

LIST OF KEY EQUIPMENT AND POTENTIAL SUPPLIERS

This list is not exhaustive and is provided to Tenderers for information purposes. Inclusion of a manufacturer on this list does not constitute a preference for, endorsement of, recommendation on, or mandating of the equipment.

ESWBS Series	Candidate Equipment Description	Potential Equipment Suppliers
	Combat Management System	BAE Systems Insyte
000	Whole ship – Shock Mounts	Christie & Grey Trelleborg Liberty Dynamics Hutchinson Stop-Choc
100	Structure Paint scheme/coatings	For full range of authorised Suppliers refer to document "Warpaint" A copy of Warpaint can be found & downloaded at; www.mod.uk/DefenceInternet/Microsite/DES/OurPublications/Warpaint.htm
200	Propulsion System & Propulsion Train Equipment 'Entire' Propulsion Systems Equipment	Wartsila/Lips GE Engineering Power Conversion, UK Rolls Royce
200	Diesel Engines	Wartsila MAK MAN Rolls Royce Bergen MTU (Detroit Diesel) Perkins Lister Petter Cummins Pielstick Caterpillar
200	Generators / Alternators	GE Engineering Power Conversion, UK Siemens Rolls Royce Caterpillar ABB Wartsila
200	Drive Motors and Converters	GE Engineering Power Conversion, UK Siemens ABB Ultra PMES

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200	Shafting and Bearings	Wartsila/Lips Rolls Royce Schottel GMBH Michell Bearings (Now owned by Rolls Royce) Somers Forge - for Shafting Blohm & Voss - for Stern & Bulkhead Seals Twiflex - for Shaft Bearings Dellner - for Shaft Bearings Trelleberg - for Stern & Stabiliser Bearings
	Propeller's	Stone Manganese Wartsila Lips
200	Propulsors and Bow Thrusters (if fitted)	Wartsila/Lips Rolls Royce AB (Kamewa) Brunvoll AS ZF Marine
200	Heat Exchangers	<i>Refer to section further down this list titled "Pipework (including Domestic FW, HPSW, LPSW and Hydraulic Fluids)"</i>
200	Gearbox and clutches (dependant on what propulsion option is utilised)	David Brown Engineering Reintjes Renk Allen Gears (Now owned by Rolls Royce)
300	Electrical Systems Transformers	GE Engineering Power Conversion, UK KOC Elec Co Ltd, S.Korea
300	Cabling (LV/HV)	Anixter, UK
300	UPS Systems (Incl Battery Chargers, Battery Boxes)	Gresham Power Electronics, UK
300	Lighting (General, Special, NVG, LED)	Daeyang Electric Co Ltd, S.Korea Consolite Technology Ltd, UK
300	Distribution boards (LV/HV) – 690/440/230/115V	GE Energy Power Conversion, UK Elecsis Ltd, UK KTE Co Ltd, S.Korea
300	Alternators	GE Energy Power Conversion, UK
300	Frequency Converters	GE Energy Power Conversion, UK
300	Hybrid Machines	GE Energy Power Conversion, UK
300	Switchgear (LV/HV)	Elecsis Ltd, UK GE Energy Power Conversion, UK
300	HV Power Generation System for Propulsion Motors (if electric propulsion is adopted)	GE Energy Power Conversion, UK RH Marine/Siemens Rolls Royce

