EXECUTIVE SUMMARY

INTRODUCTION

1. This Executive Summary reflects the key findings within the subject report. The conclusions are based on the circumstances and documentary evidence, the statements of key witnesses and advice provided by relevant subject matter experts (SME). There was considerable eyewitness evidence to suggest that this aircraft was subjected to hostile Surface-to-Air Missile (SAM) attack, and as the investigation progressed, evidence did suggest that MANPADS\(^1\) was used against the aircraft. Because most of the wreckage was consumed by fire, and without the benefit of a Flight Data Recorder (FDR)/Cockpit Voice Recorder (CVR), it was impossible to identify the status and settings of all components although some settings and selections were discovered following technical analysis. A more complete understanding of the exact circumstances of the loss of this aircraft to hostile fire may only arise from the ongoing technical investigation being conducted by the Royal Navy Flight Safety and Accident Investigation Centre (RNFSAIC).

NARRATIVE OF EVENTS

2. This was the second sortie of the day for the aircrew, who had assumed the ‘Lynx 2 duty crew’ responsibilities the day before. The crew conducted a pre-flight brief for a Joint Helicopter Force (Iraq) (JHF(I)) internally tasked local area recce of Basra Helicopter Landing Sites (HLS) for the benefit of the Comd JHF(I) (Desig), and also a recce of the Old State Building (OSB) in central Basra. The aircraft started engines/rotors without incident and departed Basra airfield. It was observed in the hover at the Shatt Al Arab Hotel (SAAH) to the N of Basra, before departing and following the river to the S, towards Basra Palace (BP). The aircraft hovered over the BP HLS for approximately 1 minute before departing low-level NW up the river, and then climbing to approximately XXXX ft before turning towards the OSB. The aircraft transited a further 2 km and then exploded, still at about XXXX ft, approximately 500m S of the OSB, descending thereafter in an uncontrolled manner before crashing onto a residential building in the centre of Basra town.

3. Evidence from witness statements suggested that the aircraft had been struck by a weapon fired from a ground position some XXXXXXXX resulting in a mid-air explosion emanating from the starboard rear quarter of the aircraft, between the fuselage and the tail pylon. This partially severed the tail pylon leaving it loosely

\(^1\) Man-Portable Air Defence System (MANPADS)
attached to the fuselage. The aircraft was engulfed by a fireball and plummeted to
the ground. On impacting the ground, the wreckage burned for approximately 45
minutes before being extinguished by the local Iraqi Fire Service. Soon after the
event an inner and outer cordon around the crash site was established by MND(SE)
troops, although there had been plenty of opportunity for local access to, and
contamination of, the wreckage. Throughout the recovery phase, troops maintaining
the cordon were subjected to sniper and mortar fire as well as blast and petrol
bombs. Some UK military personnel sustained minor injuries and several civilians
fatalities were reported in the post-incident riot.

DISCUSSION

4. This was a well planned, operationally necessary sortie designed to furnish an
incoming CO with knowledge of his Area of Operations (AO) and, in particular, local
HLSs frequently used by his assets. It was internally generated by JHF(I), correctly
authorised and briefed, and an appropriate task given the prevailing weather
conditions, known threat levels and crew capabilities.

5. In the absence of technical evidence suggesting that there had been any
mechanical failure of the aircraft, allied to the overwhelming eyewitness evidence
suggesting hostile fire, the Board focused on the potential weapon system used in
the attack. In deliberating, the following types of weapon system were discounted by
the Board given the aircraft’s flight profile and range from the potential firing point at
the time, and evidence from examination of the aircraft wreckage:

   a. Small arms fire
   b. Improvised Explosive Device (IED)
   c. Rocket Propelled Grenade (RPG)
   d. Collision with an Unmanned Air Vehicle (UAV)
   e. Artillery fire
   f. Mortar fire
   g. Guided Rocket (Command Line-of-Sight)
   h. Unguided Rocket

6. Based on the weight of evidence, (eye-witness accounts, the range of the
observed potential firing point and the height of the aircraft), the Board considered
that the most likely weapon system used was a MANPADS. Following further
deliberations on the capabilities of MANPADS systems believed to be present in
theatre, the Board identified XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
as candidate weapon systems used in this attack. The XXXXXXXXXXXXX were discounted
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXX The XXXXX was discounted because XXXXXXXXXXXXX
XXXXXXXXXXXXXXX This left the XXXXX and XXXXX as the candidate weapons
systems. Forensic evidence from examination of weapon fragments found within the

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wreckage was compared against known characteristics of XXXXX and XXXXX and identified the XXXX as the most likely weapon used, even though eyewitness evidence of the potential firing position placed the distance at the extreme range of the weapon.

7. 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11. During the course of the investigation, the Board identified 2 anomalies concerning passenger issues. The first related to passenger manifest procedures for internally generated JHF(I) flights and the second related to the carriage of passengers. The former meant that there was no record of either of the 2 passengers being present on the aircraft at the time of the crash and the latter related to a lack of Command guidance on the carriage of passengers in a given threat environment.

MAIN CONCLUSIONS

12. The aircraft was shot down using MANPADS; the most likely weapon system utilised being the

MAIN RECOMMENDATIONS

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16. **Fitment of Crashworthy FDR/CVR.** Rigorous efforts should be made to procure a fully crashworthy FDR or CVR capability for all UK military aircraft.

17. **Carriage of Passengers.** Command guidance on the carriage of passengers in a threat environment should be addressed by JHC.
18. **JHF(I) Passenger Manifest Procedures.** A suitable passenger manifest system should be implemented for all JHF(I) internal tasking, to align internally tasked manifest procedures with the robust system already in place for external (to JHF(I)) tasking.

19. **Continued Technical Investigation.** Technical investigations should be continued to confirm with greater confidence the likely missile type (explosive residue analysis, metallurgical analysis, weapon parts analysis etc).