

SUBMISSION REQUIREMENTS

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1. INTRODUCTION

1.1. Introduction

- 1.1.1. This Annex outlines the way in which Tenderers are required to respond to the Invitation To Negotiate (ITN) in terms of the required format, number of copies and deliverables. Incomplete responses will be marked accordingly.
- 1.1.2. Tenderers shall provide an Executive Summary (no more than 10 pages) as part of their response, which will be used to brief senior management and must not include any financial information. This Executive Summary shall include the proposed design, key characteristics (including a completed Ship Characteristics Form - Appendix C), build and fitting out arrangements.
- 1.1.3. It should be noted that this ITN covers a requirement for a class of ship(s), however elements of the documentation are appropriate to the requirement for the first of class. Where no differentiation of singular or plural has been made within the ITN documentation, the Tenderer should use their judgement in interpreting whether the subject referred to is for the class of ship(s) or first of class when constructing their proposal.

1.2. Content and Structure of Proposals

- 1.2.1. The Authority requires Tenderers to submit their response to this ITN in a highly structured set of documents to facilitate evaluation. This Annex provides a brief explanation of the evaluation methodology and details the content and format required of each part of the Tenderer's response.
- 1.2.2. The Authority's initial evaluation will result from an assessment of each Tenderer's proposal(s) and will utilise consistent evaluation criteria. The assessment of the Tenderer's proposals will then identify those areas of their proposal(s) that require further clarification and/or discussion, which will be carried out during the negotiation phase. This Annex advises Tenderers on how to structure their initial proposal in a manner consistent with assessment processes to be used to facilitate straightforward evaluation.
- 1.2.3. Two hard copies are to be provided for each of the deliverables forming part of the Tenderer's proposal in accordance with Sections B, C and E of these Instructions to Tenderers. An additional eight hard copies (ten in total) of the general arrangement drawings are to be provided.
- 1.2.4. Tenderers are not constrained as to how they should define and explain their solution within the frameworks at Parts 2 to 6 inclusive.

1.3. Tender Assessment Summary

- 1.3.1 The key objectives of the assessment are to provide a fair, transparent, accurate and auditable means of identifying solutions to meet the Authority's requirement and to identify areas for further discussion and/or negotiation with the Tenderers prior to final offers being requested. In addition, the assessment is to identify those Tenderers who are capable and competent of meeting the Authority's requirements and which are likely to deliver best Value for Money (VfM). This will be achieved through:
 - 1.3.1.1. agreement on commercial terms and conditions;
 - 1.3.1.2. robust and comprehensive Project Management, Technical and Integrated Logistics Support (ILS) proposals.
- 1.3.2. The assessment is designed to generate an objective appraisal of each Tenderers initial proposal, provide a platform for the clarifications / negotiations through to request for revised Tenders, and evaluation of final offers.

2. COMMERCIAL PROPOSALS

2.1. Commercial Submission Requirements

- 2.1.1. Tenderers shall provide a commercial response as detailed below.

2.2. Tender Validity

- 2.2.1. Tenderers are to confirm that any tender they submit shall be valid for a minimum period of five hundred and fifty (550) Days from the date of submission.

2.3. Tender Submission Document

- 2.3.1. Tenderers are required to complete and sign the Tender Submission Document at Annex A. The Tender response form will not form part of any evaluation but will become the Contract Price at Contract award.

2.4. Statement of Commercial Compliance

- 2.4.1. Tenderers are required to provide a statement that they accept all the Terms and Conditions of Contract, including Schedules, in the attached ITN documentation.

2.5. Pricing, Payment and Delivery

- 2.5.1. Tenderers are required to submit prices for all Milestones within the Design, FSS-01, FSS-02 and FSS-03 tabs in Annex C (Pricing) by completing the tables as detailed in the instruction sheet, and in accordance with Clause 38 (Price) of the Terms and Conditions of Contract.
- 2.5.2. Submitted prices for Design, all 3 Ships and their associated ILS must not exceed a Total Outturn Cost greater than £1,565,000,000.
- 2.5.3. The NPV Tender Price (shown on the Calculation Sheet tab) will be used for the Financial Evaluation detailed in Section D of the Instructions to Tenderers. This figure is calculated from the Total NPV in the Design, FSS-01 and FSS-02 tabs.
- 2.5.4. With regard to the submission of Option prices please refer to Clause 10 of the Terms and Conditions of Contract.
- 2.5.5. As part of the Tender response, Tenderers are to confirm their acceptance of the Instalment Payment Scheme detailed at Schedule 13 and submit proposed dates for achievement of each of the milestones.
- 2.5.6. Tenderers are to provide a statement confirming that they can meet the delivery dates for each Ship as detailed in Schedule 1 of the Terms and Conditions of Contract.

2.6. Acquisition Cost and Through Life Cost Data Capture

- 2.6.1. Tenderers are required to complete the Acquisition Cost and Through Life Cost Data capture tools at Annexes M1 and M2 in accordance with the instructions on each tab of the spread sheets as far as is reasonably practicable. The information provided will support the

Authority's evaluation of the technical aspects of the Tenderers solution only, and will not form part of the MEAT evaluation.

2.7. Privately or Substantially Privately Funded COTS or MOTS

- 2.7.1. Tenderers shall complete Annex L (Intellectual Property Rights) detailing those items acquired as Commercial Off the Shelf or Military Off the Shelf and also Contract Deliverable Interface Information.

2.8. Commercial Alliances / Consortia

- 2.8.1. Detailed information about any form of alliance, collaborative, teaming, shareholder or other joint venture arrangements and subcontracting and, if so what form this will take, and copies of the relevant draft agreements. Tenderers shall also explain whether any such arrangements would raise issues under applicable merger control or general competition law. Tenderers shall detail the full names of each entity and registered office, roles of the various entities involved in the arrangements, including ownership structure, roles and responsibilities, levels of financial and other investments and allocation of liability and risk between the entities, with letters of support provided from each entity.
- 2.8.2. The Authority shall test the structure proposed by the Tenderer, including the financial robustness and level of commitment of organisations involved in the consortia given proposed roles and SPV/consortia, alliancing, collaboration, teaming, joint venture, shareholder and/or sub-contracting structures having regard to the evidence of the structure that is provided by the Tenderers. The Authority requires a structure which provides detailed evidence that ensures that all parties and their roles are clearly defined and the Tenderers deliver future security and financial robustness with an appropriate sharing of key risks between consortium members.
- 2.8.3. If a Tenderer submits a structure which the Authority considers has a level of assurance within its proposed contractual/commercial structure that is unacceptable the Authority may, in its sole discretion, award a fail to that structure.

2.9. Insurance Requirements

- 2.9.1. For the purposes of demonstrating compliance with the Authority's insurance requirements at Clause 65 of the Terms and Conditions of Contract and Schedule 10 (Required Insurances) and to assist in Tender evaluation, Tenderers must complete and return the Insurance Requirements Table at Annex H.

2.10. Conflict of Interest Compliance Regime

- 2.10.1. Tenderers are required to submit a Conflict of Interest Compliance Regime to the Authority's satisfaction as outlined at Paragraphs F7 and F8 of the Instructions to Tenderers. If a Tenderer does not believe any Conflict of Interest will occur a statement to this fact is required.

