

CHECKLIST FOR STRUCTURAL & CIVIL ENGINEERING SERVICES



Schedule 1

The Services

	PROJECT:	Included
1.1	Comply with the duties of the 'Designer' in relation to the current CDM Regulations. This to include the provision of Designer's Risk Assessments.	Yes
1.2	Review Employer's Requirements and any additional information provided by Hill Partnerships Ltd, our Client or other Consultants, including supporting documentation provided by the employer/contractor that may influence the design such as Statutory Authority information and third party surveys, reports and Soil Investigations, for adequacy, error or conflict.	Yes
1.3	Establish with Hill Partnerships Ltd / other consultants a structural and civil design philosophy.	Yes
1.4	Provide assistance and contribute in Value Engineering to achieve a cost effective solution and details.	Yes
1.5	Establish and advise on building design codes and design loading.	Yes
1.6	Provide a soils investigation or additional works brief (including contamination), tender to 3 companies, assess and make recommendations on the most competitive tender. Hill Partnerships Ltd will contract with the soils investigation company and pay their fees.	Yes
1.7	Comment as necessary on the final soils report or on the completeness of any existing soil investigation report and, if necessary, prepare a brief etc for an addendum investigation.	Yes
1.8	Prepare and secure local authority approval to any contamination remediation measures necessary.	No
1.9	Agree the design programme and the consultants key deliverables submission dates. Submit information in accordance with this agreement.	Yes
1.10	Advise the Contractor on the need for arrangements to be made for the carrying out of specialist surveys and investigations or model tests. Arrange and advise on costs. Advise the constructor of the results of any such surveys, investigations or tests carried out.	Yes
1.11	Provide complete designs and specifications to address special ground conditions eg contaminants, methane etc and liaise with the relevant authorities to secure approval of proposed measures.	Yes
1.12	Provide complete designs and specifications for all civil/structural elements of the project as may be required. Supplemented with hand sketches as the need arises.	Yes
1.13	Provide schematic designs, details and specifications for inclusion in submission documents and/or for budgetary pricing purposes prior to execution of the full detail designs.	Yes

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1.14	Provide concept drawings, details and specifications for specialist subcontractors/suppliers works (eg piling, pre-cast floors, RC frame, crane base, roof trusses, structural steelwork, RC frame details including reinforcement/bending schedules, retaining structures, porches etc) in sufficient detail to enable competitive tenders to be obtained.	Yes
1.15	Review and audit all specialist tender design packages. The Engineer is to take the lead on checking subcontract designs where these designs are of a specialist nature, eg falsework, structural steelwork, steel brickwork support, steel lift shafts and stairs, precast floors, lightweight steel frame (eg Metsec), builders work holes through reinforced concrete etc. Include dimension checks against subcontractors' preferred setting out principles.	Yes
1.16	In conjunction with the Architect, submit all necessary information to the relevant authorities to obtain discharge of conditions and statutory approvals including: Building Control, Highways, Planning, NHBC, EA, EHO, Party Wall surveyor, Statutory Services, British Rail, British Waterways, IDB, London Underground, and any other interested third party requiring approval to our proposed works. Comply with any information upload procedures set out by those mentioned.	Yes
1.17	Where Section Agreements are required (eg S38, S278, S33, S104, S106 etc) provide complete designs, programmes and specifications to achieve Technical Approval and to allow progression of legal agreements. The consultant is responsible for making applications and providing any documentation needed to submit for Approval in Principle/AIPs necessary to obtain Highways and Drainage agreements or other such agreements needed with Third party stakeholders including liaising as necessary with the Statutory Authorities during the approval period and for establishing the Statutory Authorities Fees and Bonding requirements.	Yes
1.18	Respond as necessary to all queries and requests for information from site production staff using Hills Information Required Protocols.	Yes
1.19	Respond as necessary to all queries and requests for information from relevant third parties including Local/Statutory Authorities, Code for Sustainable Homes Assessor, BREEAM, CEEQUAL Assessor, Secured By Design officer etc.	Yes
1.20	Liaise as necessary with the Local/Statutory Authorities regarding satisfying Section Agreements relating to on and off-site Roads/Highways, and Drainage design, including any necessary vehicle tracking and turning circle diagrams. Civil engineer is to avoid positioning drainage inspection covers in pedestrian walking zones.	Yes
1.21	Prepare a co-ordinated Statutory Authorities services layout drawing from information issued by Hill Partnerships Ltd.	Yes
1.22	Design and prepare drawings for temporary works retention of soils/existing structures.	Yes
1.23	Provide a piling mat design, as required and provide advice on other temporary works requirements.	No
1.24	Design of external adopted and un-adopted street lighting (to adoptable standards).	No

