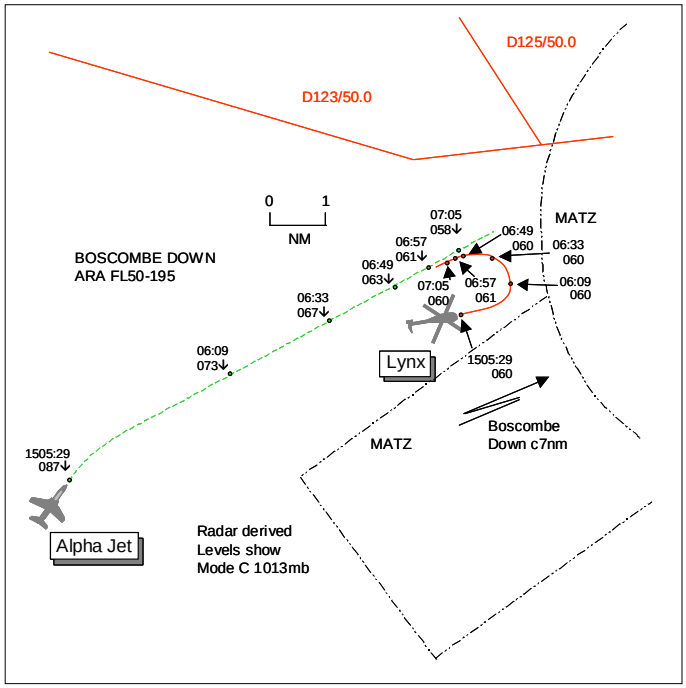
AIRPROX REPORT No 2010061

Date/Time:	24 May 2010 1507Z	
Position:	5108N 00157W (7nm W Boscombe Down)	
Airspace:	Boscombe ARA	(*Class: G*)
	Reporting Ac	*Reporting Ac*
Type:	Alpha Jet	Lynx AH7
Operator:	MoD ATEC	MoD ATEC
Alt/FL:	6500ft↓ (QFE 999mb)	FL65
Weather:	VMC CLOC	VMC CLBC
Visibility:	>10km	25km
Reported Separation:	100ft V/100m H	200ft V/200m H
Recorded Separation:	c100ft V/<0·1nm H	



BOTH PILOTS FILED

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE ALPHA JET PILOT reports flying a local sortie from Boscombe Down and in receipt of a TS from Boscombe, squawking an assigned code with Modes S and C. The visibility was >10km in VMC and the ac was coloured black/white; no lighting was mentioned. Whilst cleared for descent to 3000ft QFE into the radar pattern on heading 050° at 280kt, a contact was called 'Lynx 12 o'clock 5nm similar heading indicating 1000ft below. The front seat pilot was flying heads-in, as this was an IRT, and rear seat pilot was responsible for lookout. Descending through 6500ft QFE a follow-up call was provided stating 'Lynx 12 o'clock 2nm crossing R to L 400ft below. No further TI was received prior to the rear seat pilot seeing the Lynx co-altitude at an estimated range of 150m. Owing to the ROD of the Alpha Jet and the slight relative bearing change at the time of the visual pick-up, it was quickly realised that a collision was not going to happen but the 2 ac passed within 100m laterally, to their R and 100ft vertically above. There had been no time for the rear seat pilot to take control. He opined that the rear seat lookout was compromised by the presence of the Alpha Jet blast screen canopy arch, front fuselage, and by the constant relative bearing of the 2 ac. At no stage did either crewmember believe that the risk of collision was high or that any other course of action was necessary given their SA and the conditions on the day. He assessed the risk as high.

THE LYNX PILOT reports flying a local sortie from Boscombe Down and in receipt of a TS from Boscombe squawking an assigned code with Modes S and C. The visibility 25km flying 2000ft below cloud in VMC and the ac was coloured red/white/blue. During data gathering for the ETPS Level Flight Performance exercise, which involved considerable heads-in time, other traffic was reported as initially 5nm and then 2nm at a similar height and descending under ATC control and was considered no confliction. Heading 270° at FL65, he thought, and 70kt flying into sun an Alpha Jet was seen 0·25nm away before it quickly passed seconds later dead ahead and then to their R 200m away and approximately 200ft below with no time to take avoiding action. He assessed the risk as high.

THE BOSCOMBE DOWN APPROACH RADAR CONTROLLER reports operating bandboxed without a Director (DIR), controlling ac on both UHF and VHF over a wide range, in a busy ac and airspace environment. He already had the Lynx on frequency operating approx 10-20nm W of Boscombe Down GH in the block FL050-080 under TS. Zone handed over the Alpha Jet for a PAR recovery, approx 25nm SW of Boscombe on a TS.

