

The Sea King Life Of Type Extension (LOTE)

At one stage it did not look like the Sea Kings would see out the 1990s with a decision by the 1991 Force Structure Review to declare a LOT for the helicopter of 1995-6, but following further detailed examination of options for providing for providing the RAN with MUH capability by HQ ADF and the Department of Defence, a LOTE programme for the Sea Kings, rather than buying additional S-70B-2s, was seen as the most capable and cost effective way ahead.

Rear Admiral Nick Hammond, then ACMAT-N, signed the LOTE contract with Westland on July 5, 1994 for a programme that was designed to see the seven Sea Kings fully up-graded by the end of 1996. Major features of the programme included replacement or modification of obsolete avionics equipment and enhancement of the capability.

The extent of work comprised:

General:

- Repositioning of the Thermal Barrier on the Mk 50s to a position aft of the main cargo door, increasing available cabin space.
- Introduction of 200 lb/sq.ft loading floor panels throughout the helicopter cabin, providing for additional tie down points and improved durability.
- Introduction of Engine Air Particle Separators for engine protection in FOD environments.
- Introduction of a cabin doorway step and associated cabin door frame hand holds to assist movement of personnel in and out of the cabin.
- Increased troop seating in the main cabin.
- Installation of a second battery to improve self-start capability on deployment.
- Underfloor relocation of the Aft Radio Rack equipment to increase cabin space.
- Removal of the Forward Radio Rack to increase cabin space.

Avionics:

- Modification of the Automatic in Flight Control System (AFCS) main amplifier to allow for the introduction of a new Doppler Navigation System including a Racal Doppler 91, RNS252 Navigation Computer and Air Data Unit to provide the helicopter with a state-of-the-art navigation system.
- Upgrading the existing Thorn EMI Lightweight ARI 5955 radar to the ARI5955/2 standard including a new processing unit, colour display monitor and track-while scan capability.
- Introduction of a British Aerospace GM9 Compass for improved navigational accuracy.
- Introduction of new Collins ARC 182 V/UHF and HF 9000 radios for enhanced communication and commonality with other naval aviation assets.
- Introduction of a new on-board Racal Communication Control System to enhance crew communication.
- Introduction of a new Collins ARN-118 TACAN.

- Modification of the X-band transponder to maintain compatibility with the radar
- Modification of the Attitude Indicators to produce new Attitude Director Indicators
- Modification to the cockpit instrument panel to permit the fitting of new Horizontal Situation Indicators

Paralleling the helicopter up-grade were Simulator modifications to reflect the changes to the aircraft. This aspect of the programme was undertaken by British Aerospace (BAeA) under contract to Westland.