

## **[ITT2B] B5 - Earth Structures**

### **Scenario/ Capability Question**

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**A cutting or embankment on LU network requires analytical assessment to assess its condition and whether it meets the minimum requirements of LU Standards to allow safe operation of the railway. In case this assessment shows that the asset does not meet the minimum requirements then remedial works need to be designed in order to stabilise the asset and upgrade to the LU standards.**

#### **Competencies**

The delivery of successful Earth Structures projects on the TfL Rail and Underground or Surface Transport network requires the following competencies as a minimum. These requirements will generally be common to both TfL Surface Transport and Rail and Underground projects, although some are more relevant to one or other of the business units. The framework applies to all stages of the project lifecycle from Outcome Definition to Handover and Suppliers should demonstrate their capabilities within each stage:

1. Verification and Validation of project requirements to ensure that it fulfils its intended purpose.
2. Working collaboratively with TfL Programme/Project Managers, Engineering, Operational liaison staff and Maintenance liaison staff throughout the Project life cycle
3. Co-ordination, integration and interface management with the other interfacing disciplines in the operational transport mode (i.e. Rail and Underground or Surface Transport).
4. Ability to develop design solutions from feasibility to detailed design and implementation.
5. Understanding of TfL Rail and Underground or Surface Transport Earth Structures requirements, standards, and assurance requirements
6. Understanding of the implementation of innovative new technology and value added initiatives that could be utilised in the delivery of successful Earth Structures projects on the TfL Rail and Underground or Surface Transport network. Including the capability to challenge traditional design approaches to deliver innovative solutions.
7. Carrying-out all necessary desk studies and site visits to assimilate all the necessary information to develop the design solution
8. Capability in the application of geotechnical analysis and the utilisation of supporting tools e.g. Specialist Design Software (e.g SlopeW,

- WALLAP), BIM, CAD (e.g Microstation) to assist the development of design solutions and drawings.
9. Capability in managing the delivery of a coordinated and buildable Earth Structures design within a transport environment; including explanation of your design checks, approve processes to deliver an assured product.
  10. Understanding of Earth Structures construction installation methods so that the buildability of the design is assured , including a sound knowledge of current construction safety initiatives and best practice
  11. Understanding of maintenance methods applicable to Earth Structures assets so that the maintainability of the design solution is assured including a sound knowledge of current maintenance best practice applicable to the TfL Rail and Underground or Surface Transport network.
  12. Provision of design representation during the construction and handover phases to verify design intent being delivered and respond to change requests.

### Response

In no more than 2000 words contained in a maximum of 8 sides of A4 (pictures, diagrams etc. may be included in the sides of A4 limit) describe your company's capability to provide Earth Structures engineering services in the skill sets 1 to 12 described above.

### *Note:*

*Bidders must not cite examples of previous completed works within their response as this formed the basis of the SSQ evaluation and as such references to completed case studies will not be subject to evaluation.*

*Bidders are encouraged to structure their submission by clearly setting out their response against each of the competencies via specific headings for each competency; the headings will not be included in the word count limitations.*