2.11. Publicity

- 2.11.1. Tenderers are advised that the Authority may wish to make a public announcement concerning the award of the Contract for the requirement described in the attached Schedule 1. The announcement may include information on any sub-contracts placed down the supply chain valued at £1 million plus. To this end, unless there are specific objections for doing so,

Tenderers are requested to provide details of such sub-contracts at Annex P (Sub-contracts in the Supply Network).

- 2.11.2. Tenderers are required to complete and return Annex E (Tenderer's Commercially Sensitive Information Form) in accordance with the instructions contained within these Instructions to Tenderers.

2.12. Cyber Risk Assessment

- 2.12.1. Tenderers are required to submit a completed Self Assurance Questionnaire (SAQ) against the MOD's Cyber Risk Assessment on the Supplier Cyber Protection Service.

2.13. Change of Control

- 2.13.1. Tenderers are required to provide a statement confirming that there has been no material change of control, composition or membership of your organisation and/or consortium members.

2.14. Import and Export Control

- 2.14.1. Tenderers are required to submit a completed Annex J as in accordance with Clause 45 of the Terms and Conditions of Contract.

2.15. Supply of Hazardous Materials

- 2.15.1. Tenderers are required to submit a completed Annex K as in accordance with Clause 34 of the Terms and Conditions of Contract

2.16. Timber and Wood Derived Products

- 2.16.1. Tenderers are required to submit a completed Annex O as in accordance with Clause 37 of the Terms and Conditions of Contract.

2.17. Official-Sensitive Aspects

- 2.17.1. Tenderers are required to confirm that measures have been and are being taken to safeguard the information classified as Official-Sensitive at the appropriate Annex B (Security Aspects Letter).

2.18. Parent Company Guarantee

- 2.18.1. Tenderers are required to provide a Parent Company Guarantee in the form set out in the terms and conditions of Contract which clearly identifies the named parties together with a letter of support from the providing guarantor.
- 2.18.2. If a Tenderer wishes to propose an alternative form of Parent Company Guarantee from the parent shareholder this should be discussed in advance of tender submission with the Authority. Where the Authority considers that the proposed alternative Parent Company Guarantee is unacceptable the Authority may, in its sole discretion, award a fail against that proposed Parent Company Guarantee.

2.19. On Demand Guarantee

- 2.19.1. Tenderers are required to confirm they will provide an On Demand Guarantee for each Ship in the form set out in the terms and conditions of Contract which clearly identifies the named parties together with a letter of support from the providing party.
- 2.19.2. If a Tenderer wishes to propose an alternative form of On Demand Guarantee from a third party financier this should be discussed in advance of tender submission with the Authority. Where the Authority considers that the proposed alternative On Demand Guarantee is

unacceptable the Authority may, in its sole discretion, award a fail against that proposed On Demand Guarantee.

2.20. Contractor's Refund Guarantee

- 2.20.1. Tenderers are required to confirm they will provide a Refund Guarantee in the form set out in the terms and conditions of Contract which clearly identifies the named parties together with a letter of support from the providing party.
- 2.20.2. If a Tenderer wishes to propose an alternative form of Refund Guarantee from a third party financier this should be discussed in advance of tender submission with the Authority. Where the Authority considers that the proposed alternative Refund Guarantee is unacceptable the Authority may, in its sole discretion, award a fail against that proposed Refund Guarantee.

2.21. Maker's List

- 2.21.1. Tenderers are required to populate the Maker's list at Annex Q with their extant and or proposed Sub-Contractors to be employed under this Contract.

2.22. Details of Contractor, Guarantor and Sub-Contractor

- 2.22.1. Tenderers are required to confirm that they will provide the details of the Contractor, Guarantor(s) and Sub-Contractor(s) as required to complete Schedule 19 on Contract award, in accordance with Clause 4 of the Terms and Conditions.

2.23. Other Matters

- 2.23.1. Tenderers shall detail and explain any other matters of a legal and/or commercial nature that is wishes to be addressed during the tendering process and should not be constrained by the type or content of the Terms, Conditions and Schedules issued as part of this ITN

3. PROJECT MANAGEMENT PROPOSALS

3.1. Introduction

- 3.1.1. In response to the requirements of Schedule 2 (Project Management Specification), the Tenderer is to develop management plans, programmes and documentation that, so far as is reasonably practical, adopts the structure as required by Schedule 2 (Management Specification).
- 3.1.2. The response is to include a description of the proposed management arrangements as required in paragraphs 3.2 to 3.6 below.
- 3.1.3. In the response, the Tenderer is provide a compliance matrix to:
 - 3.1.3.1. Confirm full compliance with the requirements of Schedule 2 (Project Management Specification); or
 - 3.1.3.2. Confirm partial compliance with the requirements of Schedule 2 (Management Specification) and provide a detailed explanation of where the response is not fully compliant; or
 - 3.1.3.3. Confirm non-compliance with the requirements of Schedule 2 (Management Specification) and provide a detailed explanation of the response and reasons for non-compliance.

3.2. Project Management

Initial Project Management Plan (PMP)

- 3.2.1. The Tenderer shall provide an initial PMP which shall define how all Contract activities shall be managed outlining the organisation, processes, procedures and techniques to be used. It shall include details of how all activities plans and programmes will be managed, monitored, controlled and integrated, and shall cover as a minimum all aspects defined in Part 1 of the Schedule 2 (Project Management Specification). The submitted document must not exceed 50 pages of A4, Arial font 11.

Initial Organisation Management Plan

- 3.2.2. The Tenderer shall provide an initial Organisation Management Plan providing a description of the organisational arrangements required to support the Contract. The Tenderer must clearly identify all other companies proposed as Key Sub-Contractors. Suppliers of major equipment, systems or services shall be described to the same level of detail as the Tenderer. The submitted document must not exceed 15 pages of A4, Arial font 11.
- 3.2.3. The Tenderer shall provide details of the level of resources and Suitably Qualified and Experienced Personnel (SQEP) required to deliver the contract and how they will be managed throughout the project. Resources shall include, as a minimum, the following: manpower, infrastructure, facilities, equipment, risk provision and finance arrangements.

Initial Communication and Relationship Management Plan

- 3.2.4. The Tenderer shall provide an initial Communication and Relationship Management Plan that describes the interactions between the Authority, the Tenderer and its Principal Sub-Contractors. The submitted document must not exceed 10 pages of A4, Arial font 11.

Baseline Contract Management Schedule (CMS)

- 3.2.5. The Tenderer shall provide a baseline CMS, and integrated programmes for each Ship. The submitted document must not exceed 30 pages of A4, Arial font 11.
- 3.2.6. In support of the above, the Tenderer shall provide proposed programmes and key milestones for the following:
- 3.2.6.1. Material Procurement and Delivery including GFE;
 - 3.2.6.2. Project Management (including risk, schedule, quality and cost);
 - 3.2.6.3. Basic and Detailed Design Acceptance;
 - 3.2.6.4. Tests, Trials and Inspections;
 - 3.2.6.5. Safety and Environmental Management;
 - 3.2.6.6. ILS.

Initial Risk Register.

- 3.2.7. The Tenderer shall provide an initial risk summary with descriptions of probability/impact definitions and scales prepared in accordance with the Schedule 2 (Project Management Specification). The submitted document must not exceed 15 pages of A4, Arial font 11.

Initial EVM Plan

- 3.2.8. The Tenderer shall provide an Initial EVM Plan describing how EVM will be deployed on this project to monitor performance against the Cardinal Date Programme and the project cost throughout the duration of the contract. The plan should propose how EVM could be linked to milestone payments. The submitted document must not exceed 15 pages of A4, Arial font 11.