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300	Electrical Systems - Power Distribution System feeding essential services (steering gear, main switchboards, navigation equipment etc)	GE Energy Power Conversion, UK RH Marine/Siemens Rolls Royce
300	Electrical Systems - Emergency Generator	Wartsila MAK MAN Rolls Royce Bergen Caterpillar
400	Ship Control Systems - Integrated Platform Management Systems (IPMS)	L3 Communications RH Marine Rolls Royce GE Energy Power Conversion, UK Sperry Marine Ultra Electronics Servowatch Valmet
400	Ship Control Systems - Integrated Bridge Management System (IBMS)	RH Marine Raytheon Kelvin Hughes Servowatch Valmarine
400	Ship Control Systems - Electrical Power Management System (EPMS)	Norfolk Grummen GE Engineering Power Conversion, UK
400	Ship Control Systems - Gas Turbine Management System (GTMS)	Rolls Royce
400	Bridge and Communications Equipment's - External Communications Equipment	Rohde & Schwarz - for External Comms System, Thales - for External Comms System, NERA Satellite Systems Ltd (NSSL), EADS Astrium - for SCOT Military Satellite Systems, Marconi Defence Systems - for SCOT Military Satellite Systems and VLF/LF/MF/HF Comms Equipment, Racal Decca Marine - for VLF/LF/MF/HF Cougar Communications Equipment, Sailor - for Compact GMDSS equipment, Radio/Telex Message Terminal and Inmarsat C Message Terminal, Telindus - for SAS (Ship Alongside System), SP Radio - for Radio/Telex Message Terminal and Inmarsat C Message Terminal, US Robotics - for Message Modems, Redifon - for various Comms Equipment, Rediffusion, EADS - for Message Handling System. Selex

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400	Bridge and Communications Equipments Equipment's - Internal Communications Equipment	Rohde & Schwarz Selex Atlas EADS
400	Bridge and Communications Equipments Equipment's - Portable Communications Equipment	Motorola Dittal General Dynamics Navico - for GMDSS Portable Radio SRH - for Emergency GMDSS Portable Radios Selex
400	IPMS and other main Bridge Consoles	RH Marine
400	Loran, GPS and Navtex equipment	Furuno
400	Outfit 1019 equipment, GPS/Loran Equipment and Gyro Compass equipment	Raytheon
400	Navystar Receiver	Marconi Defence Systems
400	Log System equipment	Aeronautical & General Instruments (AGI) Chernikeeff
400	Warship Automatic ID System	OSL (Offshore System Ltd)
400	WECDIS Satellite Navigation Display equipment	Kelvin Hughes
400	Aneroid Barometers	Negretti & Zambra
400	Echo Sounder equipment	Skipper Electronics AS
400	GMDSS Sailor Station equipment	SP Radio
400	AIS System equipment	JRC Marine Products
400	Chart Plotter equipment	Panasonic
400	Public Address & Alarm broadcast equipment	Spector Lumenex
400	Gyro Compass equipment	Raytheon Anschutz
400	Indicator equipment (Rate of Turn, & Speed and Distance)	S G Brown
400	Wind Speed Indicator equipment	Meggitt Aviation
400	EB Communications - for Navtex Receiver	Kelvin Hughes
400	Bridge, Navigation & Radar Equipment - Equipment - Navigation Equipment	BAE Systems - for Gyro Compass, Raytheon Anschutz - for Gyro & Magnetic Compass & GPS Display unit, John Lilley & Gillie Ltd - for Magnetic Compass, MX Marine - for Nav aids display unit, JRC Marine Products - for Nav aids GPS display unit, Cetrek - for Magnavox GPS display unit,

