

# FLEET HEADQUARTERS CARRIER STRIKE BRIEFING



**Future Aircraft Carrier**

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## CARRIER STRIKE COMBINING AIR AND MARITIME POWER

*Another key milestone was reached with the signing of the CVF Contract Manufacture Award giving the formal go ahead to build the new Aircraft Carrier (CVF) – A Joint Defence Capability. The Company, named BVT Surface Fleet, is a Joint Venture, established between BAE Systems and VT Shipbuilding. It forms part of the wider Aircraft Carrier Alliance, which is charged with delivering the first of the two ships in 2014 and the second in 2016. The manufacture of these new aircraft carriers marks the first step in a massive capability development for UK Defence and the following paragraphs reinforce the concept of Carrier Strike.*



As part of an integrated Task Group (TG), alongside Theatre Entry and Force Protection assets, the future carrier offers the Joint Commander the inherent strengths of the maritime (poise, reach and manoeuvre) and air power (speed and reach). Carrier Strike (CS) is a fundamental component of the Defence shift towards a Joint Expeditionary Capability, with the dexterity of flying from a land or sea base.

There is a need to maintain our effort on the delivery of the current CSTG with a clear need to develop for the future. Much can be learnt from CVS/JFH integration, within the current CSTG, and this must drive our efforts to identify lessons now and to apply relevant solutions for the future.

The primary responsibility for FLEET will be delivering the personnel, training and information Defence Lines of Development (DLOD), with DNPS, ACOS Training and ACOS ISTAR. FLEET needs **air-minded mariners**, gleaned best practice from across the other Services and coalition partners, such that they can apply maritime and military skills to best effect.



A significant amount of work has already been undertaken in the area of personnel and training. The proposed manning solution for CVF is based upon the role and task of individual positions, which has been confirmed by practical Visualization and Experimentation (V&E), conducted at Farnborough, where full mission rehearsals have been conducted, as illustrated in these pictures. This activity covered the interaction between CVF's key operational spaces, (Bridge, Ops Room, Flyco and Aviation Planning Spaces) in support of the delivery of Air Power. The Aircraft Carrier Alliance (ACA) is commissioning Training Needs Analysis (TNA) to look, in detail, at the various skill-sets of embarked personnel.

When deploying for operations, the Carrier Strike Task Group will comprise CVF with its embarked Joint Tailored Air Group (JTAG), Surface Combatants, both T45's and T23's, Afloat Support Shipping (AFSUP), MM/PP and depending on the nature of the operation an SSN (TLAM) in support. This force will provide Theatre Entry and Force Protection across all spheres of warfare and is capable of delivering Force Projection with long-range precision strike from Joint Combat Aircraft (JCA).

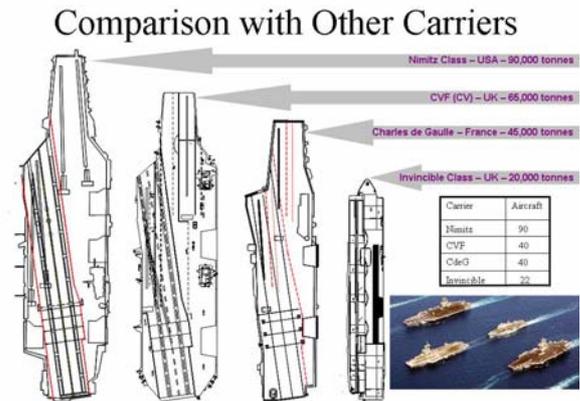


The integrated nature of the CSTG will mean 'duties' will be TG based and a pan Fleet activity, for example the Composite Air Warfare Commander duty will be in the T45 (T42). CVF has a dedicated Generic Command Facility (GCF) capable of supporting a variety of embarked staff and can be reconfigured and tailored to their individual requirements.



The requirement to be able to project the full level of medium-scale offensive air effort, from the sea, has driven the design of CVF. The STOVL variant of the Joint Strike Fighter (JSF) is the baseline design assumption for the aircraft, and therefore the ship design. The STOVL JSF made its inaugural flight on 11 Jun 08 and pilots with engineers are planned to join the Operational Test and Evaluation Programme next year, alongside the USMC, assuming the programme maintains track. The ability for CVF to be reconfigured for conventional (CV) operations at a later stage is fully embedded in the design solution.

With an overall length of approximately 280 metres and a displacement in the region of 65,000 tonnes, CVF will be considerably larger than the current CVS, and only about 40-50 metres shorter than the USN Nimitz class. The ship's complement will be comparable with the current CVS class, achievable through increased automation in areas such as weapon delivery and the movement of stores both during Replenishment at Sea operations and routine operations throughout the platform.



In order to de-risk some elements of the proposed design solution, the ACA constructed full scale mock-ups of the Bridge and Operations' Room, in Portsmouth Naval Base, last year. The ACA with the assistance of a number of key stakeholders including FLEET, LUST, OCEA, MWS, Air Command, RNSFC and SSG-TES ran a series of scenarios to optimise these spaces concentrating on the Operability, Maintainability and Safety aspects.

A mock-up of Flyco has also recently been constructed and will be undergoing a similar process to ensure this key operational space is optimised for the launch and recovery of large numbers of aircraft.

Initially complemented with Harrier GR9, Sea King Mk7 Airborne Surveillance and Control and Merlin, CVF will be capable of projecting offensive air and be able to contribute significantly to Medium Scale effort. In the future, CVF will be complemented with an Air Group comprising JSF, Maritime Airborne Surveillance and Control Aircraft (MASC) and Merlin helicopters. To put the step change of capability into perspective, as a key element of the UK's Joint Rapid Reaction Force, the CVF and its enlarged Air Group will be capable of delivering ordinance many times that currently available from Harrier, in an autonomous manner, at ranges well in excess of 400 nautical miles from the carrier.



Carrier Strike is being taken forward within a 'System-of-Systems' approach. With that in mind, it is evident that the carrier will have wider utility and CVF will therefore be able to operate the largest possible variety of aircraft in the widest number of roles. Furthermore, with an expected life span of up to 50 years, CVF will be capable of readily adapting to host future air systems both manned and unmanned.



***In summary, and to add some context, the first CVF will be sailing within 6 years, with the first members of the Ship's Company complementing HMS QUEEN ELIZABETH within 4 years from now.*** Everything is in place for the Aircraft Carrier Alliance, through the Joint Venture, to deliver the equipment part of the future capability. We in FLEET, working together with the wider Defence Community, must continue to play our part in delivering the remaining DLOD elements in a timely manner if we are to achieve the full potential that CVF undoubtedly offers UK Defence.