3.3. Management of Design, Build and Acceptance

Initial Design Build and Acceptance Plan

- 3.3.1. The Tenderer shall provide an initial Design, Build and Acceptance Plan as required by Part 2 of the Schedule 2 (Project Management Specification). The submitted document must not exceed 65 pages of A4, Arial font 11.
- 3.3.2. The Design, Build and Acceptance Plan shall include proposals for reporting progress on design, production/build and acceptance. The proposals shall include a framework of the aspects to be included in the reports, and arrangements for contractual, project and technical review meetings.
- 3.3.3. The Tenderer shall provide, as part of the Design, Build and Acceptance Plan, proposals for how they will ensure that the ships communications, data and control systems are developed to achieve Information Security Accreditation by the Authority
- 3.3.4. The Tenderer shall provide, as part of the Design, Build and Acceptance Plan, a description of how the Contract activities shall be managed, including the following:
- 3.3.4.1. Procedures detailing how Plan Approval and As Drawn Assessment activities will be managed including any subcontracted design activities.
 - 3.3.4.2. It's proposal for the Classification Society to be used for the duration of the project and provide details where the Classification Society is required to prove equivalency to the nominated Lloyds Register Naval Ship Rules notations.

- 3.3.4.3. Details of the dissemination process for design information and the formal arrangements for control of physical and functional interfaces.
- 3.3.5. The Tenderer shall provide, as a separate annex to the Design, Build and Acceptance Plan, a Project Engineering Management Plan (P-EMP). The plan shall define the Tenderer's approach to the management and control of its technical direction in terms of engineering resources, activities, reviews and outputs. The submitted document must not exceed 15 pages of A4, Arial font 11.
- 3.3.6. The Tenderer shall describe, as part of the Design, Build and Acceptance Plan, how they will facilitate surveillance by the Authority's representatives and Classification Society surveyor's including accommodation, communication with the Tenderer's organisation, external communications and access to the ship, systems and equipment during design and build and leading up to Acceptance Off Contract (AOC).
- 3.3.7. The Tenderer shall provide, as part of the Design, Build and Acceptance Plan, proposals for how they will manage acceptance activities, and the details of the acceptance tool that will be used.
- 3.3.8. The Tenderer shall provide details of their proposed Test Form format and breakdown for the various acceptance activities of Schedule 2 (Project Management Specification).

Modelling

- 3.3.9. The initial Design Build and Acceptance Plan shall include statements of intent providing details of the intended use of models and simulation to assist in design development and progressive acceptance. This shall include cargo flow modelling to confirm compliance with the required operational transfer rates, and aviation airflow model testing to assess effects on helicopter operability and any required improvements to the design

Tests, Trials and Inspections

- 3.3.10. The Tenderer shall provide as part of the initial Design, Build and Acceptance Plan, details on how the tests, trials and inspections shall be managed, including the following:
- 3.3.10.1. A description of the proposed organisation to manage and conduct Tests, Trials and Inspections to achieve an optimum progressive acceptance process. Covering planning and writing of procedures, conducting, recording and analysing tests trials and inspections, and preparation of reports to provide assurance that requirements have been met.
 - 3.3.10.2. Proposed procedures for agreeing what tests, trials and inspections are required to be conducted to satisfy the Classification Society, MCA and the Authority.
 - 3.3.10.3. Proposed arrangements for agreeing the scope and content of trials procedures, and acceptance criteria for tests and inspections with Classification Society, MCA and the Authority, including the development of Test Forms.
 - 3.3.10.4. Proposals on how Tests, Trials and Inspections leading to Acceptance off Contract shall be undertaken and managed to demonstrate that all the requirements of the Contract have been met.
 - 3.3.10.5. Details to show how Tests, Trials and Inspections will be packaged to ensure on site attendance by the Authority's representatives and Classification Society surveyor's is efficient and effective.
 - 3.3.10.6. Reference to any external authorities the Tenderer will need to liaise with, to obtain agreement/approvals or advice including dependencies on the Authority.

- 3.3.10.7. An initial list of Tests, Trials and Inspections based on the acceptance activities identified in the Technical Specification.
- 3.3.10.8. Details on how the Tenderer will ensure that they, and their suppliers, will be involved in Capability Assessment Trials leading up to Acceptance into Service.
- 3.3.10.9. Copies of codes of practice/standards for the following activities:
 - 3.3.10.9.1. Proof (Shop) and installation pressure testing of equipment, fittings and systems.
 - 3.3.10.9.2. Cleanliness, care and protection of ship, equipment, fittings and systems at all stages of manufacture and build.
 - 3.3.10.9.3. Maintenance of equipment, fittings and systems at all stages up to acceptance off contract, including after setting to work / commissioning of equipment.
 - 3.3.10.9.4. Steel work practices including storage, preparation, welding, fabrication and assembly including initial preservation.
 - 3.3.10.9.5. Pipework production and installation standards.
 - 3.3.10.9.6. Paint control, application and inspection.

Initial Technology, Design and Production Maturity Plan

- 3.3.11. The Tenderer shall provide an initial Technology, Design and Production Maturity Plan detailing the Technology Readiness Levels (TRL) of all major equipment and systems proposed for the Fleet Solid Support (FSS) Project. Detailed explanations and proposed risk mitigation are to be provided for any technology that is considered to be below TRL 7 as defined in Schedule 2. The submitted document must not exceed 25 pages of A4, Arial font 11.
- 3.3.12. The Tenderer shall provide details of how they will manage design and production maturity / readiness through the design & build/conversion and acceptance process.

Plan Approval and As Drawn Assessments

- 3.3.13. The Tenderer shall provide an initial Drawing and Document list which shall identify all drawings and documents proposed for As Drawn Assessment and Plan Approval including all those drawings and documents to be approved by the Authority, Classification Society and Maritime Coastguard Agency (MCA) as defined in Schedule 2. The submitted document must not exceed 15 pages of A4, Arial font 11.

3.4. Safety and Environmental Management

Safety and Environmental Management Plan (SEMP)

- 3.4.1. The Tenderer shall provide an initial SEMP (the submitted document must not exceed 50 pages of A4, Arial font 11) detailing how the Safety & Environmental Protection (S&EP) - related Contract activities shall be managed, including the following:
 - 3.4.1.1. A description of how safety and environmental issues shall be managed to satisfy Part 3 of the Schedule 2 (Project Management Specification). Details of the procedures that shall be applied to ensure that safety and environmental requirements are assessed including, risk and hazard assessment, as an integral part of the design through to acceptance.
 - 3.4.1.2. Details of how safety and environmental issues will be considered in the purchase of materials, equipment and systems from sub-contractors.

