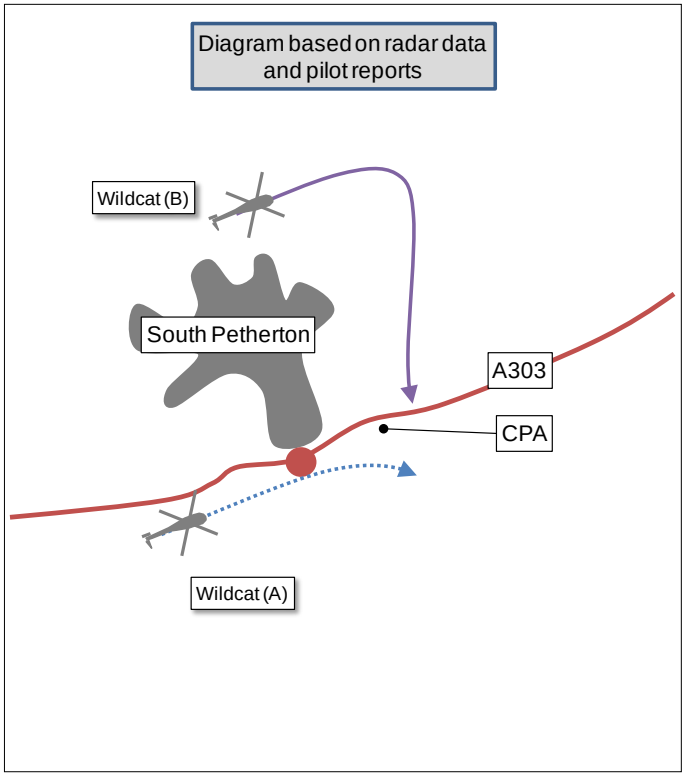
AIRPROX REPORT No 2013006

Date/Time: 29 Jan 2013 1641Z

Position: 5057N 00248W (7nm SW RNAS Yeovilton)

Airspace: Yeovilton AIAA (*Class: G*)

	Reporting Ac	*Reported Ac*
Type:	Wildcat AH1 (A)	Wildcat AH1 (B)
Operator:	JHC	Civ Pvt
Alt/FL:	700ft QFE (NR)	700ft QFE (998hPa)
Weather:	VMC CLBC	VMC CLBL
Visibility:	10km	10km
Reported Separation:	0ft V/0.5nm H	NR V/1000yd H
Recorded Separation:	NR	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE WILDCAT (A) PILOT reports undertaking a conversion training flight to the Wildcat AH Mk1, following the A303 as part of the promulgated Foul Weather Route (FWR), back to RNAS Yeovilton from RNAS Merryfield on completion of his sortie detail. He was operating under VFR in VMC and in communication with Merryfield TWR [378.525MHz]. The ATS provided was not reported. The grey camouflaged ac had HISLs selected on, as was the SSR transponder with Modes A, C and S. The ac was not fitted with an ACAS. At South Petherton [7nm SW Yeovilton], heading 060° at 100kt, the crew noticed a similar ac type at a range of 4nm, flying parallel to them on the LH side and at the same height, N of the A303. There had been no mention of any other ac by Merryfield TWR. The other Wildcat was then observed turning towards him; it was assumed that it would execute a tighter turn to pass behind. However, the other ac's turn was not sufficient to achieve this and the crew perception was of a possibility of collision. The ac commander directed the pilot to turn away from the other ac and he made a positive turn away, to the R. He assessed that the 2 ac were converging rapidly and the other ac was also seen by the rear crew to conduct an avoiding manoeuvre.

He assessed the risk of collision as 'High'.