The Alpha Jet had been placed on a heading of 050°, he thought [actually 065°], and was in the descent to 3000ft QFE, passing through approximately 8000ft approx 10nm SW of the Lynx. Once on frequency, he passed TI to both flights on their relevant positions with the Alpha Jet now approx 5nm SW of the Lynx, 1000ft above descending. He assessed that the normal ROD for an Alpha Jet would be sufficient to get below the Lynx before they came into close proximity and as such felt that the heading of the Alpha Jet was safe and the most expeditious for his recovery. As the ac closed on each other, he assessed that the ROD of the Alpha Jet was slower than normal and a TI update would be required; he gave this to both flights. The Lynx manoeuvred towards the Alpha Jet and the contacts merged at co-alt. Three days after the event, he was informed that the pilot was filing an Airprox.

Of note, Boscombe based ac are automatically under a reduced service within 15nm of Boscombe due to high traffic density and limits of surveillance cover.

During the incident, he was also providing a TS to 2 x Twin Squirrels on a separate frequency, operating approx 20-30nm NE in close proximity to CAS, SPTA D123/5 and numerous primary contacts, which were drawing his attention away from the other ac on frequency.

The unit has been operating extended hours to meet operational tasks, meaning that the number of controllers available is less than normal. As such, he was unable to call upon a DIR as he may have done considering the number of ac, their relative positions and the airspace he was operating within.

He had an interrupted sleep the night before and although he could not be sure as to its effect, if any, fatigue may have played a part in the incident as it was towards the end of a busy day.

THE BOSCOMBE DOWN SUPERVISOR reports the Wx conditions were extremely good, all equipment was fully serviceable and the Radar controller had been in the seat for approximately 30min. Although the intensity was estimated in the Approach room as medium, he was aware that Tower was getting busy and as there was a u/t ADC so he elected to go upstairs to Supervise.

At approximately 1600Z, he received a call from the Alpha Jet pilot, who told him that he felt he had been given a vector during his recovery that had caused him to merge with a rotary, the Lynx. This was the first that he, as the SUP, had heard of the incident. He asked the pilot if the conflicting traffic had been called; he said it had been called to him on a couple of occasions, but they were not visual with it until late, adding that the front seat pilot was heads down in the cockpit. He explained to the pilot exactly what the provision of TS was, and what responsibilities the controller had, but said he would speak to the controller, listen to the tapes and then call him back. At this stage the pilot did not mention reporting the incident as an Airprox.

He spoke to the controller, who confirmed that the contacts did get close; however, he had called accurate TI to both crews about each other. He asked the controller if he felt he had vectored the Alpha jet into confliction with the Lynx, and he said that the Alpha Jet was already on a heading after handover from Zone. Sup then listened to the tapes, which confirmed that the Alpha Jet had been handed over approximately 20 miles SW Boscombe descending to height 3000ft QFE – the Lynx was still over 10 miles away and not in direct confliction. Once identified on stud 4 (233·850), the controller passed TI to the Alpha Jet pilot about the Lynx and passed the information to the Lynx crew about the Alpha Jet. This information was again updated by 2 miles.

He contacted the Alpha Jet pilot to inform him that after listening to the tapes, speaking with the LEO and the controller, I felt that the APP Radar controller had not knowingly vectored the Alpha Jet into confliction with the Lynx, and that accurate TI had been passed in good time, then updated by 2 miles. The pilot's initial thoughts were that as he was recovering for a radar pattern, receiving vectors and descent instructions from ATC, he should not be coming into close proximity with other ac, and that ATC should maybe give further vectors to maintain separation. SUP explained this was not the responsibility of the controller under the terms of TS, and asked whether he was completely happy with both ATC and the pilot's responsibility when receiving a TS; he said he was happy. The pilot

said he would be filing an Airprox report so he informed him that he would impound the tapes and ensure the appropriate paperwork was completed.

After recent events, he believed that there is a misunderstanding among the aircrew at Boscombe Down as to what the terms of a TS are, and that they believe that when they recover for a GCA under a TS, ATC will maintain separation from all other ac; this could be causing complacency in the cockpit regarding the amount of heads up visual scanning they do, compared with when manoeuvring in a block to the W of Boscombe.

HQ AIR BM SAFETY MANAGEMENT reports that SO2 SM Spt ATM acknowledges the workload the controller was under at the time. Best practice remains to have available manpower to man APP and DIR separately during busy periods. The lack of available manpower, on this occasion, led to a reduction in SA which restricted the controller's ability to manage effectively the traffic he had on frequency. Not withstanding the provisions of a TS, in this situation the Alpha Jet's ROD and turn of the Lynx was not assimilated and acted upon. TI was timely and accurate; unfortunately the Alpha Jet handling pilot was head down and the rear seat pilot reports his lookout being compromised by the presence of the Alpha Jet blast screen canopy arch and front fuselage.

SO2 SM Spt ATM also acknowledges that working practices were complicated due to extended hours operations to meet operational tasks which lead to a lack of available manpower. Consideration should be given at Unit level to the knock-on effect of operating hours and availability of manpower.