- 3.4.1.3. A description of the Tenderer's safety objectives, the approach to be adopted and methodology for their achievement including criteria for the acceptability of risks, the need for further analysis where required, and the mechanisms for continued improvement.
- 3.4.1.4. A description of how the risk and hazard matrix provided in Part 3 of the Schedule 2 (Project Management Specification) will be used. The frequency classifications shall include numerical targets and the severity classifications shall cover effects on personnel, ship and the environment.
- 3.4.1.5. Proposals for how safety management activities shall be planned and programmed, identifying major milestones to be achieved including safety reviews and key stages in development of the Safety and Environmental Case, Safety and Environmental Case Reports and associated documents.
- 3.4.1.6. Proposals for reporting progress on safety and environmental management, including a framework of all aspects to be included in the report, the proposed period between reports, and arrangements for review meetings.
- 3.4.1.7. Arrangements for the formal safety assessment process identifying the role of the Authority-appointed Independent Safety Auditor and; including self and independent audits and proposals for holding Safety Committee meetings.
- 3.4.1.8. Proposed procedures for quality and configuration control of the Safety and Environmental Case, including maintenance of the Hazard Log, feedback, documentation and data.
- 3.4.1.9. Details of the organisation for safety management, and evidence to demonstrate that the safety management staff are SQEP, and have the required competencies to carry out their safety responsibilities.
- 3.4.1.10. Proposals for how the Tenderer will recognise and act on the need to plan for end of life disposal.
- 3.4.1.11. An outline Safety and Environmental management programme.
- 3.4.1.12. Proposals for managing the MCA and Classification Society to ensure that the ship design complies with relevant Certification and Classification requirements as described in Schedule 2 (Project Management Specification) and Schedule 3 (Technical Specification).

Hazard Log

- 3.4.2. The Tenderer shall provide an initial Hazard Log with As Low As Reasonably Practical (ALARP) descriptions, as required by the Schedule 2 (Project Management Specification). The submitted document must not exceed 15 pages of A4, Arial font 11.

3.5. Quality Management

- 3.5.1. The Tenderer shall provide copies of the Company Quality Policy, Company Quality Strategy and an initial Quality Plan, tailored for the FSS Project, detailing the requirements for quality assurance (see Part 4 of Schedule 2 (Project Management Specification)). In addition, the

Tenderer shall provide access to relevant parts of their Company Quality Manual upon request from the Authority.

- 3.5.2. The submitted document for the Quality Plan must not exceed 15 pages of A4, Arial font 11. The supporting Company Quality Policy and Strategy documents must not exceed 50 pages.

3.6. Occupational Health and Safety

- 3.6.1. The Tenderer shall provide details of their Health and Safety policy and procedures, and describe how they will be applied to the FSS Project. The submitted document must not exceed 15 pages of A4, Arial font 11.

4. TECHNICAL PROPOSALS

4.1. Introduction

- 4.1.1. In the response to the requirements of Schedule 3 (Technical Specification), the Tenderer is to provide a compliance matrix that, for each requirement will:
- 4.1.1.1. Confirm full compliance with the requirements of Schedule 3 (Technical Specification); or
 - 4.1.1.2. Confirm partial compliance with the requirements of Schedule 3 (Technical Specification) and provide a detailed explanation of where the response is not fully compliant; or
 - 4.1.1.3. Confirm non-compliance with the requirements of Schedule 3 (Technical Specification) and provide a detailed explanation of the response and reasons for non-compliance.

4.2. System Integration Statement & Human Factors Integration Plan

- 4.2.1. The Tenderer shall provide a statement on the management of system integration of all major systems in the Ship. This shall reflect the requirements detailed in Clause 25 of the Contract Terms and Conditions document. The submitted document must not exceed 10 pages of A4, Arial font 11.
- 4.2.2. The Tenderer shall provide a Human Factors Integration Plan, including the IPMS Human Factors aspects detailed in Expanded Ship Work Breakdown Structure (ESWBS) 070.10 and ESWBS 438. The submitted document must not exceed 10 pages of A4, Arial font 11.

4.3. Ship System and Equipment Design Disclosure

- 4.3.1. For each Volume of the Technical Specification (Volume 0 Wholeship, Volume 1 Structure etc), the Tenderer shall provide Statements of Design Intent.
- 4.3.2. These Statements of Design Intent shall define the standards of design and construction to be applied to meet each volume of the FSS Technical Requirements. Statements shall be cross-referenced to the appropriate ESWBS number of Technical Specification. The statements shall provide proposals to give confidence that the overall capability will be achieved, and to demonstrate that the Tenderer has understood the Authority's requirements. The submitted document, for each volume, must not exceed 50 pages of A4, Arial font 11.
- 4.3.3. For the Replenishment at Sea (RAS) Systems;
- 4.3.3.1. Heavy RAS (HRAS) (delivery);
 - 4.3.3.2. 2T (delivery);
 - 4.3.3.3. Moveable High Points (6T, 2T and Fuel);
 - 4.3.3.4. Over The Bow (OTB) (Fuel reception);

the Tenderer shall provide evidence to demonstrate that TRL6 has been achieved. See Management Specification for definitions of TRL's. As a minimum, the evidence must include a TRL Breakdown Structure representing the proposed system and sub-systems hierarchy in block diagram form. Each subsystem shall include a TRL score. The submitted documents must not exceed a total of 50 pages of A4, Arial font 11 (20 pages for HRAS and 10 pages each for 2T, Moveable High Points and OTB).

4.4. Design Calculations

4.4.1. The Tenderer shall provide design calculations (including inputs, method and results) for ship, system and equipment performance and sizing including but not limited to:

- 4.4.1.1. Power / speed predictions for the following range of Conditions:
 - a) Upper Sustained Speed (see ESWBW 044);
 - b) Trial Condition;
 - c) Start of Life, Clean Hull, Deep Displacement, Calm water.
- 4.4.1.2. The contractor shall provide a Matrix of estimated trial speeds (as Defined by ESWBS 044) based on the Power/Speed curves and the Hull form selected;
- 4.4.1.3. Endurance / range;
- 4.4.1.4. Fuel consumption for the contract speed condition, and the annual consumption based on the profile in the ILS Specification;
- 4.4.1.5. Waste Systems – calculations for waste systems capacities. Waste Treatment and Disposal Plan;
- 4.4.1.6. Weight and centre of gravity estimates, (lightship and deadweight) including the Authority's margins and justified proposals for Contractor's Margins. The weight report shall be categorised by 2 digit ESWBS weight groups;
- 4.4.1.7. Paramarine stability model demonstrating compliance with the Intact and damage stability criteria (Assessment shall be limited to Full Load Pre-staged and Ballast Arrival Conditions);
- 4.4.1.8. Demonstration of compliance with watertight subdivision requirements, and demonstration that the Damage Control Deck access requirement has been satisfied;
- 4.4.1.9. Seakeeping predictions (submission of seakeeping assessments required for pre-staging and helicopter operations only). Details of any proposed roll reduction features to be included;
- 4.4.1.10. Manoeuvring assessments for RAS in calm water to demonstrate compliance with manoeuvring criteria;
- 4.4.1.11. Structural strength;
- 4.4.1.12. Vibrations predictions;
- 4.4.1.13. Heating, Ventilation and Air Conditioning (HVAC) & Chemical, Biological, Radiological and Nuclear (CBRN) System - loading / power consumption at the high and low extremes of external temperature & humidity in both normal and CBRN conditions;
- 4.4.1.14. HVAC Chilled Water system calculations, heat load calculations, heat dissipation data and HVAC design statement;
- 4.4.1.15. Refrigeration systems sizing calculations - cargo holds and ships domestic stores;
- 4.4.1.16. Electrical power load charts (in the format detailed in Appendix E – Electrical Load Chart Template) for the following operational states:
 - 4.4.1.16.1. Harbour;
 - 4.4.1.16.2. Slow Speed (8 Knots);
 - 4.4.1.16.3. Maximum speed (Contract Speed);

- 4.4.1.16.4. RAS Evolutions;
- 4.4.1.16.5. CBRN closedown condition at Contract Speed;
- 4.4.1.16.6. Emergency Switchboard loads.
- 4.4.1.17. Three separate load charts shall be competed for Arctic, Temperate and Tropical regions. See technical Specification section 044 for details of temperatures; Arctic is -20°C air temperature, Tropical is 45°C air temperature at 35% relative humidity, Temperate shall be 15°C air temperature at 75% relative humidity.
- 4.4.1.18. An estimate of the total length of cable to be installed on the Ship shall be provided.