THE WILDCAT (B) PILOT reports conducting a test flight. He was operating under VFR in VMC with a BS from Westland APP [130.800MHz]. The grey camouflaged ac had navigation lights and HISLs selected on, as was the SSR transponder with Modes A, C and S. The ac was not fitted with an ACAS. From Crewkerne, he elected to operate towards South Petherton as the cloud base looked much higher to the N. He knew this would take his flight path close to the Yeovilton W'ly [MATZ] stub but elected to continue with a BS from Westlands as he had good positional SA. He stated that although he also knew his flight path would take him over the Merryfield to Yeovilton FWR, he assumed that all traffic on this route would be at 500ft and below on the Yeovilton QFE. He operated between Merriott and South Petherton at about height 1400ft [998hPa], turning back to the S 1nm before the Yeovilton [MATZ] stub, and started a slow descent. Aware of possible traffic following the A303, he elected to level off at 700ft. As he was levelling off to the S of South Petherton, the LHS occupant called 'Lynx right and low, turning away'. The pilot immediately saw a Lynx or Wildcat helicopter turning to the S in his 2 o'clock position about 100ft below and at a range of 1000-1500yd. He judged that there was no confliction at that point. After turning about 20° L he continued on a S'ly heading before conducting further operations ivo Crewkerne and returning to Westlands. He stated

that on seeing the other ac he immediately realised it had probably been turning to avoid him; however, at that point there was no perceived risk of collision and therefore he did not raise an Airprox. He also commented that the nature of his sortie required 'eyes-in time' but that CRM was used to maintain one set of eyes looking out during set-up and data recording. He noted that this incident would probably have been avoided if he had called Yeovilton or Merryfield for a traffic update prior to flying in proximity to 'their airspace' and that he had also wrongly assumed that any FWR traffic would be below his level when at 700ft on 998hPa.

He assessed the risk of collision as 'Low'.

THE YEOVILTON DUTY ATCO reports Wildcat (A) was recovering via the publicised FWR to RNAS Yeovilton. When the ADC first spoke to the pilot he called another 'Westlands' ac in his vicinity. The pilot replied, possibly on the Merryfield TWR frequency, that he had narrowly avoided the ac in the vicinity of South Petherton. When the controller stood up to check the Hi-Brite, he saw a 'Westlands squawk' close to that location, which appeared to be to the N of the Westlands operating areas. Nothing else was mentioned on frequency and Wildcat (A) recovered normally.

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

[UKAB Note(1): The Merryfield (MF) and Yeovilton (VL) ADC transcripts for the period of the Airprox are reproduced below:

From	To	Speech Transcription	Time
Wildcat (A)	MF ADC	[Wildcat (A) C/S] is now complete, and we'd like to return via the Foul weather Route	1639:50
MF ADC	Wildcat (A)	[Wildcat (A) C/S] depart Foul Weather Route, Yeovil QFE 1000	1640:12
MF ADC	VL Logger	[Wildcat (A) C/S] on the Foul Weather Route	1640:36
?	MF ADC	[Short transmission with no speech]	1644:26
MF ADC	Wildcat (A)	[Wildcat (A) C/S], continue with Yeovil Tower Channel 1	1644:30
MF ADC	VL ADC	[Landline call] Have you got [Wildcat (A) C/S]?	1644:40
Wildcat (A)	MF ADC	This is [Wildcat (A) C/S] near South Petherton, we just came very close to another aircraft, similar type, assume it's from Westlands	1644:45
MF ADC	Wildcat (A)	[Wildcat (A) C/S], I've nothing else on this frequency	1644:55
Wildcat (A)	MF ADC	[Wildcat (A) C/S] to Channel 1	1645:00

From	To	Speech Transcription	Time
Wildcat (A)	VL ADC	Yeovil Tower, [Wildcat (A) C/S], South Petherton to join.	16:45:39
VL ADC	Wildcat (A)	[Wildcat (A) C/S] Yeovil Tower, Join Point South, QFE one Thousand the circuit is clear, Westland's have traffic in the sectors up to three thousand feet.	16:45:39
Wildcat (A)	VL ADC	Err, err, join for Point South and, err, there is one, err, similar type which is in the South Petherton area, err, orbiting.	16:45:49
VL ADC	Wildcat (A)	[Wildcat (A) C/S] roger	16:46:00

]

THE YEOVILTON OCCURRENCE MANAGER made the following comments: Wildcat (B) was not where Yeovil/Yeovilton ATC believed it to be. The last reported position was in the 'Westland areas' to the S of Yeovil. The Wildcat (B) pilot made an assumption that the FWR was in operation without checking with RNAS Yeovilton ATC. Ac can route along the FWR without it being in force. The height restrictions are only mandated in Green or worse (3.7 km visibility/700ft cloud-base). The Wildcat (B) pilot positioned himself in a location where he knew RNAS Yeovilton ac transit between VL and MF but elected to remain on a BS with Yeovil, despite having a 'heads in sortie' and elected not to get a service from VL whilst close to the MF and VL MATZ boundaries. Wildcat (A) perceived a risk of collision and Wildcat (B) did not.