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		Rockwell Collins - for GPS equipment, Panasonic - for Safe Navigator display unit, Broadgate - for Voyage Data Recorder, Marconi - for various types of equipment's, Leica - for MK 12 & MX420 Navigation GPS equipment, Skipper Electronics AS - for Echo Sounding Display equipment,
400	Bridge, Navigation & Radar Equipment - Radar Equipment	Kelvin Hughes Marconi Defence Systems Racal Decca Marine Sperry Marine (part of Northrop Grumman Corporation) Raytheon Anschutz
500	Steering System - Hydro/Electrical/Mechanical, Stocks & Bearing Equipment	TSS International - Watford Raytheon-Anschutz - Kiel Rolls Royce Van Der Velden Hatlapa Marine Equipment
500	Steering System - Control Systems	Blohm & Voss Hamburg Van Der Velden
500	Ship Plant Systems comprising; Fuel Filtration System Fuel Separator Equipment's Filter Equipment (for all applications)	Alfa Laval Westfalia Samgong
500	Ship Plant Systems - Filters Equipment (all applications)	Meggitt Racor/Parker Hannifin Boll & Kirch Fram Vokes Pall Enwa, UK
500	Heating, Ventilation, Air Conditioning System (HVAC)	J & E Hall York Navy Systems(Flakt Woods Stork Special Products Hi Air, Korea
500	NBCD Filter Equipment	Portsmouth Aviation Stork Bronswerk Camfil Farr
500	Compressed Air System - Air Compressor	J P Sauer & Sohn, Compair Group (Hydrovane, Broomwade, Reavell) Wartsilla Hamworthy Gardner Denver Drager (HP) Bumhan (MP and LP)
500	Compressed Air System - Air Driers & Air Filters	Domnick Hunter L B Bentley Drager (HP) Bumhan (MP and LP)
500	Compressed Air System - Compressed Air Receiver	SCI Composites Chesterfield Special Cylinders Hoval Farrar Ltd Gangrim

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500	Compressed Air System - Compressed Air Pressure Reducing Valves & Specialist Valves	Hale Hamilton Swagelok (Bristol) Thompson Valves
500	Domestic Refrigeration Plants	J & E Hall York Navy Systems (part of Johnson Controls Inc.) Ernest West & Beynon Lightwood Refrigeration Co Ltd. Stork Special Products Hi Air Korea
500	Sewage System and Garbage Disposal Systems - Dirty Oil/Water Separators	Deerberg Flight Refuelling Ltd - For OWS
500	Sewage System and Garbage Disposal Systems - Food Waste Garbage Disposal Units	Deerberg Wascon IMC Haig
500	Sewage System and Garbage Disposal Systems – Membrane BioReactor Systems (MBR)	Deerberg Wartsilla Hamworthy Transvac
500	Sewage System and Garbage Disposal Systems - Pyrolysis equipment	Ethos
500	Cargo and Material Handling System and Equipment – Radar Distance Device	Guidance Marine Ltd (Range Guard)
500	Fire Fighting Systems – Fixed Fire Detection & Fire Fighting Systems installation	Tyco
500	Fire Fighting Systems - portable appliances	Chubb Angus Fire - for monitors Wormald Kidde
500	Pipework (including Domestic FW, HPSW, LPSW and Hydraulic Fluids) - Pumps	Desmi Clyde Pumps (was Weir), Amarinth Ltd. (Ex Girblestone Pumps) Flowserve, Allweiler, Plenty Ltd, Wartsilla Hamworthy Megator Colfax

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500	Pipework (including Domestic FW, HPSW, LPSW and Hydraulic Fluids) - Hull Side Valves and General Service Valves	Broady Valves Brooksbank Tyco/Hindle Cockburns Truflo Marine Charles Winn Bestobell/Shiphams David Auld - Glasgow John Mills - Newcastle Flowserve/Invensys/Worcester LK Valves and Controls Young & Cunningham Score Marine BY Controls Inc Pleiger Far East LLC GS Hightecher Co. Ltd.
500	Pipework (including Domestic FW, HPSW, LPSW and Hydraulic Fluids) - Heat Exchangers / Coolers	Therco Serck Heat Transfer Nuclear Engineering Services (NES) Sterling Thermal Technology Alfa Laval Tranter APV Baker/Invensys Tranter Scanpro Pacific Ltd (Sondex AS) Bloksma Cool Technology Ltd Halberg SWEP SPX Korea Co. Ltd DongHwa Entec
500	Pipework (including Domestic FW, HPSW, LPSW and Hydraulic Fluids) - Hydraulically Operated Systems and Equipments such as; Doors and Hatches, Remote Valve Actuation Systems, Lifts etc.	MacTaggart Scott & Co Ltd. Rotec Hydraulics, TA Savery & Co Ltd Rexroth Ltd (RAS) Rolls Royce (Clarke Chapman) Alstec/GEC McGregor Navire Truninger Denison Macor Neptune ZF Marine (Bow Thruster) WSF Sander (Valves) Van Der Velden (Steering)
500	Cargo and Material Handling System and Equipment - Cargo inert gas system and equipment (if fitted)	Unitor Marine Systems - (Innovative Gas Systems Americas (Generon) and Kaeser) Air Products
500	Cargo and Material Handling System and Equipment - RAS Delivery Rigs	Rolls Royce, Alstec (Babcock) Bosch Rexroth
500	Cargo and Material Handling System and Equipment - RAS Hoses	Dunlop Oil & Marine, Dunlop Hi-Flex Ideal Hoses Goodyear

