Design Services for Enterprise Hub

Multidisciplinary Scope of Services

Broxtowe Borough Council

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Client signoff

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| Client | Broxtowe Borough Council |
| Project | Design Services for Enterprise Hub |
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Introduction

Multi-disciplinary Scope Of Services

# Scope Overview

## Design Status at Services Commissioning.

|  |  |
| --- | --- |
| **Scope of Services Part 1.1 - Design Status At commencement of commission.** | |
| RIBA Work Plan Stage 0 Strategic Definition | **Outputs**  Client Requirements **✓Complete**  Business Case **✓ Complete**  Indicative Site Plan **✓ Complete**  Indicative GA and elevation drawing **✓ Complete**  Precedent images **✓ Complete**  Project Budget - **to be confirmed.**  Business Case - **to be confirmed.** |

## Scope of Services Part - Required Service

| **Work Stage** | **Task / Output Required** |
| --- | --- |
| RIBA Work Stage 1  Preparation of Brief | **Outputs Required**  Project Brief  Feasibility Studies  Site Information  Site appraisal including Site services and utilities appraisal  Planning Strategy  Building Regulations Appraisal  Project Budget  Project Programme  Procurement Strategy  Responsibility Matrix  Information Requirements  Identification of Site Surveys required  Environmental / Sustainability Strategy  Building Service strategy |
| RIBA Work Stage 2  Concept Design. | **Outputs Required**  Project Brief Derogations  Signed off Stage Report  Project Strategies including design aspirations, sustainability, planning, and procurement.  Outline Specification  Concept SAP to support Part L / Building Regulations  Environmental M&E Plans including outline M&E Concepts  Cost Plan  End of Design Stage Report |
| RIBA Work Stage 3  Spatial Coordination. | **Outputs Required**  Signed off Stage Report  Project Strategies  Operational / User Requirements Assessment  Updated Specification  Fire Strategy Document  Updated Cost Plan  Planning Application  Update Risk Register  Approval of End of Design Stage Report by Client |
| RIBA Work Stage 4  Technical Design. | **Outputs Required**  Develop detailed architectural and  engineering coordinated technical design  Manufacturing and Construction information  Final full detailed Specifications  Update Operational / User Requirements Assessment  Maintenance and Access Strategy  Residual Project Strategies  Update Fire Strategy Document  Building Regulations Application  Planning Approval  Pre-construction H&S Information  Pre-Tender Estimate  Update Risk Register  Approval by Client of End of Design Stage Report |
| RIBA Work Stage 4  Tender | **Outputs Required**  Contract Documents  Preliminaries  Coordinated Tender design  Final NBS Specification  Planning Conditions  Building Regulation Plan Approval |
| RIBA Work Stage 5  Manufacture and Construction | Outputs Required  Building Regulation Approval  Fully discharge of Planning Condition  Fully detailed and coordinated Contractor’s Design technical design.  Health and Safety File  Operation and Maintenance Manual  Warranty Matrix  Update Fire Strategy Document  Update Maintenance and Access Strategy  Detailed As-built information  Building Manual including  Health and Safety File and Fire Safety Information  Practical Completion certificate including Defects List  Asset Information / Register |
| RIBA Work Stage 6  Handover | **Outputs Required**  Fire Risk Assessment & Fire Plan (Occupier)  Project Review / Lesson Learnt.  Defects monitoring and assessment  Final Certificate |
| RIBA Work Stage 7  Use | **Outputs Required**  Feedback from Post- Occupancy Evaluation  Updated Building Manual including Health and Safety File and Fire Safety Information as necessary |

## Scope of Services Key Project Requirements

|  |  |
| --- | --- |
| **Scope of Services Key Project Requirements** | |
| BIM Level | UK BIM Framework / BIM Level 2 |
| Proposed Construction Contract | JCT or NEC to be confirmed |
| Tender Design | RIBA Stage 4 – Technical Design Full Technical Design to be complete. Including full spatial coordination of building services. |
| Proposed Construction Route | Design & Build – Contractor Design responsibility commencing post completion of RIBA Stage 4 – Technical Design by Client Design Team. |
| Procurement Process | Compliant with Public Contract Regulations |
| Sustainability | Equivalent to BREEAM Excellent based on BREEAM rating benchmarks for projects assessed using the 2018 version of BREEAM UK New Construction. |
| Inclusive Design | Exceed Building Regulation Requirements |
| Secured by Design | To comply with Secure by Design Standard Refer to [SBD\_Commercial\_2015\_V2.pdf (securedbydesign.com)](https://www.securedbydesign.com/images/downloads/SBD_Commercial_2015_V2.pdf) |
| Car park | To Comply with Safer Parking Scheme is administered by the British Parking Association refer to [About the Safer Parking Scheme (parkmark.co.uk)](https://www.parkmark.co.uk/about-the-safer-parking-scheme) |
| Planning Status | Full Planning application required. |
| Building Control | To be confirmed |
| Novation | The Client reserves the opportunity to novate all or part of the design team to the works contractor. |
| Warrantee | All designers will be required to provide a Collateral Warranty to the Client. |