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1.25	Execution of a Flood Risk Assessment for the Code for Sustainable Homes SUR1 and SUR2 (where applicable).	Yes
1.26	Execution of Traffic Impact Assessments, soil investigation and topographical survey works.	Yes
1.27	Co-ordination of Traffic Impact Assessments, soil investigation and topographical survey works.	Yes
1.28	Respond as necessary to all queries and requests for information from all relevant third parties (eg Local/Statutory Authorities).	Yes
1.29	Attend Design Co-ordination Meetings during the design development period as required.	Yes
1.30	Attend site during construction of the main structural elements and provide comments and assistance on site on structural and civil matters.	Yes
1.31	Attend resident consultation meetings.	No
1.32	Issue all information in accordance with the Design Development Programme (NB programme to be mutually agreed).	Yes
1.33	Provide design information in PDF format and CAD disk format where appropriate for utilisation by others and in line with Doc Hosting requirements.	Yes
1.34	All drawings and sections to be fully dimensioned.	Yes
1.35	Provide Risk Assessment to the Principle Designer as per CDM current programme.	Yes
1.36	Provide As Built Record Drawings and other technical information as required to meet the Employer's Requirements and CDM Regulations.	Yes
1.37	Provide details of the personnel who will be responsible for designing and then checking the design, their names and relevant qualifications or experience and dates obtained/achieved. Proposed changes in personnel are to be put forward for prior agreement.	Yes
1.38	Provide evidence of certification under BS EN ISO 9001 or provide details of procedures for the Management of Design Services.	Yes
1.39	Provide information to assist in compliance with EC procedures and directives (including UK regulations).	Yes
1.40	Provide Collateral Warranty in accordance with the Employer's Requirements or other Contract Conditions. Level of indemnity to be £10 M.	Yes
1.41	For refurbishment works, provide all structural & civil engineering designs, including inspections and reports for existing structures, to enable the refurbishment works to be procured and constructed and to secure all statutory approvals and achieve the minimum standards as required by the Client in accordance with the Building Contract.	No

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1.42	Any changes to drawings that may incur additional fees will need to be agreed and approved in writing prior to the changes being made. Any variations that are claimed retrospectively will not be agreed.	Note
1.43	The consultant will review and respond to a raised RFI within the time frame confirmed within the request. If the consultant determines that it will take longer than the established time, then the consultant is obliged to confirm when a response is expected to be received within 2 days of receipt. This should be discussed and agreed with the RFI owner and a fair and reasonable time suggested to accommodate the response requested. If a date is not confirmed within the RFI, then the consultant is deemed to have a 7 working day time frame to respond to the request. If the RFI concerns an activity in which the consultant is deemed to have caused the delay to the programme, the consultant is then not entitled to a time extension and the response is required urgently as not to cause any further delay to the project.	Note

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CIVIL ENGINEER

1.0 LIST OF DRAWINGS

Provide and such drawings, schedules or specification required to construct the works including, but not limited to the following:

- 1.1 Engineering layout showing site levels and external works setting out.
- 1.2 Drainage layout (private and adoptable). Civil engineer is to avoid positioning drainage inspection covers in pedestrian walking zones.
- 1.3 Road layout incorporating external works details.
- 1.4 Road and hard paved areas construction details (private and adoptable).
- 1.5 Drainage construction details (private and adoptable).
- 1.6 Adoptable and private street lighting design.
- 1.7 Slab, road and footway levels (in conjunction with Structural Engineer and Architect).
- 1.8 Setting out, co-ordinated in conjunction with the Architect, to include roads, external corners of buildings, piling, adoptable manholes and any other site specific requirements including retaining walls. Setting out to grid lines if required.
- 1.9 Combined coordinated statutory services layout.
- 1.10 Piling mat design.
- 1.11 Retaining walls.
- 1.12 Sectional Agreement designs and associated construction cross section and interface details.