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500	Cargo and Material Handling System and Equipment - RAS Loose Gear	Goldring, Solid Swivel, Alstec (Babcock)
500	Cargo and Material Handling System and Equipment – Radar Distance Device	Guidance Marine Ltd (Range Guard)
500	Cargo and Material Handling System and Equipment - RAS Movable Highpoints	Rolls Royce, Alstec Bosch Rexroth
500	Cargo and Material Handling System and Equipment - RAS & Mechanical Handling Winches	Thomas Reid & Sons, MacTaggart Scott Rolls Royce (Clarke Chapman) Dowty/Parkburn Bosch Rexroth
500	Cargo and Material Handling System and Equipment - RAS Equipment Hydraulic Power Packs	MacTaggart Scott & Co Ltd. Rotec Hydraulics, TA Savery & Co Ltd Rexroth Ltd Rolls Royce (Clarke Chapman) Alstec/GEC McGregor Navire Truninger Denison Macor Neptune Bosch Rexroth
600	Accommodation Trim	Trimline Ltd
700	Cargo and Material Handling System and Equipment comprises; Aircraft & Vehicle Tie Down Deck Link Plates	Solid Swivel Haeen Machinery Ind. Co. Ltd.
700	Helo Deck Handling Equipment and Grid	MacTaggart Scott Haeen Machinery Ind. Co. Ltd.
700	Cargo and Material Handling System and Equipment - Deck Cranes	Rolls Royce Clarke Chapman Kenz Figee Liebherr Pellegrini
700	Cargo and Material Handling System and Equipment - Gantry Cranes	Houlder Ltd, Barnsley Cranes, Seward Wyon
700	Cargo and Material Handling System and Equipment - Knuckle Boom Cranes	Hiab Ltd
700	Cargo and Material Handling System and Equipment - Air Weapon Handling System Equipment	Entwistle
700	Cargo and Material Handling System and Equipment - Monorails	Stahl Leusden BV Haeen Machinery Ind. Co. Ltd.

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700	Cargo and Material Handling System and Equipment - Hoists	Stahl Didsbury, Yale, Morris Street Cranes Haean Machinery Ind. Co. Ltd.
700	Cargo and Material Handling System and Equipment - Winches	Thomas Reid & Sons, MacTaggart Scott Dowty / Parkburn Rolls Royce (Clarke Chapman) Pellegrini
700	Cargo and Material Handling System and Equipment - Capstans / Windlasses	Rolls Royce (Clarke Chapman) Thomas Reid & Sons MacTaggart Scott SEC Groningen BV Pellegrini
700	Cargo and Material Handling System and Equipment - Lifts	MacTaggart & Scott Co Ltd Strachan & Henshaw Trinox Kone - Personnel Lifts Otis - Personnel Lifts Babcock - was Alstec Whetstone in Leicester Dae Myung Elevator Co. Ltd.
700	Cargo and Material Handling System and Equipment - Davits	Schat Welin Lambie Caley Ocean Systems MacTaggart Scott Pellegrini Houlder Ltd. Noreq
700	Cargo and Material Handling System and Equipment - Weather Deck Drop Tank Equipment	Houlder Ltd