## Key Design Studies, Surveys or Investigation Required.

| **Key Tasks** | **Responsible Parties** |
| --- | --- |
| Planning Application | Architect to coordinate and submit. |
| Building Control Planning Submission. | Architect to coordinate and submit. |
| Fire Strategy | Architect |
| Inclusiveness Design Strategy | Architect |
| Sustainability Policy | Client |
| Initial Architectural BIM Model | Architect |
| Landscape Design | Landscape Designer to be appointed. |
| Flood risk assessment. | Structural & Civil Engineer |
| Desktop Topographical & Geotech Survey Procurement. | Structural & Civil Engineer |
| Onsite Topographical, Geotech, GPRS, XO Survey Procurement. | Specification / Scope of requirements to be prepared by Civil Eng. |
| Desktop Utility Search | Specification / Scope of requirements to be prepared by Civil Engineer and Building Services Engineer. |
| Environmental Surveys | Architect to clarify requirement with Planners. |
| Navigation/Way signage and Building Signage including Advertising Consent application. | Architect. |
| Below Ground drainage | Structural & Civil Engineer |
| Above ground drainage including roof rainwater design. | Architect to coordinate and submit. |
| Renewable energy provision specification and layouts (Detailed Design by specialist subcontractor) | Building Services Engineer |
| Lift Specification (Detailed Design by specialist subcontractor) | Building Services Engineer |
| Fire suppression Sprinklers Specification (Detailed Design by specialist subcontractor) | Not anticipated |
| Lightening Protection Specification (Detailed Design by specialist subcontractor) | Building Services Engineer |
| CCTV / Security Systems including integration with Client corporate systems. Specification and layouts. | Building Services Engineer |
| IT Systems including integration with Client corporate systems. Specification and layouts including Comms Room layout and performance specification. | Building Services Engineer |
| Building Management Systems including integration with Client corporate systems. | Building Services Engineer |
| Building Condition Survey | Specification / Scope of requirements to be prepared by Architect, Civil Engineer and Building Services Engineer (as necessary). |
| Specialist technical advice on any aspect of the Works which is not within the expertise of the Consultant. | If Required - Specification / Scope of requirements to be prepared by Architect, Civil Engineer and Building Services Engineer (as necessary). |
| Special inspections or tests advised by the Consultant | If Required - Specification / Scope of requirements to be prepared by Architect, Civil Engineer and Building Services Engineer (as necessary). |
| Preparation, or assistance in the preparation, of an environmental impact assessment in respect of the Works. | If Required - Architect to clarify requirement with Planners. |

## All Plan of Works Scope of Services - All Consultants

Subject to at which RIBA Plan of Work Stage, the Consultant has been appointed, the Consultant shall carry out and complete their Design work in a proper and professional manner, in compliance with the Project Brief and Statutory Requirements and for that purpose shall complete the design for the Works including the selection of any specifications for the kinds and standards of the materials, goods and workmanship to be used in the construction of the Works.

Should the Consultant be appointed after the design process has been commenced and part of the design has been completed by others, the Consultant shall review that design and assess it against the Project Brief and Statutory Requirements, advise of any issues identified that are non-compliant and to take and accept responsibility to develop that design to be fully compliant with the Project Brief and Regulation.

All design works must comply with all current regulatory standards and industry best practice guidance, including considering the impact of any proposed changes to Building Regulation or regulation related to the works.

The following scopes of service items are to be provided by all consultants appointed to the project team.