4.5. Drawings and Arrangements

- 4.5.1. The overall layout of the Ship shall be in accordance with the requirements in the Technical Specification section ESWBS 600 – Outfit & Furnishings. The layout of specific areas or compartments shall be shown in greater detail as appropriate for the subject. The Tenderer shall provide drawings showing the proposed arrangements for the following:
 - 4.5.1.1. General arrangement drawing including profile and deck plans, and showing the locations of all compartments referenced in the Technical Specification;
 - 4.5.1.2. Compartment matrix including all required compartments with their deck areas and locations;
 - 4.5.1.3. Midship section;
 - 4.5.1.4. Scantling plan;
 - 4.5.1.5. Lines plan;
 - 4.5.1.6. Sections;
 - 4.5.1.7. Watertight divisions;
 - 4.5.1.8. Arrangements of the RAS stations, including delivery and reception arrangements, with dimensions (see Technical Specification section 571);
 - 4.5.1.9. RAS Masts, RAS Winch Rooms / Spaces;
 - 4.5.1.10. Arrangements for RAS Control Office (RASCO) and Winch Control positions;
 - 4.5.1.11. AutoCAD drawings for General Arrangement, all of the Cargo Magazines defining the Cargo Magazine number, clear deck area assigned for cargo stowage, swept areas of all doors and drain locations;
 - 4.5.1.12. Arrangements of all non-magazine cargo holds (including refrigerated holds) Storing and ammunition routes, detailing use of lifts and mechanical handling equipment;
 - 4.5.1.13. Clearway Arrangements;
 - 4.5.1.14. Damage control zones including Citadel / Sub-Citadel arrangement;
 - 4.5.1.15. Boats, Escape and Evacuation and lifesaving equipment;
 - 4.5.1.16. Personnel evacuation and escape routes; Removal routes for major equipment and assemblies;
 - 4.5.1.17. Maintenance envelopes for major equipments; Operational areas including Bridge, Bridge Annex, Main Communications Office, MCR, Damage Control Headquarters, and Fire and Repair Party Posts;

- 4.5.1.18. Commissary spaces typical layouts (See Technical Specification section ESWBS 651);
- 4.5.1.19. Block diagram of IPMS including connections to controlled equipment, RTU utilisation, workstation connections and network topology;
- 4.5.1.20. Propulsion system arrangements;
- 4.5.1.21. General layout of machinery spaces;
- 4.5.1.22. Schematic of power generation and distribution;
- 4.5.1.23. Single line diagrams of the electrical distribution system, including indicative ratings of major electrical equipment (i.e. switchgear / transformers / Uninterruptible Power Supply (UPS) Systems / motors / variable speed drives / main and emergency generators etc.);
- 4.5.1.24. Piping and Instrumentation Diagrams for all fluid systems;
- 4.5.1.25. Piping and Instrumentation Diagrams for all refrigeration systems;
- 4.5.1.26. Piping and Instrumentation Diagrams for all fire suppression systems;
- 4.5.1.27. Block diagrams of internal and external communications systems including matrices;
- 4.5.1.28. Block diagrams of navigation systems;
- 4.5.1.29. Self-defence weapon positions and arcs for fitted and fit-to-receive weapons equipment;
- 4.5.1.30. Indicative topside arrangements including aerials, radars and visual signalling arrangements, showing details of any blind arcs;
- 4.5.1.31. Flight deck including hangar arrangements;
- 4.5.1.32. Anchor, cable and mooring arrangements.

4.6. System Specifications

- 4.6.1. Systems Specifications. The Tenderer shall provide outline specifications for the following systems and equipment:
 - 4.6.1.1. Propulsion machinery including transmission;
 - 4.6.1.2. Electric power generation, distribution and protection, including power management control philosophy and switchgear interfaces. Reasons for the Voltage level selected shall also be included;
 - 4.6.1.3. Interior communications systems;
 - 4.6.1.4. Exterior communications systems;
 - 4.6.1.5. Navigation systems;
 - 4.6.1.6. IPMS - details of the expected network and control panels, and details of the expected networked and serial equipment interfaces;
 - 4.6.1.7. HVAC including chilled water plants and proposed refrigerant gases to be used;
 - 4.6.1.8. Refrigeration systems including proposed refrigerant gases to be used;
 - 4.6.1.9. RAS systems;
 - 4.6.1.10. Cranes;
 - 4.6.1.11. Lifts - General Purpose, Munitions & Cargo;

- 4.6.1.12. HP sea water systems;
- 4.6.1.13. Fresh water cooling systems;
- 4.6.1.14. Firefighting systems including fire detection;
- 4.6.1.15. Waste disposal; and
- 4.6.1.16. Paint and preservation;

4.6.2. Policy Documents . The Tenderer shall supply outline policy documents and management plans for the following aspects:

- 4.6.2.1. Electrical policy document – as detailed in Technical specification section ESWBS 320.2;
- 4.6.2.2. Cabling policy document – as detailed in Technical specification section ESWBS 304.3;
- 4.6.2.3. Electromagnetic Environmental Effects policy document – as detailed in Technical specification section ESWBS 407
- 4.6.2.4. Electromagnetic Environmental Effects management plan – as detailed in Technical specification section ESWBS 407
- 4.6.2.5. IPMS Engineering management plan – as detailed in Technical specification section ESWBS 438;
- 4.6.2.6. IPMS policy document – as detailed in Technical specification section ESWBS 438;
- 4.6.2.7. Pipework / piping policy or standards to satisfy ESWBS 505;
- 4.6.2.8. Structure policy / shipyard steelwork standards;
- 4.6.2.9. Vulnerability Reduction Design statement, including High Value Compartment list.
- 4.6.2.10. An outline Equipment Shock Qualification List (ESQL) Management Plan to satisfy the requirements of ESWBS section 072 (Shock Protection of Key Systems and Equipment) along with an indicative list of systems & equipment that will require shock protection;
- 4.6.2.11. RCS policy and design statement;
- 4.6.2.12. Margins policy document defining all margins;
- 4.6.2.13. A Power and Propulsion Integration plan, as detailed in ESWBS 200;
- 4.6.2.14. Weight management plan;
- 4.6.2.15. Each submitted policy document must not exceed 20 pages of A4, Arial font 11.

4.7. Propulsion Systems Selection

4.7.1. A Propulsion and Power Generation Selection Report shall be provided, that details how the Tenderer has selected the propulsion and power generation system configuration, and demonstrates through design and cost calculations that it is the optimum choice against other options for the Fleet Solid Support project based on the following criteria in descending importance:

- 4.7.1.1. Performance in accordance with the Technical Specification, notably Ship speed (see Technical Specification section ESWBS 044 – Ship Operation - Speed), RAS equipment Powering (see Technical Specification ESWBS 580

- RAS Equipment), and requirements for spinning reserve (Technical Specification ESWBS 310);

4.7.1.2. Whole Life Cost. These shall be defined for the propulsion and power generation system considering spares, maintenance, training, and fuel consumption using the operational profiles defined in the ILS Specification;

4.7.1.3. Minimum risk to the Authority, the Tenderer and performance of the Ships (the Tenderer shall identify key risks to the Authority);

4.7.1.4. For comparison purposes, the Tenderer is requested to provide details of the unit production cost and through life costs for;

4.7.1.4.1. a Diesel Electric propulsion solution; and

4.7.1.4.2. a Hybrid propulsion solution.