He made the following observations: Pilots should advise the controlling authority if changing operating area, should always talk to the relevant controlling agency and always take the most appropriate/best ATS available. He also observed that fitment of TCAS could have cued both aircraft [pilots] earlier.

ATSI reports the Airprox occurred E of South Petherton (5057N 00248W), situated on the SW boundary of the Yeovilton/Merryfield CMATZ, between two Agusta Westland Lynx Wildcat AW159 helicopters, Wildcat (A) and Wildcat (B).

Background

Wildcat (A) pilot was operating under VFR, returning to Yeovilton A/D and following the promulgated FWR, used by ac routeing between Merryfield and Yeovilton A/Ds. He was in receipt of a BS from Merryfield TWR [378.525MHz]. Wildcat (B) pilot was operating under VFR on a test flight from Yeovil/Westland (Westland) A/D, planning to use the designated Westland Test Flying Area (TFA) to the S of the A/D. Wildcat (B) pilot elected to route N to South Petherton (see Figure 1), which is outside the TFA and is situated to the N of the FWR. Wildcat (B) pilot was in receipt of a BS from Westland TWR [125.400MHz].

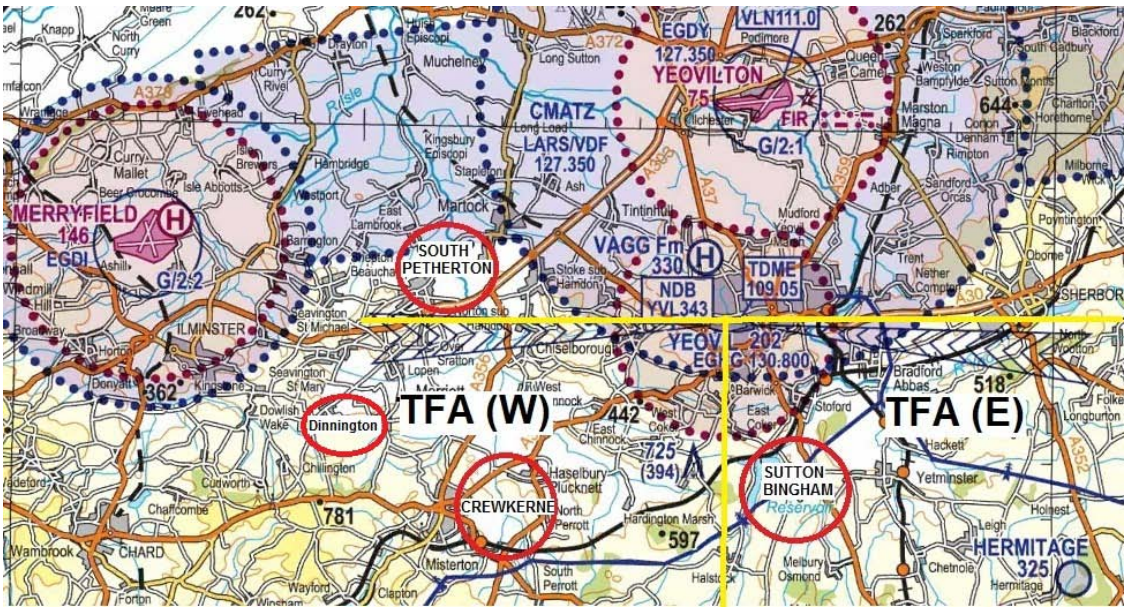


Figure1: TFA (W) & (E) together with circled geographical positions.

Westland ATC were providing a combined A/D and APP control service, but this was planned to be split. A limited radar service can be provided by arrangement for inbound ac utilising the Sperry Type 424E primary radar equipment but, due to equipment limitations, Westland Radar can only provide a radar approach for one ac at a time. The Westland Manual of Air Traffic Services (MATS) Part 2, Paragraph 4.1.2, states:

'The normal method of operation at Westland is for the functions of both Approach Control and Aerodrome Control to be combined. During periods when these services are being provided separately, Approach Control shall co-ordinate with Aerodrome Control all aircraft approaching to land and transit aircraft routing through the ATZ below altitude 2000ft.'