1. Comply with the CDM Regulations insofar as that relate to this appointment / project / programme, including advise the Client of the client’s obligation under the CDM Regulations.
2. Advise the Client and the Project Team of any H&S or Environmental concerns arising from this appointment.
3. Advise the Client and the Project Manager, of any information, instruction, decisions, or consents required.
4. Advise the Client of any statutory or regulatory obligations insofar as they relate to this appointment.
5. Encourage an innovative and collaborative design process utilising leading edge practice and solutions.
6. Encourage full integration across all team disciplines and Client/end user to deliver a fully coordinated design solution.
7. Provide general impartial, independent advice and support to the Client.
8. Assist the Client and the Project Manager in defining and developing the programme/project vision and the Client’s strategic requirements, if appointed at the relevant Plan of Work Stage.
9. Attend Client, Design, Project, Site, and other meeting as required (refer to Meeting schedule).
10. Provide all necessary data / information required for all project reports to the relevant lead report writer in a timely manner and in the necessary format.
11. Prepare and circulate prior to all meeting discipline specific report, including previous meeting actions update.
12. Ensure that the Consultant records any actions or tasks arising from any meeting that is allocated to the Consultant and/or that could be reasonably assumed to be the responsibility of the Consultant and completes that action or task will diligence and within the agreed timeframe.
13. Visit the site(s) as necessary to ensure a coordinated design is prepared that aligns with; the Project Brief, Project Budget/Cost Plan, Project Strategies and Specification, compliant with Building Regulations and all relevant statutory regulations.
14. Visit the site(s) as necessary to clarify any Contractor Design obligation and/or details to enable the Contractor to meet their contractual obligations.
15. Contribute to the monitoring of quality of design and the works, notify the Project Manager of any concerns, regardless of whether a separate Clerk of Works/Project Supervisor/Quality Monitor has been appointed.
16. Contribute to the production of the Client’s business case and assist with the development of the feasibility of the Project during the early Work Stages, if appointed during the relevant Plan of Works Stage.
17. Preparation of design, drawings, and specifications in compliance with the RIBA Plan of Work Stages.
18. Review any; design, proposals, specification, product/equipment data prepared or provided by other Consultants or specialist advisors or specialist contractor or equipment and/or component manufacturers/suppliers to ensure that the Consultant’s design is accordingly coordinated. Where relevant the Consultant is to identification any required builder works and/or other requirements / attendances arising from the review of this information.
19. Review other consultants’ design information to ensure that an overall developed and coordinated design is produced.
20. Prepare specifications, scheme drawings and supporting details to support the tender process.
21. Support the tender evaluation process to aid recommendation and the appointment of the most appropriate contractor in conjunction with other members of the design team.
22. Ensure co-ordination and integration of the Client’s direct equipment within design including specialist equipment.
23. Attend site meetings as required to inspect and support, reporting to the Project Manager on the progress, quality, and compliance of the works with the Building Contract.
24. Provide technical assistance to the Client’s Cost Advisor / Quantity Surveyor to allow their preparation of budget cost information and cost feasibility information, e.g., draft budgets and final costs.
25. Provide assistance and advice to the Client’s Cost Advisor / Quantity Surveyor when preparing valuations and final account.
26. Assist the Client’s Quantity Surveyor with value engineering initiatives.
27. Assist the Project Manager and/or Main Contractor to progress the production and issue of adequate record drawings, test certificates and instruction manuals.
28. Ensure full consideration has been given to all aspects of future operation and maintenance and draw up/agree the necessary maintenance procedures. Obtain maintenance proposals and estimates and recommend acceptance.
29. Assist the Project Manager and/or Contractor in ensuring the expeditious making good of all defects within the time scales provided for in the Building Contract and also the issue of the necessary record documentation and approvals during the defect’s liability period.
30. Assist the Project Manager and/or appointed Main Contractor in the preparation and distribution of a comprehensive "As Built" package of drawings and building manual within one month of practical completion in accordance with the Client’s BIM Level 2 requirements including Pre and Post BIM Contract Execution Plans.
31. Ensure clear and timely information flow to facilitate a soft-landing handover process.
32. Support the development of a detailed health and safety file and O&M Manual and an electronic building logbook/operation and maintenance manual with a suitable interface for all levels of user.
33. Attend meetings called by the Project Manager and provide requested information necessary to satisfy the reasonable requirements of any surveyors or other specialists who may be appointed by any Third Parties.
34. Provide reasonable assistance in the preparation of marketing and communication information and materials
35. Throughout the project consider and develop strategies for sustainability, information services and communications. Consider common standards to be utilised for the Project.

