The Royal Academy of Engineering

Academy Briefing

Tuesday 20 March 2007

The Future Aircraft Carrier

The engineering and technical challenges of designing and building the largest ever warships for the Royal Navy

Speaker: John D Coles CB FREng Future Aircraft Carrier (CVF) Integrated Project Team Leader, Ministry of Defence

Chairman: Sir John Parker FREng Chairman, National Grid plc

The Future Aircraft Carrier for the Royal Navy will, at some 65,000 tonnes, be the largest warship ever built in the United Kingdom and is expected to have a service life of 40 to 50 years. It is being designed to operate the Short Take-off, Vertical Landing variant of the US designed multi-role Joint Strike Fighter. Due to the life expectancy of the Carrier, it is also being designed with an in-built capacity to be able to be adapted later in life, with the addition of catapults and arrestor gear, to operate conventional carrier aircraft if needed.

The engineering and technical demands are challenging and have resulted in a number of innovations, including the adaptable design, a split island superstructure, engine location and advanced environmental considerations. The exceptional size of the carriers means that it will need to draw on the skills and facilities of several shipyards, with integration at a single yard.

John Coles will explain how the challenges have been met and overcome and how the Ministry Of Defence remains on course to provide the UK armed forces with the largest and most powerful warships ever constructed in the UK and the most capable carrier force outside of the US.

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John D Coles CB FREng

John Coles was awarded a Royal Corps of Naval Constructors Cadetship to study at University College London. Following appointments associated with the Design and Acquisition of ships and submarines, he joined the Staff of Flag Officer Submarines at Northwood in 1978. In February 1982 he headed the British Admiralty Office in New London, Connecticut overseeing the design and integration of the centre section of VANGUARD Class Submarines. On return to the UK in 1985 he was appointed Assistant Director for Future Naval Projects based in London. Re-assigned to Bath in 1988 he was the Design and Acquisition Project Manager for VANGUARD Class Submarines and later the Project Manager for Batch 2 TRAFALGAR Class Submarines. In 1992 he was promoted to Grade 5 and appointed the Director of Works to manage the completion of the large civil works programmes at the Faslane Naval Base and nearby Armament Depot at Coulport in Scotland. He attended the RCDS in 1994 and on completion was appointed Superintendent Ships at Devonport.

John took over as Chief Executive of the Ships Support Agency in September 1997, and became Head of the Royal Corps of Naval Constructors in April 1998. In April 2001, he became the first Chief Executive of the newly formed Warship Support Agency, now part of the Defence Logistics Organisation and in 2004 he also became Director General Nuclear, a role in which he is accountable to CDP and CDL for the coherent delivery of the MOD's nuclear programmes.

In December 2001 John was awarded an Honorary Degree of Doctor of Engineering from Bath University. In June 2004 he was elected as a Fellow of The Royal Academy of Engineering and was awarded the CB in January 2005.

John took up the post of Future Aircraft Carrier (CVF) Integrated Project Team Leader in January 2005. The project is at the forefront of SMART Acquisition and is using an innovative alliancing approach that is bringing together the MoD and Industry to deliver the two new carriers to time and cost. John represents the Client in the Alliance and is Chairman of the Aircraft Carrier Alliance Management Board.

Tuesday 20 March 2007 4.00pm for 4.30pm

Venue The Royal Academy of Engineering, 29 Great Peter Street, London SW1P 3LW

Programme

4.00pm	Registration
4.30pm	Welcome by Sir John Parker FREng
4.40pm	*The Future Aircraft Carrier – The engineering and technical challenges of designing and building the largest ever warships for the Royal Navy* by John D Coles CB FREng
5.30pm	Question and answer session
6.00pm	Drinks reception
7.00pm	Close

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Booking Form

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The Future Aircraft Carrier

The engineering and technical challenges of designing and building the largest ever warships for the Royal Navy

I wish to attend the Lecture and Reception ☐

Title: First Name:

Surname: Honours:

Position:

Organisation:

Email:

Address:

Postcode: Telephone:

Guest

Title: First Name:

Surname: Honours:

Position:

Organisation:

Email:

Telephone:

Please return this form to: Jacqueline Cox, Communications Department at jacqueline.cox@raeng.org.uk by tel 020 7227 0531 or fax to 020 7233 0054 or by post to: Communications Department, The Royal Academy of Engineering, 29 Great Peter Street, London SW1P 3LW