

G(a)



ACE Schedule of Services – Part G(a)

Civil and structural engineering
Single Consultant or non-lead Consultant
For use with ACE Agreement 1 – Design

2009 Edition incorporating JUNE 2009 amendments



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ACE represents the business interests of the consultancy and engineering industry in the UK. We are the leading business association in this field, counting around 800 firms – large and small, operating across many different disciplines – as our members.

There are two key strands to ACE's work. First, through powerful representation and dialogue with government, major clients, the media and other key stakeholders, we promote the critical contribution that consultants and engineers make to the nation's development infrastructure.

Second, through direct contact, publications, events, our website, our sector and regional networks, we provide a cohesive approach and direction for our members and the wider industry. ACE listens to its members, understands the issues affecting them and their clients and takes the lead in representing their interests to decision makers and opinion formers in government, client organisations and the media.

ACE Agreements are the industry standard contract documents for consultancy appointments. To further promote best practice and better ways of working in the industry, ACE also publishes a range of briefing notes and policy statements for both clients and consultants. Full details can be found on the ACE website at www.acenet.co.uk.

For further information contact:
Association for Consultancy and Engineering
Alliance House, 12 Caxton Street, London SW1H 0QL
Tel: 020 7222 6557, Fax 020 7990 9202
consult@acenet.co.uk
www.acenet.co.uk

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Part G: Schedule of Services to be undertaken by a single Consultant or non-lead Consultant

Civil and structural engineering

G1 GENERAL

G1.1 Definitions

The following definitions shall apply throughout this Part G.

Coordination Drawings	Drawings showing the inter-relationship of two or more engineering services and their relation to the structure and fabric of the Project or of the Works as the case may be.
Cost Plan	A document showing the estimated cost of all parts of the Project and how it is to be spent.
Stages	The stages for the performance of the Services as described in this Part G.
Tender Documentation	Drawings and other documentation as appropriate to the agreed procurement method prepared to enable those tendering to interpret the design for the Works and to submit a tender for executing all or any part of the Works.

G1.2 Lead Consultant

If a Lead Consultant is not appointed, the Consultant shall discuss with, seek consent from, advise, consult with, agree with and collaborate directly with the Client as appropriate.

G2 THE SERVICES FOR CIVIL AND STRUCTURAL ENGINEERING

Note 1: Each of the services in this Part G is optional and may be deleted.

Note 2: If a Lead Consultant is not appointed the following services will need particular amendment or deletion: G2.3.7, G2.5.4, G2.8.5 and G2.8.6.

G2.1 Appraisal Stage

- G2.1.1 Seek the Brief and instructions from the Client describing the Client's requirements in respect of the Works, what they are intended to achieve, their cost and programme.
- G2.1.2 Discuss with the Client the role of the Consultant and the Client's relationship with the Lead Consultant if appointed and any Other Consultants, the various Contractors and Sub-Contractors and any CDM co-ordinator appointed in accordance with the Construction (Design and Management) Regulations 2007.
- G2.1.3 Discuss with the Client the likely requirements for Site Staff; these shall be considered again prior to and following the appointment of Contractors.

G2.2 Strategic Briefing Stage

- G2.2.1 Seek from the Client all information and documents to be provided by the Client under clause F3.2 of Part F: *The Terms of Contract*.
- G2.2.2 Prepare a questionnaire for the Client following study of the above information to seek the Client's strategic brief confirming key objectives and constraints.
- G2.2.3 Outline the effects of limitations of the site on the Works caused by the topography and any reasonably identifiable previous uses thereof and the presence or possible presence of contaminants as a result of such uses where such matters are apparent from the documents and other information provided by the Client under clause F3.2 of Part F: *The Terms of Contract*.
- G2.2.4 Advise the Client on any limitations on road and public transport access to the site, both during construction of the Works and on completion which may affect design options.
- G2.2.5 Obtain such information as is reasonably available from documents on the existence and extent of public services such as water, gas, electricity, sewerage, culverts, tunnels and telecommunications services and comment to the Client on any effect that these may have on the Works, both during construction of the Works and on completion.
- G2.2.6 Comment to the Client on any physical site restrictions which may affect the engineering options for the Works.
- G2.2.7 Prepare a desk study of the site. If necessary, and with the Client's agreement, bring forward from G2.3.2 of the next Stage a full site investigation.
- G2.2.8 Collaborate with the Lead Consultant if appointed and any Other Consultants in seeking from the Client any further information needed so that they can perform their services under their various agreements with the Client.
- G2.2.9 Collaborate with the Lead Consultant if appointed and any Other Consultants in making initial recommendations to the Client on the technical viability of the Works.
- G2.2.10 Seek, through the Lead Consultant if appointed, the Client's consent to proceed to the Outline Proposals Stage.