Westland ATSU reported that ac intending to operate N of the Westland TFA will be notified by Westland ATC to Yeovilton ATC and coordinated or transferred as required. A LoA exists between Westland and Yeovilton. The LoA paragraph 1.16.5 (c), states:

'Yeovil/Westland will pass traffic information to Yeovilton on aircraft operating under their jurisdiction, including imminent Test Flying within the TFA, giving a minimum of 5 minutes warning whenever possible to allow for any necessary liaison or co-ordination.'

The Yeovil/Westland MATS Part 2, Paragraph 1.2.4, states:

'The Westland TFA is an area of Class G airspace within which helicopter test flights take place and instrument approaches are conducted. It extends from ground level to 3000 ft amsl. The TFA is divided into two sectors (W and E) by a N/S line drawn through the A/D Reference Point. The TFA is only recognised by ATC Yeovilton who will, whenever possible, co-ordinate use of the airspace with ATC Yeovil/Westland.'

The TFAs have been highlighted in Figure 1, together with the reported geographical positions of Sutton Bingham, Crewkerne, South Petherton, and Dinnington.

CAA ATSI had access to Westland RTF and area radar recording, together with written reports from the two pilots and Yeovilton ATC. The Yeovil/Westlands controller was not made aware of the Airprox and consequently did not file a report but was subsequently questioned about the incident. The area Multi-Tracking Radar recording showed only Wildcat (B) aircraft from 1639:04 until 1643:15.

The Yeovilton A/D weather was recorded as follows:
METAR EGDY 291650Z 20019KT 9999 SCT012 BKN020 13/11 Q1002 GRN NOSIG=

Factual History

The Westland controller was providing a combined Aerodrome (TWR) and APP control service. A Merlin helicopter was operating with Westland APP [130.800MHz] and had requested a SRA to RW27. The Westland controller intended to split the frequencies in order to facilitate the SRA.

The Westland ATSU reported that the Wildcat (B) pilot had booked-out using the standard faxed booking out form, indicating an intention to operate in the Westland TFA (E and W).

At 1610:10, Wildcat (B) pilot contacted Westland TWR and reported ready for departure, initially to operate on the RWY. The TWR acknowledged the call and allocated squawk 0260. Shortly afterwards, Wildcat (B) pilot was instructed to line-up and wait on RW27. At 1613:50, Wildcat (B) pilot was cleared to operate as required on the A/D.

Details of Wildcat (B) pilot's intended flight in the Westland TFA (E and W) together with the squawk 0260 were notified to Yeovilton ATC in accordance with the LoA.

At 1616:03, Wildcat (B) pilot reported ready for departure and TWR cleared him for take-off on RW27. At 1616:45, TWR instructed Wildcat (B) pilot to remain on the Tower frequency and agreed a BS, passing the Portland RPS [998hPa], which was acknowledged correctly.

At 1627:00, the A/D and APP frequency were split to facilitate the provision of the Merlin helicopter's SRA on the APP frequency.

At 1628:25, TWR, aware that the Merlin pilot would be joining the cct after the SRA approach, passed TI and requested the position of Wildcat (B). The Wildcat (B) pilot reported at 500ft, approaching Sutton Bingham (see Figure 1) and advised, *"we'll hopefully remain south.*"

The written report from Wildcat (B) pilot indicated that he elected to route from Crewkerne to South Petherton, due to a low cloud base of 800ft, and was aware that this would take him to the N of the Westlands TFA and across the Merryfield to Yeovilton FWR.

Radar returns showed only Wildcat (B) from 1639:04 until 1643:15. For illustrative purposes the radar position and time of Wildcat (B) have been added to Figure 2 below, together with the approximate track of Wildcat (A).

