

Glossary

In this report the following words or phrases have the meaning shown below. In other contexts they may have other meanings.

AMEC	AMEC plc, a construction company.
AO	Auxiliary Oiler, a fleet tanker vessel.
AOR	Auxiliary Oiler Replenishment, a fleet tanker and supply vessel.
ASEAN	Association of South East Asian Nations.
B2TC	Batch 2 Trafalgar class SSN .
BAe	British Aerospace Public Limited Company.
BAeSEMA	BAeSEMA Ltd, a software and systems engineering company jointly owned by BAe and the SEMA Group.
Best and final offer	The culmination of competitive tender price negotiations between the MoD and a prospective contractor.
BMT	British Maritime Technology Group Ltd.
British Shipbuilders	A public corporation that owned and managed the UK shipbuilding industry, 1977 to 1986.
Build to print	Construction of a warship, or production of equipment, to conform precisely with fully-detailed drawings and specifications, and with no technical risk involved.
CAD/CAM	Computer-aided design and computer-aided manufacture.
Capability	The ability of a shipyard to produce warships of a certain sort, eg large surface vessels, or submarines.
Capacity	The ability of a shipyard to produce a certain quantity of warships, usually measured by the maximum annual tonnage that could be launched.
CL	Cammell Laird Shipbuilding Ltd, of Birkenhead, a subsidiary of VSEL since 1985, now closed.
CNGF	Common New Generation Frigate International joint venture company see Project Horizon , and IJVC .
Combat management system	A computer system linking weapons systems , sensors, communications, and electronic warfare systems, providing analysis, display and control functions for the command of operations. Sometimes known as command system .
Combat system	An assembly of weapon systems and their sensors and controls integrated to form a comprehensive fighting system. See weapon system , and Figure 4.2.
Command system	A computer system linking weapons systems , sensors, communications, and electronic warfare systems, providing analysis, display and control functions for the command of operations. See combat management system .

Commercial standards	Generic specifications produced by the marine classification societies (eg Lloyd's, or Den Norske Veritas) to be applied in the design and construction of merchant ships.
DDH	Devonshire Dock Hall, a building at VSEL currently used for the construction of Vanguard class SSBNs .
DESO	Defence Export Services Organisation, that part of the MoD providing advice to industry on overseas sales of defence equipment and services.
Destroyer	The name first given to the extremely fast vessels, intended to destroy torpedo-boats that were built by Yarrow and Hedley (YSL 's precursor) at the Isle of Dogs in 1892, and subsequently given to many classes of larger vessels, most recently to the Royal Navy's Type 42 ships of about 4,000 tonnes displacement, with a primary anti-aircraft role.
DTI	Department of Trade and Industry.
Electronic counter-measures	The jamming of radar or communication signals.
Electronic support measures	Analysis and classification of electronic signals.
Electronic warfare (EW)	The detection and classification of electronic signals in the operating environment and application of counter-measures.
First-of-class (ship)	The first vessel to be built in a class of warships.
Fleet auxiliary (ships)	For example, fleet oilers and replenishment vessels, built largely to commercial standards and manned by officers and men of the Royal Fleet Auxiliary, drawn from the Merchant Navy.
Follow-on (ship)	A vessel in a class of warships built subsequent to the first-of-class .
Free issue equipment	Equipment procured directly by the MoD or its agents and supplied without charge to a contractor in furtherance of an MoD contract. See GFE .
Frigate	A warship of between 2,000 and 7,000 tonnes, fast and manoeuvrable, equipped for general purposes or for specific roles such as anti-submarine warfare or anti-air warfare.
GEC	The General Electric Company plc.
GFE	Government-furnished equipment procured directly by the MoD or its agents and supplied without charge to a contractor in furtherance of an MoD contract. See free issue equipment .
GIAT	Groupement Industriel des Armements Terrestres, a French state-owned small arms, ammunition and artillery company.
GMNS	GEC-Marconi Naval Systems Ltd, of GEC .
GRP	Glass reinforced plastic.
H&W	Harland & Wolff plc, a Belfast shipbuilder.
HDW	Howaldswarke Deutsche Werft, a German submarine builder.
Howitzer	An artillery piece, towed or self-propelled, that can be elevated to a high angle.