G2.3 Outline Proposals Stage

After receiving the Client's consent to proceed to the Outline Proposals Stage:

- G2.3.1 Visit the site and study data and information relating to the Project and relevant to the Works which are reasonably accessible to the Consultant, and consider reports relating to the Works which have either been prepared by the Consultant or have been prepared by others and made available to the Consultant by the Client.

- G2.3.2 Advise the Client through the Lead Consultant if appointed on the need for arrangements to be made for geotechnical investigations of the site. Arrange as agent for the Client when authorised by the Client for such investigations to be undertaken, certify the amount of any payments to be made by the Client to the persons or firms carrying out such investigations and advise the Client on the results of such investigations.
- G2.3.3 Advise the Client through the Lead Consultant if appointed on the need for arrangements to be made for and define the extent of topographical and dimensional surveys of the site, surveys to obtain details of construction in existence on or adjacent to the site, special investigations or model tests. Arrange as agent for the Client when authorised by the Client for such works to be undertaken, certify the amount of any payments to be made by the Client to the persons or firms carrying out such works, and advise the Client on the results of such works.
- G2.3.4 Consult any local or other authorities about matters of principle in connection with the design of the Works.
- G2.3.5 Consider alternative outline solutions for the Works.
- G2.3.6 Develop the Client's Brief into a full Brief for the Works in consultation with the Client, the Lead Consultant if appointed and any Other Consultants. Such Brief shall describe the Client's requirements in respect of the Services and both the Client and the Consultant shall work to the Brief. Discuss and agree with the Client any changes to the arrangements for payments to be made to the Consultant which may have become necessary as a result of changes to the Brief. Comment to the Lead Consultant if appointed or, if not so appointed, the Client on any restrictions the Brief may impose on any future use of the Works suggested by the Client.
- G2.3.7 Provide sufficient preliminary information in relation to the Works in the form of advice, sketches, reports or outline specifications to enable the Lead Consultant if appointed to prepare his outline proposals and assist any Other Consultant to prepare the outline Cost Plan.
- G2.3.8 After review, seek, through the Lead Consultant if appointed, the Client's approval of the outline proposals and the Client's consent to proceed to the Detailed Proposals Stage.

G2.4 Detailed Proposals Stage

After receiving the Client's approval of the outline proposals and the Client's consent to proceed to the Detailed Proposals Stage:

- G2.4.1 Liaise as may be necessary with the Lead Consultant if appointed and any Other Consultants to agree a programme for the whole of the design and construction of the Works.

- G2.4.2 Develop the design of the detailed proposals for the Works in collaboration with the Lead Consultant if appointed and any Other Consultants.
- G2.4.3 Prepare such representative sketches, drawings, specifications, and/or calculations in respect of the Works as are necessary to enable the Lead Consultant if appointed or any Other Consultant to prepare the Cost Plan.
- G2.4.4 Collaborate with the Lead Consultant if appointed and any Other Consultants to prepare the detailed proposals for presentation to the Client, drawing attention to any significant differences from the previously agreed requirements for the Works.
- G2.4.5 Seek, through the Lead Consultant if appointed, the Client's approval of the detailed proposals and the Client's consent to proceed to the Final Proposals Stage.

G2.5 Final Proposals Stage

After receiving the Client's approval of the detailed proposals and the Client's consent to proceed to the Final Proposals Stage:

- G2.5.1 Develop the design of the Works in collaboration with the Lead Consultant if appointed and Other Consultants and prepare sufficient calculations, drawings, schedules and specifications to enable the Consultant, the Lead Consultant if appointed or any Other Consultant to prepare the final proposals.
- G2.5.2 Integrate into the design of the Works any requirements of specialist sub-consultants, Contractors or Sub-Contractors.
- G2.5.3 Collaborate with the Lead Consultant if appointed and any Other Consultants to prepare the final proposals for presentation to the Client, drawing attention to any significant differences from the previously agreed requirements for the Works.
- G2.5.4 Assist the Lead Consultant if appointed in coordinating the design of the Works into the overall design.
- G2.5.5 Seek, through the Lead Consultant if appointed, the Client's approval of the final proposals and the Client's consent to proceed to the Production Information Stage.