4.7.2. The Propulsion and Power Generation Selection Report must not exceed 50 pages of A4, Arial font 11.

4.8. Modelling Data

4.8.1. To allow the Authority to conduct model testing / simulation with other Royal Naval (RN) Ships, the following information shall be provided:

4.8.1.1. A 3D model of the hull;

4.8.1.2. A 3D model / detailed drawings of the hull appendages;

4.8.1.3. The information detailed Appendix of this document.

4.9. Classification

4.9.1. A Class Tailoring document shall be provided detailing the scope of work of the Classification Society and the scope of Classification / Class for the ship (Not to exceed 20 pages of A4, Arial font 11).

4.9.2. Any proposed changes to Statutory Legislation or Classification Society Rules identified by the Tenderer shall be detailed (Not to exceed 0.5 pages of A4 per change, Arial font 11)

4.9.3. The Tenderers plans for contracting MCA and Classification Society shall be provided (Not to exceed 2 pages of A4, Arial font 11).

5. INTEGRATED LOGISTIC SUPPORT PROPOSALS

5.1. Introduction

- 5.1.1. In response to the requirements of the Schedule 4 (ILS Specification), the Tenderer is to develop and provide to the Authority an initial ILS Specification response that includes an Executive Summary and, so far as is reasonably practical, adopts the structure of Schedule 4 (ILS Specification). Furthermore, the Tenderer is to develop a draft Integrated Support Plan (ISP) based on the Authority's FSS ILS Plan (see ISDS Annex I to Notices and Instructions - ILS Supporting Documentation) and other information as required in paragraphs **Error! Reference source not found.** to 6 below. **The total submission for items detailed in paragraphs 5.1 – 5.5, including attachments, shall not exceed 500 pages (1000 sides) A4, Font Size Arial 11.** In the response, the Tenderer is to:

- 5.1.1.1. Confirm full compliance with the requirements of Schedule 4 (ILS Specification); or
- 5.1.1.2. Confirm partial compliance with the requirements of Schedule 4 (ILS Specification) and provide a detailed explanation of where the response is not fully compliant; or
- 5.1.1.3. Confirm non-compliance with the requirements of Schedule 4 (ILS Specification) and provide a detailed explanation of the response and reasons for non-compliance.

5.2. ILS Specification

- 5.2.1. For each section of the ILS Specification the Tenderer shall provide a statement of support intent to meet the FSS supportability requirements. Statements shall be cross-referenced to the relevant paragraphs in the ILS Specification and/or Management Specification as applicable. These statements shall provide robust proposals to meet the overall supportability requirement and shall demonstrate that the Tenderer has understood and will meet the Authority's ILS requirements.

5.3. Integrated Support Plan (ISP)

- 5.3.1. The Tenderer shall provide a draft ISP to the Authority. The draft ISP shall demonstrate the Tenderer's compliance with the Authority's ILS requirements and that the discipline of ILS will be applied to all aspects of the Tenderer's programme and will detail how the Tenderer intends to control and manage the required ILS activities. This ISP shall mirror the Authority ILSP and shall include the element plans as detailed below:

- 5.3.1.1. Availability, Reliability & Maintainability Plan;
- 5.3.1.2. Maintenance Management Plan including:
 - 5.3.1.2.1. Reliability Centred Maintenance (RCM);
 - 5.3.1.2.2. Failure Modes Effects and Criticality Analysis (FMECA);
 - 5.3.1.2.3. Level of Repair Analysis (LORA).
- 5.3.1.3. Supply Support Management Plan;
- 5.3.1.4. Support & Test Equipment Plan;
- 5.3.1.5. Shore Facilities Plan;
- 5.3.1.6. Training & Training Equipment Plan;
- 5.3.1.7. Technical Data and Documentation Plan;
- 5.3.1.8. Packaging, Handling, Storage and Transportation Plan;

- 5.3.1.9. Disposal Plan;
- 5.3.1.10. Whole Life Cost Management Plan;
- 5.3.1.11. Software Support Management Plan;
- 5.3.1.12. Obsolescence Management Plan;
- 5.3.1.13. Configuration management plan.

5.4. ILS Manager

- 5.4.1. The Tenderer shall provide the Terms of Reference (ToRs) for the ILS Manager and their authority within the company. The Tenderer shall also provide details of the support organisation and their task responsibilities that shall be responsible for delivering the ILS package. If ILS services are not provided by the Tenderer, then the Tenderer shall advise the name, ToRs and authority of the proposed Sub Contractor's ILS Manager who will be responsible for the programme.

5.5. Equipment

- 5.5.1. The Tenderer shall provide a list of full candidate systems and equipment items, as detailed in Annex A to the ILS Specification, which will be agreed with the Authority as part of the pre-contract dialogue. This list will be required by the Builder to determine those spare parts and consumables required for routine maintenance during the first two (2) years of operation for each FSS for all full candidate systems and equipment items installed in the ship, giving details of the equipment manufacturers in Schedule 7 (Makers List).

6. THROUGH LIFE COST INFORMATION

6.1. Introduction

- 6.1.1. To support the FSS tender process, the FSS Through Life Cost (TLC) Data Capture Tool has been developed to assist the Authority to identify a TLCs for the Ships. The data supplied in this aspect will **not** be used in the assessment of the Tenders.
- 6.1.2. The Contractor is required to complete the TLC Data Capture Tool spreadsheet at Appendix D as far as reasonably practicable for each of their solutions. Instructions for completion of the tool are included in the spreadsheet.

COMMERCIAL COMPLIANCE MATRIX (CCM)

Please refer to the separate Excel File “MARS Fleet Solid Supports Commercial Compliance Matrix” found on the CD ROM accompanying this ISDS. Tenderers shall complete the matrix filling in columns 3 (and 4 as applicable) using the key for column 3, viz ‘Y’, ‘N’ or ‘IP’. This will automatically record the appropriate colour code.

APPENDIX B

SCHEDULE OF INSURANCES

For the purposes of demonstrating compliance with the Authority's insurance requirements, Tenderers are required to provide the following insurance information as a minimum.