2.0 LIST OF MATERIAL & WORKMANSHIP SPECIFICATIONS

- 2.1 Roads, footways.
- 2.2 Drainage.
- 2.3 Street lighting.

SOILS ENGINEER

- 1.1 Advise the Constructor on the need to carry out any geotechnical investigations which may be necessary to supplement the geotechnical information already available to the Engineer, arrange for such investigations when authorised by the Constructor, certify the amount of any payments to be made by the Constructor to the persons or firms carrying out such investigations under the Structural Engineer direction and advise the Constructor on the results of such investigations.
- 1.2 Advise the Constructor on the need for arrangements to be made for the carrying out of special surveys, special investigations or model tests. Arrange and advise on costs. Advise the Constructor of the results of any such surveys, investigations or tests carried out.

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STRUCTURAL ENGINEER

1.0 LIST OF DRAWINGS

Provide and such drawings, schedules or specification required to construct the works including, but not limited to the following:

Sub Structures

- 1.1 Site preparation and groundwork details (cut and fill etc).
- 1.2 Piling and/or ground improvement details where applicable.
- 1.3 Foundation designs, all plots, blocks and external features such as garages, bin stores, cycle stores, sub stations, and terracing and retaining walls.
- 1.4 Slab under build General Arrangement designs including ventilation and oversite designs.
- 1.5 Ground Improvement stabilisation design.
- 1.6 Sub structure setting out drainage.
- 1.7 Basement/undercroft design.
- 1.8 Advise in conjunction with the architect waterproofing and/or methane design and associated construction cross section and interface details.
- 1.9 Dimensioned substructure layouts and details e.g. SVP setting out (northings and eastings), foundations, ground beams, crane base design, retaining walls, ventilation requirements etc.

Superstructures

- 1.10 Traditional build General Arrangements, sections.
- 1.11 RC Frame General Arrangements, sections.
- 1.12 Dimensioned floor plans. Allow for checking and co-ordinating details provided by specialist subcontractors/suppliers.
- 1.13 Ancillary build designs such as garages, bin stores, cycle stores, sub stations and terracing and retaining walls.
- 1.14 Superstructure details, i.e. ground and upper floors (pre-cast, in-situ or timber), straps, ties, trimming details to openings, strutting, etc. In sufficient detail for construction and/or development by specialist subcontractors/suppliers as agreed. Allow for checking and co-ordinating details provided by specialist subcontractors/suppliers.
- 1.15 Masonry details including ties, support angles and restraints etc.
- 1.16 Support details for balconies, Juliettes, pre cast stone, specialist cladding etc.
- 1.17 Typical sections.
- 1.18 Lintel schedules and details. Engineer to be mindful of CDM when specifying lintels to ensure that what is specified can be lifted on site.
- 1.19 Roof layouts, sections and details (structural steel, timber etc.).
- 1.20 Slab levels (in conjunction with Civil Engineer and Architect).
- 1.21 External works structural details, i.e. retaining walls, garden walls, planters etc.
- 1.22 Dimensioned steelwork layouts and details, including stairs, balconies, ladders, hand railing/ barriers and the like.
- 1.23 Reinforcement details and bending schedules. The engineer is responsible for provided weighted re-bar schedules and these are to be updated and reported on a monthly basis to the contracting team so this can be monitored.
- 1.24 Temporary works retention of soils/existing structures.

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- 1.25 Mechanical and Civil Engineering Consultants will be responsible for ensuring any underslung drainage to podiums and any necessary attenuation detailing suits the drainage strategy from the structure above, as detailed by the Architect.
- 1.26 Provide hand/CAD sketches as requested and in a timely manner to convey design intent/principles or compliance with statutory requirements.
- 1.27 Minutes/salient notes of design workshops/DTMs.

2.0 LIST OF MATERIAL & WORKMANSHIP SPECIFICATIONS

- 2.1 Site preparation and groundworks.
- 2.2 Piling and/ground improvement.
- 2.3 Concrete works; Insitu, precast, composite.
- 2.4 Structural steelwork including protection.
- 2.5 Structural timber and associated components.
- 2.6 Brickwork/block work including strength required.
- 2.7 Metalwork (stairs, cat ladders, balconies, hand railing/barriers and the like).

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