G2.6 Production Information Stage

After receiving the Client's approval of the final proposals and the Client's consent to proceed to the Production Information Stage:

- G2.6.1 Develop the design of the Works in collaboration with the Lead Consultant if appointed and any Other Consultants and prepare sufficient calculations, drawings, schedules and specifications to enable the Consultant, the Lead Consultant if appointed or any Other Consultant to prepare Tender Documentation in respect of the Works.

- G2.6.2 Prepare such calculations and details relating to the Works as may be required for submission to any appropriate statutory authority including the coordination of such information for the Works submitted by specialist suppliers and/or Contractors as is available which may need to be included in such submissions excluding any submissions or applications for planning consents and approvals.
- G2.6.3 Prepare any further drawings and schedules necessary to enable Contractors to carry out the Works, but excluding Coordination Drawings and drawings and designs for temporary works, formwork and shop fabrication details. In the case of reinforced concrete work, general arrangement drawings and drawings of non-standard details should be prepared with sufficient information to enable a Contractor to prepare standard details and bar bending schedules for the Works.
- G2.6.4 Advise the Lead Consultant if appointed or, if not so appointed, the Client on the need for any special conditions of contract relevant to the Works and on appropriate forms of contract and invitations to tender for the Works.
- G2.6.5 Seek, through the Lead Consultant if appointed, the Client's consent to proceed to the Tender Documentation and Tender Action Stage.

G2.7 Tender Documentation and Tender Action Stage

After receiving the Client's consent to proceed to the Tender Documentation and Tender Action Stage:

- G2.7.1 Assist the Lead Consultant if appointed in advising the Client or, if not so appointed, advise the Client as to the suitability for carrying out the Works of persons and firms to be invited to tender for any contract involving the construction, supply and/or installation of all or part of the Works.
- G2.7.2 Assist the Lead Consultant if appointed or, if not so appointed, the Client to assemble the Tender Documentation and to issue it to firms selected to tender.
- G2.7.3 Assist the Lead Consultant if appointed and any Other Consultant in advising the Client as to the relative merits of tenders, prices and estimates received for execution of all or part of the Works.
- G2.7.4 Seek, through the Lead Consultant if appointed, the Client's consent to proceed to the Mobilisation, Construction and Completion Stage.

G2.8 Mobilisation, Construction and Completion Stage

After receiving the Client's consent to proceed to the Mobilisation, Construction and Completion Stage:

- G2.8.1 Advise the Lead Consultant if appointed or, if not so appointed, the Client on the finalisation of formal contract documents relating to accepted tenders for carrying out the Works or any part thereof. The Consultant shall not accept any tender in respect of the Works.

- G2.8.2 Examine detailed designs, shop fabrication drawings, standard details, bar bending schedules and specifications submitted by Contractors or Sub-Contractors for the Works or parts thereof, in respect of conformity with the Consultant's design and in particular in respect of general dimensions, structural adequacy of members and connections and compliance with performance criteria. The Consultant shall not be required to examine the design of any proprietary products manufactured or supplied by Contractors or Sub-Contractors.
- G2.8.3 Advise the Client through the Lead Consultant if appointed on the need for special inspections or tests arising during the construction of the Works.
- G2.8.4 Advise on the appointment and duties of Site Staff and, where they have been appointed, instruct Site Staff in accordance with clause F4 of Part F: *The Terms of Contract*.
- G2.8.5 Assist the Lead Consultant if appointed in examining Contractors' proposals as may be required by contracts for the Works but not the consideration of alternative designs for the Works submitted by Contractors.
- G2.8.6 Attend relevant site meetings and make other periodic visits to the site as stated in clause B16 (B17 in Scottish Agreement) of Part B: *The Particulars of Agreement* to assist the Lead Consultant if appointed to monitor that the Works are being executed generally in accordance with the contract documents and with good engineering practice and advise the Lead Consultant if appointed or, if not so appointed, the Client on the need for instructions to Contractors.
- G2.8.7 Advise the Lead Consultant if appointed or, if not so appointed, the Client on certificates for payment to Contractors in respect of the Works.
- G2.8.8 Perform any services which the Consultant may be so required to do under any contract for the execution of the Works including where appropriate the witnessing of any specified tests, provided that the Consultant may decline to perform any services specified in a contract, the terms of which have not been approved by the Consultant.
- G2.8.9 Inspect the Works on completion and, in conjunction with any Site Staff, record any defects.
- G2.8.10 On completion of the Works deliver upon request to the Client one copy of each of the final drawings supplied by the Consultant to Contractors for the purpose of constructing the Works.
- G3 OTHER SERVICES TO BE PERFORMED BY THE CONSULTANT**
- G3.1 Prepare any report or documentation required for consideration of proposals for alternative works.
- G3.2 Work consequent upon a decision by the Client to seek Parliamentary powers.

