

(ITT2B)- Scenario: Marine Structures Engineering

Question [A]

Marine Structures Engineering involves the design, checking and assessment of marine structures such as river piers, pontoons, ferry infrastructure and river walls. It also includes elements of structures such as bridges and Ship Impact Protection barriers located in the marine environment.

The supplier shall demonstrate:

1. The knowledge and ability with regard to marine engineering standards, Structural Eurocodes, DMRB, and TfL Standards
2. The knowledge and ability with regard to design, checking, inspection, assessment, maintenance, refurbishment and operation of marine structures or elements of marine structures in the UK and overseas.
3. The knowledge of consents and licenses processes required to undertake works in the London marine environment , throughout the UK and overseas
4. The knowledge and ability to provide advice to the client on structures in the marine environment including river piers, river walls, and elements of structures such as bridges and Ship Impact Protection barriers located in the marine environment
5. An understanding of the behaviour of marine structures and materials under a variety of environmental conditions, loadings and accidental actions.
6. The knowledge and ability to conduct root cause failure investigation of marine structures.

In no more than 1500 words contained in a maximum of 4 sides of A4 (pictures, diagrams etc. may be included in the sides of A4 limit) describe your company's capability to provide marine structures engineering services in the skill sets 1 to 6 described above.

TfL Professional Services Framework Agreement: Marine Engineering

ITT- Scenario: Marine Architecture

Question [B]

Architectural Commercial Support includes initial advice for business cases and feasibility studies, through concept and detailed design stages to full construction and handover.

The framework applies to all stages of the project lifecycle from Outcome Definition to Handover and suppliers should demonstrate their capabilities within each stage.

The supplier shall demonstrate their ability provide technical and professional support for marine architectural projects across a range of scales.

Services may be procured across one or all of the RIBA stages (or equivalent), including concept design, feasibility, detailed design, construction information and monitoring. Works may be new build or refurbishment.

The services also capture the provision of design guidance and parameters relating to marine architecture and the built environment.

The Bidder will be expected to supply a wide range of advice, studies, surveys, reports, design and supervision services which will in turn rely and depend on skill, competence and capabilities including but not limited to the following areas:

1. Urban Strategies and Area Plans
2. Architecture
3. Site Master planning and Development Feasibility
4. Design Advice and Design Management
5. Interior Design and Space Planning including core sizing
6. Modelling and Visualisation

The supplier shall demonstrate knowledge and understanding of the requirements of designing a variety of different structures with varying constraints.

Bidders should provide evidence of the above in their return. Recent, relevant projects of appropriate scale are preferred, ideally across a variety of RIBA workstages. Bidders are encouraged to use their return to demonstrate their flexibility, design flare, as well as ability to design to a variety of levels of scale and budget in different contexts.

Many TfL buildings have heritage features or are statutorily listed. If suppliers have relevant expertise in this area they are encouraged to provide evidence in their return.

Suppliers must demonstrate in their return how they comply with Section 20 of the Architects Act 1997, and how their design review process enable compliance with Section 20 (3).

Suppliers should demonstrate an understanding of the relevant CDM and Health & Safety legislation associated with the design of buildings. Where suppliers have experience of designing marine structures near transport infrastructure they are encouraged to include evidence or examples of this in their return.

Where a supplier has evidence of innovative, national or international experience in the design of marine structures the supplier is encouraged to explain in their return how the knowledge and experience gained would add value to TfL.

In no more than 1500 words contained in a maximum of 4 sides of A4 (pictures, diagrams etc. may be included in the sides of A4 limit) describe your company's capability to provide marine architecture services in the skill sets described above.

TfL Professional Services Framework Agreement: Marine Engineering

ITT- Scenario: Marine Vessel Engineering

Question [C]

The supplier will need to demonstrate specialist knowledge and understanding of all professional engineering matters relating to marine vessel engineering and be able to apply them to the operation of the Woolwich Ferry. In particular the supplier shall demonstrate their knowledge and ability to communicate with and advise their client in the following areas:

1. Root cause failure investigation of marine structures & vessels.
2. Marine propulsion systems.
3. Marine Electrical & Control systems.
4. Marine diesel generators & thruster units.
5. Operational ship management.
6. Docking systems.

In no more than 1500 words contained in a maximum of 4 sides of A4 (pictures, diagrams etc. may be included in the sides of A4 limit) describe your company's capability to provide marine vessel engineering support services as described above.

TfL Professional Services Framework Agreement: Marine Engineering

ITT- Scenario: Marine Asset Incident Investigation

Question [D]

Marine Asset Incident Investigation involves investigation following a marine structural or asset failure which could include piers, pontoons, docking systems, linkspans or boarding ramps and vessels. The supplier will need to demonstrate specialist knowledge and understanding of all professional engineering matters relating to marine asset technical investigations and be able to apply them to the operation of TfL Piers and the Woolwich Ferry.

The supplier shall demonstrate:

1. Usage of specialist tools and techniques required by TfL during accident investigations.
2. Experience in leading an investigation, engaging with TfL specialists as required.
3. Ability to communicate and advise on technical aspects of most marine systems and investigation analysis of simulated or actual accident scenarios that involve marine systems.
4. Knowledge and experience in the understanding of accident mechanisms, their immediate causes, causal factors and root causes.
5. Competence in applying investigative techniques including root cause analysis.
6. Ability to preserve and manage evidence captured in a controlled manner.
7. Knowledge and experience in assessment of damage to assets.
8. Knowledge and experience in assessment of remedial works necessary to recover damaged assets and bring them back to full service operation.
9. Usage of specialist tools and techniques to be able to be an expert witness.
10. The ability to present their findings and conclusions, in terms of immediate causes, causal factors and root causes, in clear, logical structured report with recommendations that appropriately address the root causes identified.

In no more than 1500 words contained in a maximum of 4 sides of A4 (pictures, diagrams etc. may be included in the sides of A4 limit) describe your company's capability to provide marine asset specialist investigation support as described above.