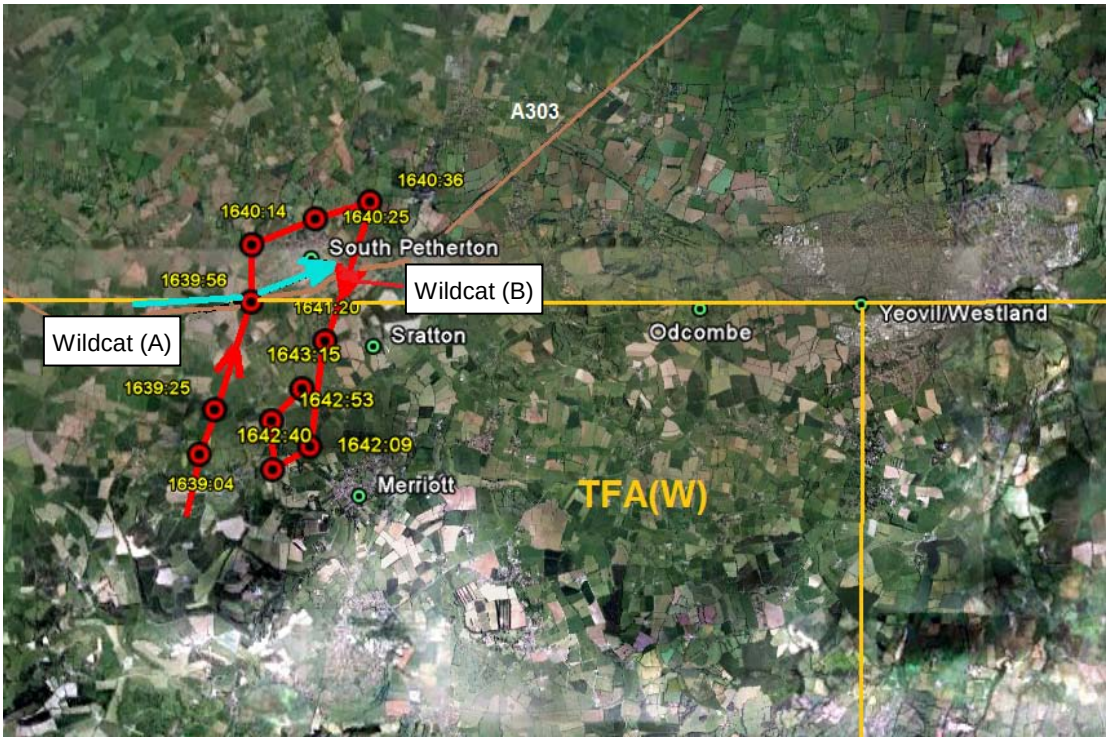


Figure 2: Plotted radar positions and times of Wildcat (B).

Between 1639:56 and 1641:00, Wildcat (B) was N of the TFA(W) area. The precise geometry of the encounter is unknown. However, Wildcat (A) pilot's written report indicated sighting Wildcat (B) N of the A303 and flying parallel to Wildcat (A) before observing it turn R towards him. Wildcat (B) pilot's written report indicated that he had turned S and, levelling at 700ft, had sighted Wildcat (A) in his R, 2 o'clock position and 100ft below. It is considered likely that the Airprox occurred shortly after 1640:36, when Wildcat (B) pilot turned S.

The Westland controller was not aware of the Airprox and therefore did not complete a report. Westland ATSU were not advised of the Airprox until the following week.

When questioned, TWR reported that operations on the day were routine, indicated that he expected Wildcat (B) would be operating within the TFA and did not consider it unusual that the helicopter might operate N of Crewkerne and W of the A/D. The controller indicated that he would have expected Wildcat (B) pilot to report his intention to operate N of the TFA and might also have expected a call from Yeovilton ATC had they observed this to have been the case.

The Westland ATSU reported that Yeovilton and Westland have a very good working relationship and that their joint LoA is continually reviewed and updated (i.e. October 2012 and March 2013).

Wildcat (A) pilot was in receipt of a BS from Merryfield ATC. It was not clear what procedures exist between Merryfield and Yeovilton ATC.

As a result of this incident the Westland Helicopter Chief Test Pilot indicated that all pilots will be reminded of the requirement to advise ATC if they intend to operate N of the TFA, in order that appropriate notification and any required coordination can be effected between Westland ATC and Yeovilton ATC in accordance with the LoA.