- G3.3 Work done in connection with any application by the Client for any order, sanction, licence, permit or other consent, approval or authorisation necessary to enable the Works to proceed including planning consents or approvals but other than applications for approvals under G2.6.2.
- G3.4 Prepare any information necessary for the Client's negotiations with third parties including ground landlords, financing bodies and adjoining site owners.
- G3.5 Work in making initial recommendations to the Client on the economic and financial viability of the Works.
- G3.6 Advise the Client on the need for arrangements to be made for contamination investigations on the site. Arrange as agent for the Client when authorised by him for such investigations to be undertaken, certifying the amount of any payments to be made by the Client to the persons or firm carrying out such investigations and advise the Client on the results of such investigations.
- G3.7 Work in connection with providing a feasibility study.
- G3.8 Recommend to the Client any necessary remediation works required to the site and/or any necessary protection measures required in the building specification as a result of any investigations carried out under G4.1.2.
- G3.9 Work in considering alternative designs for the Works submitted by Contractors.
- G3.10 Prepare drawings for shop fabrication of structural steelwork or metal, timber or plastics frameworks or other specialist supplied components.
- G3.11 Prepare detailed drawings and bar bending schedules for reinforced concrete work.
- G3.12 Check and/or advise upon any part of the Works not designed by the Consultant.
- G3.13 Examine any designs carried out by a Contractor or Sub-Contractor on the basis of a performance specification for general compliance with the specification.
- G3.14 Make visits to site in addition to those allowed for in G2.8.6.
- G3.15 Provide information to enable bills of quantities to be prepared for the Works.
- G3.16 Prepare bills of quantities based on Works/Project drawings for the Works.
- G3.17 Price bills of quantities prepared for the Works to provide an estimate comparable with tenders.
- G3.18 Perform work or advise the Client on one occasion only in connection with any claim or matter where such claim or matter arises out of any contract for the execution of the Works provided that this service shall not extend to the detailed examination of any financial claim nor to advising the Client following the taking of any step in or towards any resolution of any dispute or difference or towards any adjudication, arbitration or litigation in connection with the Works.

G4 SERVICES TO BE ARRANGED BY THE CONSULTANT AND TO BE PERFORMED BY OTHERS

- G4.1 Identifying and finding a suitable third party, recommending that third party to the Client and dealing with any necessary pre-qualification matters, tenders, tender assessments and contract documents leading to a contract between the Client and the third party for:
 - G4.1.1 Specialist technical advice on any aspect of the Works which is not within the expertise of the Consultant.
 - G4.1.2 Contamination investigations on site.
 - G4.1.3 Legal, financial and professional services other than those offered by the Consultant and within the competence of the Consultant.
 - G4.1.4 Services in connection with the valuation, purchase, sale or leasing of lands and the obtaining of wayleaves.
 - G4.1.5 Topographical, dimensional, condition or analytical survey of sites or existing works.
 - G4.1.6 Quantity surveying services other than the preparation and pricing of bills of quantities for the Works.
 - G4.1.7 Investigation of the nature and strength of existing structures.
 - G4.1.8 Model tests or special investigations under G2.3.3.
 - G4.1.9 Independent checking of structural or other designs.
 - G4.1.10 Special inspections or tests advised by the Consultant under G2.8.3.
 - G4.1.11 Preparation, or assistance in the preparation, of an environmental impact assessment in respect of the Works.
 - G4.1.12 Special studies on durability and longevity issues and the minimisation of environmental impact.

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Alliance House, 12 Caxton Street, London SW1H 0QL
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Fax: 020 7990 9202
Email: consult@acenet.co.uk
Website: www.acenet.co.uk