UKAB Note (1): CAP774 UK Flight Information Services Chapter 3 Traffic Service Page 1 Para 1 states 'A traffic Service is a surveillance based ATS, where in addition to the provisions of a Basic Service, the controller provides specific surveillance-derived traffic information to assist the pilot in avoiding other traffic. Controllers may provide headings and/or levels for the purposes of positioning and/or sequencing; however; the controller is not required to achieve deconfliction minima, and the avoidance of other traffic is ultimately the pilot's responsibility'. Page 2 Para 6 Deconfliction states 'Whether traffic information has been passed or not, a pilot is expected to discharge his collision avoidance responsibility without assistance from a controller. If after receiving traffic information, a pilot requires deconfliction advice, an upgrade to Deconfliction Service shall be requested. The controller shall make all reasonable endeavours to accommodate this request as soon as practicable and provide deconfliction advice at the earliest opportunity. 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. However the controller is not required to achieve defined deconfliction minima'.

UKAB Note (2): The Alpha Jet pilot made his initial call to APP after transfer from Zone at 1505:31 when the ac was 14·5nm WSW of Boscombe Down and turning R from heading 050° onto heading 065°, which was assigned by APP during the handover. The ac descends through FL87 (8300ft QFE 999mb) with the Lynx it its 1 o'clock range 7·6nm tracking 075° level at FL60 (5600ft QFE). After APP confirmed the Alpha Jet was cleared to 3000ft QFE and the level of service (TS) he then established the pilot's decision height and intentions from the PAR. Immediately after, APP transmitted (1506:11) *"Alpha Jet c/s Lynx twelve o'clock five miles similar heading indicating one thousand feet above, correction, one thousand feet below"*. By now the Alpha Jet was descending through FL73 (6900ft QFE) with the Lynx, which was in a L turn passing through heading 010°, in its 1230 position range 5·3nm level at FL60 (5600ft QFE). APP's transmission was acknowledged with an abbreviated c/s after which the APP immediately transmitted *"Lynx c/s A-Jet south west four miles tracking north east with me one thousand feet above descending inbound"*. A garbled transmission was received in reply before APP transmitted (1506:29) *"Alpha Jet c/s Lynx twelve o'clock two miles crossing right left four hundred feet below"*. The radar shows the Alpha Jet descending through FL67 (6300ft QFE) with the Lynx just R of its 12 o'clock range 3·1nm turning L through heading 300°, 300ft below. No reply was received before APP transmits (1506:51) *"Lynx c/s previously reported A-Jet one mile tracking east similar height descending"* which was acknowledged with c/s. About 10sec later the APP instructed the Alpha Jet crew to R onto 080° which was acknowledged - no mention was made on the RT by either crews of an Airprox. The CPA occurs between radar sweeps: the

sweep at 1506:57 shows the Lynx steady on an almost opposite direction track of 250° in the Alpha Jet's 12 o'clock range 0·5nm, both ac showing FL61 (5700ft QFE). The next sweep at 1507:05 shows the Alpha Jet descending through FL58 in the Lynx's 6 o'clock range 0·3nm, having passed ahead and to the R of the Lynx, which is indicating FL60. By interpolation, the CPA is estimated to be 100ft vertically and a lateral separation of <0·1nm.

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 authorities.

Both crews were operating legitimately in Class G airspace of the Boscombe Down ARA where they shared an equal responsibility to see and avoid other aircraft. It was noted that the Lynx crew were operating on a flight test exercise within 15nm of Boscombe Down where there is automatically a reduced level of ATS. An ATCO Member commented that if the Lynx crew's task prevented them from fulfilling their responsibilities with respect to a TS they should have either asked for a DS and/or positioned their ac into a more suitable area, well clear of the Boscombe O/H. Although aware of the provisions of a TS and DIR's need to position the Alpha Jet towards the Boscombe O/H to feed into the radar pattern, Members unanimously agreed that the instructions given by DIR had vectored the Alpha Jet towards the Lynx which was a part cause of the Airprox. However, Members were also acutely aware of pilots' responsibilities in receipt of a TS. Despite APP twice passing accurate and timely TI to both the Alpha Jet and Lynx crews as they converged, the pilots only saw each other late and this was another part cause. An experienced Test Pilot Member expressed concern about both crews' lack of reaction to the TI and apparent misunderstanding about the provisions, limitations and responsibilities associated with a TS. The Board concurred.

The Lynx crew's lookout was degraded owing to the test flying profile and flying into sun as the ac approached the CPA, the crew only seeing the Alpha Jet about 0·25nm ahead before it quickly passed 200m to their R and 200ft below, having descended through their level. Similarly, the Alpha Jet crew only saw the Lynx when it was co-alt range 150m before it passed 100m to their R and 100ft above. Both crews reported there being insufficient time to take avoiding action. These factors left the Board in no doubt that the subject ac had passed purely by chance, without any positive steps being taken by any party to break the chain of events, leading the Board to conclude that a definite risk of collision existed during this encounter.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: APP vectored the Alpha Jet towards the Lynx and, despite receiving accurate and timely TI, the pilots of both ac saw each other late.

Degree of Risk: A.