



**Section 4 – To be answered by Design Engineers only**

**4.1 Type of work commonly involved in?** (more than one box may be ticked)

- A. Structural permanent works design of buildings -----
- B. E&M design for buildings -----
- C. Structural temporary works design for buildings -----
- D. Structural temporary works design for basements/temporary earth retaining structures -----
- E. Geotechnical permanent works design of buildings/basements/bridges/other structures -----
- F. Geotechnical temporary works design for basements/temporary earth retaining structures/temporary excavations -----
- G. Structural permanent works design of viaducts/bridges -----
- H. Structural temporary works design for viaducts/bridges -----
- I. Design of drainage/culverts/sewerage -----
- J. Permanent works design of tunnels -----
- K. Temporary works design of tunnels -----
- L. Geotechnical design of landslip preventative measures -----
- M. Design of roads/traffic engineering -----
- N. Geotechnical design of reclamations -----
- O. Remediation of contaminated sites -----
- P. Design of landfills -----
- Q. Marine/port works -----
- R. Others (please specify) -----

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**4.2 How do you typically mitigate the risk of accidents on construction projects?** (more than one box may be ticked)

- A. Identify hazards in addition to structural / geotechnical instability or failure, and mitigate risk through the preparation of designs -----
- B. Encourage clients to adopt a significant technical or performance score component (30% or greater of total score) when evaluating contractors' tenders -----
- C. Encourage selection of contractors having a high safety record and high safety standards -----
- D. Encourage safety initiatives such as safety bonus and penalty schemes and or contractual requirements -----



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- E. Encourage a longer construction programme than may be otherwise chosen to reduce pressure on the contractor to mitigate the risk of accidents -----
- F. Encourage float in programme to cater for delays due to accidents -----
- G. Encourage timely award of extensions of time -----
- H. Encourage budget allowance for safety measures -----
- I. Encourage refinement of design and of method of construction to improve safety -----
- J. Regular safety meetings and or audits with Contractor -----
- K. Regular safety walks and inspections -----
- L. Risk ownership predominantly placed with Contractor -----
- M. Discouragement of multi-layered subcontracting -----
- N. Others (please specify) -----  
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**4.3 How do you rate the level of attention you give to the safety of the public when preparing a design?** (tick one box only)

- A. High ----- B. Medium ----- C. Low -----
- D. Not applicable -----

**4.4 How do you rate the level of attention you give to the safety of the end-user when preparing a design?** (tick one box only)

- A. High ----- B. Medium ----- C. Low -----
- D. Not applicable -----

**4.5 How do you rate the level of attention you give to construction workers when preparing a design?** (tick one box only)

- A. High ----- B. Medium ----- C. Low -----

**4.6 How do you rate the level of attention you give to maintenance workers when preparing a design?** (tick one box only)

- A. High ----- B. Medium ----- C. Low -----
- D. Not applicable -----



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**4.7 How do you rate the level of attention you give to facilitating the “buildability,” or the ease of construction of a project during the preparation of your designs? (tick one box only)**

- A. High \_\_\_\_\_ B. Medium \_\_\_\_\_ C. Low \_\_\_\_\_

**4.8 Do you consider the future access and protection of workers/end-users to carry out maintenance work on E&M installations, windows, facades, etc... in your designs? (tick one box only)**

- A. Yes, regularly \_\_\_\_\_ B. Sometimes \_\_\_\_\_ C. Seldom \_\_\_\_\_  
D. Never \_\_\_\_\_ E. Not applicable \_\_\_\_\_

**4.9 Do you consider the use of modular units and other off-site construction methods to improve the safety of the construction worker? (tick one box only)**

- A. Yes, regularly \_\_\_\_\_ B. Sometimes \_\_\_\_\_ C. Seldom \_\_\_\_\_  
D. Never \_\_\_\_\_

**4.10 Do you attempt to minimize the number of trades or methods of construction required when preparing your designs? (tick one box only)**

- A. Yes, regularly \_\_\_\_\_ B. Sometimes \_\_\_\_\_ C. Seldom \_\_\_\_\_  
D. Never \_\_\_\_\_

**4.11 Do you perform or take part in hazard identifications and risk assessments? (tick one box only)**

- A. Yes, regularly \_\_\_\_\_ B. Sometimes \_\_\_\_\_ C. Seldom \_\_\_\_\_  
D. Never \_\_\_\_\_

**4.12 Do you incorporate safety measures on your design drawings? (tick one box only)**

- A. Yes, regularly \_\_\_\_\_ B. Sometimes \_\_\_\_\_ C. Seldom \_\_\_\_\_  
D. Never \_\_\_\_\_

**4.13 If you answered A or B in 4.12, please indicate the types of safety measures that you commonly implement on drawings (more than one box may be ticked)**

- A. Safety railings and or anchorage points for safety lines \_\_\_\_\_  
B. Access ladders, staircases and safe access points \_\_\_\_\_  
C. Loading limits and/or loading exclusion zones \_\_\_\_\_  
D. Illustrations of high risk scenarios and potential failure mechanisms \_\_\_\_\_



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- E. Details of critical observations to be made by site staff, to be communicated to the designer .....
  - F. Alert and stop-work limits for instrumentation and actions to be carried out upon reaching levels .....
  - G. Protective hoarding .....
  - H. Details on the safe use of electricity and welding equipment .....
  - I. Site drainage facilities .....
  - J. Detailed construction sequence specified to mitigate risks .....
  - K. Others (please specify) .....
- .....
- .....
- .....

**4.14 At what point in the design process do you commonly first consider safety issues (other than stability/structural capacity)? (tick one box only)**

- A. From the onset of design preparation .....
- B. Midway during design preparation .....
- C. Just prior to the issue of drawings .....
- D. After the method of construction has been agreed with contractors .....
- E. Not considered .....

**4.15 Do you perform or take part in brainstorming of potential failure mechanisms of a design with others in your team? (tick one box only)**

- A. Yes, regularly      .....
- B. Sometimes      .....
- C. Seldom      .....
- D. Never      .....

**4.16 What do you consider the main obstacles to be to designers addressing safety issues? (more than one box may be ticked)**

- A. Lack of time to focus on safety issues .....
  - B. Lack of knowledge/experience on construction, demolition and maintenance methods .....
  - C. Lack of suitably experienced staff in the market place .....
  - D. Lack of motivation in addressing safety issues .....
  - E. Wariness to exposing designer to greater liability .....
  - F. Others (please specify) .....
- .....
- .....



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**4.17 Generally, how often do you make visits to any of the sites for which you provide designs?**  
(tick one box only)

- A. More than once a week -----
- B. Once a week to twice a month -----
- C. Twice a month to once a month -----
- D. Once a month to once every three months -----
- E. Once every three months to once every six months -----
- F. Less than once every six months -----

**4.18 Does your design appointment fee allow for site visits?** (tick one box only)

- A. Usually -----
- B. Sometimes -----
- C. Seldom -----
- D. Never -----

**4.19 How would you best describe your general handling of design changes due to requests / information from site staff?** (tick one box only)

- A. Changes reviewed carefully with further analysis as required and findings conveyed back to site staff with modified drawings/sketches as necessary -----
- B. Changes reviewed, although not always to a sufficient degree and response sent back to site staff -----
- C. Changes seldom responded to due to a lack of time / resources -----
- D. Change seldom responded to due to this being additional work, not covered by contractual appointment as the designer -----
- E. Site staff seldom convey changes -----