Analysis

Wildcat (B) pilot booked-out to operate in the TFA (E and W) and Yeovilton ATC were advised in accordance with the LoA. The Wildcat (B) pilot's written report indicated that he elected to operate at South Petherton [outside the TFA] and was aware that he would cross the Merryfield to Yeovilton FWR. However, Wildcat (B) pilot did not advise ATC of his intentions. TWR was unaware of Wildcat (B) pilot's intentions and was therefore not in a position to notify or coordinate with Yeovilton in accordance with the LoA.

The area radar recording did not show the Airprox and radar returns were intermittent but, from the data available to CAA ATSI, it is considered likely that the Airprox occurred shortly after 1640:36, when Wildcat (B) turned onto a S'ly heading.

Wildcat (A) pilot was in receipt of a BS from Merryfield ATC. The Westland TWR was not aware of Wildcat (A) and was therefore unable to pass any TI or warning to Wildcat (B) pilot.

Within Class G airspace, regardless of the service being provided, pilots are ultimately responsible for collision avoidance and terrain clearance.

Conclusions

Wildcat (B) pilot came into confliction with Wildcat (A) when he operated outside of the Westland TFA, in the vicinity of South Petherton and the Merryfield to Yeovilton FWR, without pre-notifying his intention to Westland ATC. The Westlands controller was not aware of the intention of Wildcat (B) pilot to leave the TFA and therefore was unable to notify Yeovilton in accordance with the LoA.

NAVY COMMAND agreed with the conclusions made by ATSI. The LoA between Yeovilton and Yeovil Westlands is deemed fit-for-purpose and was enacted appropriately on the day. The weather at the time meant that the FWR was not mandatory, but was available for use bi-directionally (in colour codes worse than GRN it becomes unidirectional). It was a flawed assumption that any ac using it would always be at or below 500ft; this was acknowledged by the pilot of Wildcat (B) in his report.

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 photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

It was noted that this was the first Airprox involving the Wildcat AW159 to be considered by the Board. Members therefore firstly first discussed operating differences from previous types of Lynx helicopter, including cockpit ergonomics and equipment levels. It was established that the new helicopter offered improved performance and that the 'glass cockpit' greatly improved crew SA. However, it was also noted that the amount of information available in-cockpit could result in more time spent 'heads-in' and hence detract from an effective lookout.

The RN ATC Member clarified the conduct of Merryfield to Yeovilton transits: as Merryfield has no radar, the Merryfield ADC pre-notes Yeovilton APP, who passes back deconfliction information, if any. However, the Wildcat (B) pilot was not mandated to inform Yeovilton APP if he left the TFAs and, in this case, Yeovilton APP did not anticipate him leaving. Both crews were aware of the FWR and the Wildcat (B) pilot believed he would be above any traffic using the FWR. As it was, although Wildcat (A) was following the FWR ground track, the weather conditions were such that the FWR was not mandated and the height deconfliction therefore did not exist. Members also noted that the crews were operating in Class G airspace and were not best served by procedures only relevant to Yeovilton and Yeovil traffic. Several pilot Members observed that pilots can sometimes overly rely on

local arrangements, which do not include other VFR traffic, in the mistaken belief that they afford some degree of priority or protection over other traffic.

Members also expressed concern at the Wildcat (B) pilot's plan to operate using a BS whilst conducting an air test. Members considered that he would have been well advised to consider the available ATS in the context of Threat and Error management and the demands of his sortie. A considerable amount of time is spent 'heads-in' whilst conducting an air test and it was the Board's opinion that the availability of an appropriate, radar based, ATS, in conjunction with an assessment of the prevailing weather conditions, could reasonably be used as a 'go/no go' criterion for such a sortie.

In the event, both pilots had an equal and shared responsibility to see and avoid and the Wildcat (A) pilot had right of way. Wildcat (A) pilot saw Wildcat (B) in good time and, when it appeared that Wildcat (B) pilot was not in visual contact, Wildcat (A) crew sensibly took effective and timely avoiding action to prevent a collision. The Board also considered that Wildcat (B) pilot's use of a BS was not appropriate to the conduct of an air test in the open FIR and that this was a contributory factor.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict resolved by Wildcat (A) pilot.

Degree of Risk: C.

Contributory Factors: Wildcat (B) pilot utilised an inappropriate ATS while conducting an air test.