should be aware of what the duty runway is as this affects the VFR route configuration. However, the route configuration is not relevant when conducting a standard VFR departure for radar pickup, which is always to depart on a heading of 360°. The Merryfield ADC obtained the correct departure instructions and broadcast all of the relevant information, including the position and altitude of the MATZ crosser, this does not seem to have been assimilated by the Lynx pilot, who should not have departed on a heading of 030° and should have maintained VFR until identified by APP and placed under an ATS. The Lynx pilot contravened local orders for this departure profile causing him to fly his ac close enough to the MATZ crosser to cause himself concern; had he not done so the Airprox was unlikely to have occurred.

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.

It was evident to the Board that the PA28 pilot had requested a crossing of Merryfield MATZ in good time, which had subsequently been relayed by LARS and approved by the Merryfield ADC, who broadcast to A/D traffic, including the subject Lynx crew, that the PA28R would pass 1nm E of Merryfield at 2000ft. The Navy Command Member emphasised that the Lynx crew was in receipt of a BS as they departed Merryfield under VFR, not the PS that the reporting pilot had supposed. As this departure is a VFR procedure there was no intention to separate the two ac and it remained the Lynx pilot's responsibility, whilst departing from the vicinity of Merryfield A/D, to 'see and avoid' the PA28R. The Lynx pilot reports that he had heard the broadcast on the Merryfield TOWER frequency about the MATZ crosser and he was actively searching for it; however, he did not spot it until after he looked back out of the cockpit to clear the L turn onto N when he saw the PA28R 2-300m away just L of the nose at the same height. A pilot Member was critical of the QHI for cross-checking here when he was required to maintain the lookout; with the PF 'under the hood' and other traffic known to be passing to the E of the A/D, scanning out of the cockpit should have been his first priority. The Navy Command Member agreed with the Unit view that the Lynx crew should not have departed on a heading of 030° without approval, but should have been heading N whilst maintaining VFR until identified by APP and placed under an ATS. If they had done so the conflict would not have arisen because the Lynx would have been further to the W. The radar recording shows the PA28R maintaining a level cruise at about 2050ft QFE (998mb) on a course to pass more than 1nm E of Merryfield as it converged with the Lynx that was tracking about 030° and broadly head-on climbing to 2000ft QFE. At this virtually head-on aspect, with little crossing motion to draw attention to it, the white coloured PA28R would not have been easy to spot but the Lynx crew had been pre-warned about it and the PA28R was there to be seen by the safety pilot as the helicopter climbed up to the PA28R's notified height. However, the Lynx safety pilot did not see the PA28R until a very late stage, which resulted in him taking control from the PF that was 'under the hood' and effecting robust avoiding action at a point about 2nm NE of Merryfield. The avoiding action R turn by the Lynx is just detectable on the recording, as is an earlier slight R turn of no more than 10° by the PA28R at a range of about 0.9nm, before the two ac pass port-to-port about 0.1nm apart and broadly in accord with the separation reported by the Lynx pilot. The PA28R pilot, who also had a mutual responsibility to avoid the Lynx in this broadly head-on situation, stated in his written account that he recalled 'one Lynx low to his L' but no avoiding action was necessary. Evidently LARS had passed a warning to the PA28R pilot about the Lynx approaching from the S and the RT transcript reflects that the PA28R pilot reported visual with the helicopter, but it was not clear if it was the controller's warning that prompted the sighting or whether he had seen it beforehand at greater range and turned. Nevertheless, it was apparent that the Lynx crew did not follow promulgated Merryfield departure procedures and flew into conflict with the PA28R crossing the MATZ, which the Board agreed was the Cause of the Airprox. The Board also concluded, unanimously, that at these distances with the Lynx safety pilot unsighted until a late stage, the safety of the ac involved had been compromised.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The Lynx crew did not follow promulgated Merryfield departure procedures and flew into conflict with the PA28R crossing the MATZ.

Degree of Risk: B