Class of Required Insurance Schedule 11	Period of Policy/Renewal Frequency	Insurer(s) Identity (including Excess Layer Insurers as appropriate to the specified Limit of Indemnity in Schedule 11)	Maximum Deductible level proposed to apply to Schedule 11	Agreement to the requirements of Clause 60 Insurance obligations (N.B. if not please specify areas of non compliance, alternative proposals or points of clarification)	Agreement to the requirements of Schedule 11 Required Insurances (N.B. if not please specify areas of non compliance, alternative proposals or points of clarification)	Premium calculation relative to the requirements of Clause 60 and Schedule 11 Please specify: 1. Rateable factor 2. Premium Rate 3. Insurance Premium Tax, if applicable 4. Insurance brokers remuneration, if applicable 5. Detail of any other costs associated with the provision of the required insurance including any insurance "risk contingencies"
1. Third Party Public & Products Liability Insurance						
2. Professional Indemnity Insurance						
3. Builders Risk Insurance						

SHIP CHARACTERISTICS FORM

Item	Information Required	Tenderer's Response
1	Classification Society	
2	Classification Notations	
3	Length Overall (m)	
4	Length Waterline (m)	
5	Beam Overall (m)	
6	Depth Amidships (m)	
7	Trim (full load) (m +ve by stern)	
8	Displacement (full load) (te)	
9	Maximum Speed in SS0 (kts) start of life deep	
10	Maximum Speed in mid SS5 (kts) end of life deep & dirty	
11	Minimum Sustainable Speed (kts)	
12	Hull Steel Grade(s) and locations	
13	Longitudinal Prismatic Coefficient	
14	Midship Section Area Coefficient	
15	Propeller Diameter (m)	
16	Bow Thruster(s) Power (kW)	
17	Shaft Power (MW)	
18	Machinery Configuration & prime mover power ratings	
19	Crash Stop Lead Reach (ship lengths)	
20	Ships Bunker fuel capacity (m3)	
21	Range at Contract Speed (nm)	
22	Seakeeping RMS Pitch Amplitude in mid SS5 (deg)	
23	Seakeeping RMS Roll Amplitude in mid SS5 (deg)	
24	Seakeeping RMS Heave Acceleration in mid SS5 (g)	
25	Tactical Diameter to Port at 15kts (m)	
26	Tactical Diameter to Starboard at 15kts (m)	
27	Solid Ballast (te) and location	
28	Permanent Liquid Ballast (te)	
29	No of cabins without natural light	
30	Position of RASCO (m from stern & frame No.)	
31	Ratio of Distance to Centre of Landing Spot from Hangar Door to Height of Hangar Superstructure	
32	Ratio of Distance to Centre of Landing Spot to Width of Superstructure at Hangar	
33	Height of Flight Deck above Deep Waterline (m)	
34	Flight deck dimensions (m)	
35	Hangar dimension (m)	
36	Position of Machinery Control Room (m from stern & frame No.)	
38	Position of TEUs (m from stern & frame No.)	
39	Ship's Potable Water Capacity (m3)	
40	Victualling Stores Volume (m3)	
41	No. of cargo holds and configuration	
42	Deadweight	

WHOLE LIFE COST INFORMATION

Please refer to the separate CD ROM accompanying this ITN and file marked “20101014_WLC Model_v0-18-U”

Tenderers shall complete as appropriate.

ELECTRICAL LOAD CHART TEMPLATE

Please refer to the separate CD ROM accompanying this ITN and file marked
"20180918_Electrical-Load-Chart-Template-V1.0"

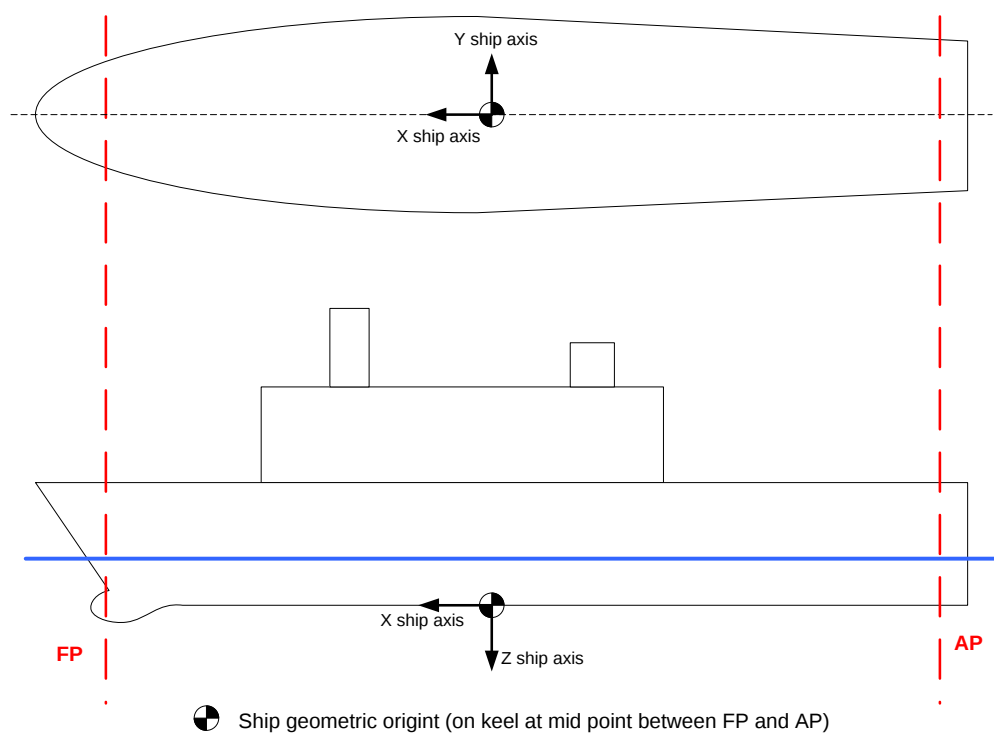
Tenderers shall complete three versions of this template (one for each required ambient
temperature condition).

REQUIRED INFORMATION FOR RAS SIMULATION MODELLING

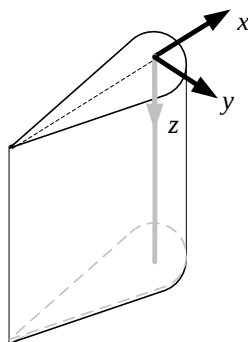
Acronyms

AP	Aft Perpendicular
FP	Forward Perpendicular
LCG	Longitudinal Centre of Gravity
TCG	Transverse Centre of Gravity
VCG	Vertical Centre of Gravity

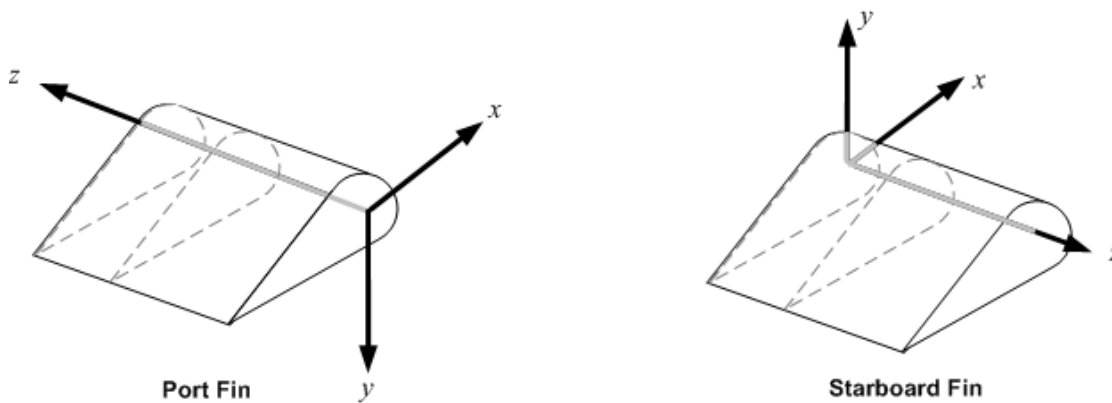
Coordinate Systems



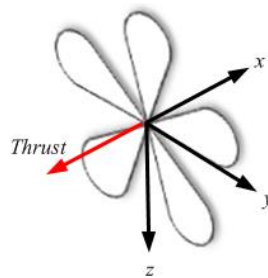
Ship coordinate system. The origin is the point midway between the Aft and Forward Perpendiculars (AP and FP), on the keel and on the ship's centreline.