IJVC	International joint venture company, the name commonly used to describe the joint UK/French/Italian industrial entity that is to undertake the CNGF first-of-class design and development.
Interfacing	All that is entailed in bringing together, housing, linking, and matching systems and equipment in every way necessary for them to function to their maximum effectiveness and efficiency: a matter of extreme complexity in a warship. See systems integration .
IPR	Intellectual property rights.
KG	Kvaerner Govan Ltd, a Norwegian-owned shipbuilder, at Govan on Clydeside.
Kockums	Kockums Submarine Systems AB, a Swedish submarine-builder.
Lead time	The elapsed time between starting the procurement of equipment and obtaining delivery of it for installation.
Lead yard	The shipyard designing and building the first vessel of a class.
Lead yard services	Provision, by the shipyard building a first-of-class ship, of design and building information to another shipyard building follow-on ships.
Learning curve	The progressive reduction in the labour time needed to build a ship as the builder gains experience of the requirements of the class to which the ship belongs.
LIMAWS	Lightweight Mobile Artillery Weapon System.
Loral ASIC	Loral Aerospace Systems Integration Corporation.
LPD	Landing Platform Dock, a naval vessel used in amphibious operations.
LPH	Landing Platform Helicopter, a naval vessel used in amphibious operations.
LSL	Landing Ship Logistic, a naval vessel used in amphibious operations, or as a supply ship.
`Make-or-buy' plan	Schedule of activities and equipment procurement, prepared by a prime contractor at the MoD's request, showing items to be procured through subcontractors and those to be carried out by the prime contractor .
Mark 8 4.5 Inch naval gun	The EC Units of Measurement Directive requires that member states, from 1 January 1995, should use only the metric system in official documents. The calibre of a gun must be shown accordingly. The expression `Inch' used here is not a measure, but a name, and spelt with a capital letter to emphasize that fact. We use it to assist the reader with a familiar description, rather than perplex him with the unfamiliar (and less accurate) measure, of 114.30 mm.
MEKO (frigate)	The acronym, in German, for the `general purpose combination' of a standard hull and the `function unit system' used in frigates built by the German shipbuilders, Blöhm and Voss.
Minehunters	Small vessels equipped to locate and destroy individual mines.
Minesweepers	Small vessels equipped to clear mines, usually by towing sweep gear behind the ship.

MoD	Ministry of Defence.
NAPNOC	The acronym for the 'no acceptable price-no contract' contract negotiation regime adopted by the MoD .
Naval standards	Engineering standards produced by the MoD to be applied in the design and construction of combat vessels for the Royal Navy.
NSD	Proposed Naval Systems Division of BAe .
OFT	Office of Fair Trading.
OSV	Ocean survey vessel.
Prime contractor	The contractor responsible for all aspects of the procurement of a project, other than GFE , but particularly including design, systems integration, project management, subcontract management, final testing and delivery to time and to meet performance specifications.
Project Horizon	Project name for CNGF .
RDM	Rotterdamsche Droogdock Maatschappij BV, a Dutch submarine-builder.
RO	Royal Ordnance plc. A subsidiary of BAe .
RR&A	Rolls-Royce & Associates Ltd, a subsidiary of Rolls-Royce Nuclear Engineering Ltd . Design authority and producer of nuclear plant for the MoD .
Sandown minehunter	GRP hull vessel built by VT , equipped to locate and destroy individual mines.
SEMA	SEMA Group plc, an Anglo-French software and systems engineering company.
SH	Swan Hunter Shipbuilders Ltd, now in receivership.
Ship-lift	A winched submersible platform, and associated ship transfer arrangements, used to move ships out of and into the water.
Ship platform	A basic warship, including the hull and propulsion system but excluding the combat system and combat management system .
SSBN	Nuclear-powered strategic missile submarine.
SK	Diesel-powered patrol submarine.
SSN	Nuclear-powered hunter killer submarine.
Staff Requirement	The specification, formulated by the Naval Staff in the MoD , of the roles, functions, and major design features of, and performance required for, a new warship.
Systems integration	The interfacing between all elements of a ship or submarine and its systems and equipment to ensure all performance requirements are achieved.
Trident	A strategic nuclear missile, carried in the Vanguard class of SSBNs , and commonly (and in this report) giving its name to that class.
Type 23 frigate	A class of anti-submarine frigates currently in production for the Royal Navy.

UPC	Unit production cost. Usually the total cost of a vessel to the MoD , including the shipbuilder's costs and cost of GFE , but first-of-class design costs may be excluded.
Vanguard	The class of SSBN carrying the Trident strategic nuclear missile, and commonly (and in this report) called by that name.
Vertical integration VSEL	The linking together of successive activities within a corporate structure. VSEL plc, of Barrow-in-Furness, formerly Vickers Shipbuilding and Engineering Ltd.
VT	Vosper Thornycroft (UK) Limited, a Southampton shipbuilder.
Weapon system	An assembly of sensors, controls, weapon launchers and associated weapons serving a particular function, eg the torpedo system. Sometimes called a combat system .
Weapon Systems Integration	The matching of interfaces between all elements of a combat system to ensure that overall system performance is achieved.
YARD	Formerly Yarrow Admiralty Research Department, now part of BAeSEMA .
YSL	Yarrow Shipbuilders Ltd, a subsidiary of GEC , at Scotstoun on Clydeside.