Ship Rudder. The rudder deflection angle corresponds to rotation about the z-axis.



Roll stabilisation fins (if fitted). The fin deflection angle corresponds to rotation about the z-axis. Fins are mounted on the hull at the coordinate system origin.



Coordinate system for a propeller. The rotation axis is about the x-axis.

FSS Configuration	
General Arrangement	A scaled drawing General Arrangement view (e.g. as a pdf)
Hull form geometry	Electronic file(s) containing the wetted hull surface form. Acceptable file formats IGES or STEP, with minimum set of NURBS surface patches. (Facetted polygonal formats are not acceptable).
AP	Location of the AP (e.g. longitudinal distance from bottom of transom, or at rudder hinge line). The AP should be readily identifiable from the hull form geometry.
LPP	Distance (m) between the Aft Perpendicular (AP) and the Forward Perpendicular (FP)
Full (heavy) loading condition	Draft at AP (m) Draft at FP (m) Displacement (tonnes) LCG (m) as distance from AP TCG (m) as distance from centreline to starboard VCG (m) as distance from keel Natural roll period (s)
Low (light) loading condition	Draft at AP (m) Draft at FP (m) Displacement (tonnes) LCG (m) as distance from AP TCG (m) as distance from centreline to starboard VCG (m) as distance from keel Natural roll period (s)

FSS Configuration	
Radius of gyration (roll)	(m)
Radius of gyration (pitch/yaw)	(m)
Number of rudders	
For each rudder:	
Rudder scale drawing	Showing rudder design/dimensions (PDF acceptable, or more preferably, as an IGES file)
Rudder location	Location of rudder hinge line: Distance(m) from AP Distance (m) from centreline Distance (m) from keel (top, bottom)
Rudder mounting angles	Roll about x(deg), Pitch about y(deg)(normally 0 deg) yaw about z (deg)
Rudder Dimensions	Rudder area (m ²) Total fin area (m ²) Rudder span (m) Root chord (m) Tip chord (m)
Rudder stall angle	(deg) (if available)
Rudder maximum deflection	(deg)
Rudder maximum turn rate	(deg/s)
Number of propellers	
For each propeller:	
Thrust and torque coefficients, or information to allow an estimate	Polynomials (wrt advance ratio J) of KT and KQ. Number of blades Expanded blade area ratio Pitch/Diameter ratio
Propeller locations (hub location)	Origin of propeller axis of rotation: Distance (m) forward of AP Distance (m) from centreline Distance (m) above keel
Propeller mounting angles	Pitch about y (deg) yaw about z (deg)
Propeller diameter	(m)
Propeller maximum RPM	(RPM)
Number of bilge keel pairs	
For each bilge keel pair:	
Bilge keel length	(m)
Bilge keel span	(m)
Bilge keel dihedral angle	(deg)
Bilge keel leading edge location	Distance (m) from AP Distance (m) above keel Distance (m) from centreline
Number of anti-roll fins (if fitted)	
Anti-roll fin location	Location of fin origin as: Distance (m) from AP Distance (m) above keel Distance (m) from centreline
Anti-roll fin dimensions	Mean chord (m) Span (m) Dihedral angle (deg)
Anti-roll fin max deflection	(deg)

FSS Configuration	
Anti-roll fin max deflection rate	(deg/s)
Anti-roll fin stall angle	(deg)
Number of RAS posts	
For each RAS post:	
RAS post location (centre of base)	Distance (m)from AP Distance (m)from centreline Distance (m)from keel
RAS post inclination angle from vertical	(deg)

CHECKLIST OF DELIVERABLES
(see Part 1, para 2.3 for quantities)

APPENDIX G

Checklist of Deliverables - (to be delivered to the Authority by XX/XX/XXXX)	Reference
Introduction	
Executive Summary (including Appendix 1 Ship Characteristics Form)	Part 1, para 1.1.2
Commercial Proposals	
Project Management proposals	
Compliance Matrix	Part 3.1, Para 3.1.3
Initial Project Management Plan	Part 3.2, para 3.2.1
Initial Organisation Management Plan	Part 3.2, Para 3.2.2 & 3.2.3
Initial Communication and Relationship Plan	Part 3.2, para 3.2.4
Baseline Contract Management Schedule (CMS)	Part 3.2, para 3.2.5 & 3.2.6
Initial Risk Register	Part 3.2, para 3.2.7
Initial EVM Plan	Part 3.2, Para 3.2.8
Initial Design Build and Acceptance Plan including Project Engineering Management Plan (P-EMP)	Part 3.3, Para 3.3.1 – 3.3.8
- Modelling Aspects	Part 3.3, Para 3.3.9
- Tests, Trials and Inspections	Part 3.3, Para 3.3.10
- Initial Technology, Design and Production Maturity Plan	Part 3.3, Para 3.3.11
- Plan Approval and As Drawn Assessments	Part 3.3, Para 3.3.13

Checklist of Deliverables - (to be delivered to the Authority by XX/XX/XXXX)	Reference
Initial Safety and Environmental Management Plan (SEMP)	Part 3.4, para 3.4.1
Initial Hazard Log	Part 3.4, para 3.4.2 & 3.4.3
Company Quality Policy	Part 3.5, para 3.5.1 & 3.5.2
Company Quality Strategy	Part 3.5, para 3.5.1 & 3.5.2
Initial Quality Plan tailored for FSS	Part 3.5, para 3.5.1 & 3.5.2
Health and safety policy and procedures	Part 3.6, para 3.6.1
Technical Proposals	
Compliance matrix against the Technical Specification	Part 4.1, para 4.1.1
System Integration & Human Factors Integration Plan	Part 4.2, para 4.2.1 & 4.2.2
Statements of Design Intent for each section of the Technical Specification and TRL details	Part 4.3, para 4.3.1 - 4.3.3
Design calculations as detailed in Part 4 Technical Proposals, paragraph 4.4.1,	Part 4.4, para 4.4.1.1 – 4.4.1.18
- Electrical load charts (x3) in the format detailed in Appendix E	Part 4.4, para 4.4.1.16
Drawings and arrangements as detailed in Part 4 Technical Proposals, paragraph 4.5.1.	Part 4.5, para 4.5.1.1 – 4.5.1.32
Outline System Specifications and Policy Documents	Part 4.6, para 4.6.1 & 4.6.2
Propulsion and Power Generation Selection Report	Part 4.7, para 4.7.1 & 4.7.2
Modelling Data – 3D models & data requirements detailed in Appendix F	Part 4.8, para 4.8.1
Classification – Tailoring documents and engagement plans	Part 4.9, para 4.9.1 – 4.9.3
Integrated Logistic Support Proposals	
Initial Integrated Logistic Support Specification	Part 5.1, para 5.1.1
Compliance statements	Part 5.1, para 5.1.1.1- 5.1.1.3
Statements of support intent	Part 5.2, para 5.2.1
Draft Integrated Support Plan	Part 5.3, para 5.3.1
Terms Of Reference for Integrated Logistic Support Manager	Part 5.4, para 5.4.1
List of LSA candidate systems & equipment (completed Schedule 7)	Part 5.5, para 5.5.1
Whole Life Cost Information	
Completed “Fleet Solid Support Through Life Cost Data Capture Tool” spreadsheet, included at Appendix D.	Part 6, para 6.1.1 & 6.1.2