## Scope of Services – All Consultants

### Tender Documents Requirements.

1. Subject to which Plan of Work Stage that tender documents will base on, prepare and coordinate a scheme design to compliance with the requirements of that chosen Work Stage, in conjunction with other appointed consultants for incorporation into tender documentation.
2. Provide drawings, interface details, amplification of detail, specifications, schedule, and other technical information necessary for tender to enable bidder to cost the works and submit a detailed and fully costed bid.
3. Identify and detail any design aspects to be undertaken by the contractors or supplier.
4. Advising on the need for any special conditions of contract relevant to the Consultant’s design discipline.
5. Develop tender documentation together with Cost Managers and other members of the project team.
6. Provide all necessary pre-construction information prepared by the consultant to the Principal Designer for inclusion with the tender documentation.
7. Provide information to other consultants for their preparation of their design data and to the Cost Manager/QS for preparation of a pre-tender estimate and to update the project cost estimate.
8. Revise as required tender documents / data to incorporate any requirements arising from any statutory authority, bidder’s queries, statutory or regulatory changes.
9. Review with the other project consultants, any proposal submitted by any bidder/tendering contractor and/or specialist supplier, including any value engineering proposals or alternative design solutions.
10. Attend tender preparation/coordination meetings, tender reviews, and bidder meetings and/or interview and bidder days.
11. Prepare a technical review of tenders that identifies any non-compliances with the Project Brief or tender requirements.
12. Assist in advising the Client as to the relative merits of tenders, prices and estimates received for execution of all or part of the Works.
13. Assist the team in the evaluation of tenders.
14. Liaising with the Project Manager and/or Main Contractor in the preparation of formal contract documents relating to accepted tenders for carrying out the Works listed in the clause dealing with Consultant’s design disciple and associated Design Elements or any part of them.

### Stage 0: Strategic Definition - ALL CONSULTANTS

* 1. In collaboration with Faithful+Gould, the Client, project stakeholders and other appointed consultants, contribute as required/assist in the development and preparation:
     1. the strategic brief for the project,
     2. undertake stakeholder consultation, as required,
     3. the development of necessary business cases, assessment
     4. project feasibility and/or options studies,
     5. of a project sustainability policy,
     6. of a strategic appraisal of Planning Considerations
  2. If relevant, consider and comment on wider schemes Masterplan/Programme for current and future developments. Review current and previous planning strategies for similar projects or developments and advise on current planning strategies. Early discussions with Planning Officers may be considered, project dependent.
  3. Support the development of the Client’s sustainability requirements and aspirations and support the Client in understanding value, costs, and budget.
  4. Review and advise the Client on design team appointments for scope, project roles and responsibilities, including the Principal Designer.
  5. Contribute to the development of the Project Programme and assist in the identification of risk/benefit/opportunities.
  6. Contribute to the identification of stakeholders and any consultation and/or communication process required.
  7. Liaise with the Client to establish a programme for design review workshops.

### Stage 1: Preparation and Brief - ALL CONSULTANTS

* 1. Prepare and develop, in collaboration with the Client, Project Stakeholders and other appointed consultants, the Project Brief.
  2. Develop the brief considering the project objectives including design aspirations, quality, programme, cost, best value, project outcomes, sustainability, best practice, regulatory and statutory requirements, site and any other relevant parameters or constraints.
  3. Contribute to the development of the Project Programme and risk/benefit identification.
  4. Review the project programme and advise on any key task or activity that is required to be included.
  5. Source pre-application Planning advice from the Local Planning Authority including reviewing any associated planning policy or local development plans to advise the Client of any implication and inform an approach to compliance with such.
  6. Advise the Client on planning considerations relevant to the Consultant’s Design discipline.
  7. Advise the Client on limitation on access to the site both during construction and post completion which may affect design options and prepare an initial site constraints plan.
  8. Identify any health and safety Pre-construction information required to be provided by the Client and/or by other in the project team.
  9. Identify any surveys, studies or investigations that are required to be provided by the Client and/or by other in the project team. Advise the Project Manager what surveys, studies or investigations will be undertaken by the Consultant as part of their design services including advising on the extent / limitation of such surveys.
  10. Evaluate and review any options and/or feasibility proposals and provide feedback to the Client and the project team.
  11. Develop the discipline specific brief considering the project objectives including quality, project outcomes, sustainability aspirations, budget, site and any other parameters or constraints.
  12. Collaborate with the other members of the design team in making initial recommendations to the Client on the technical viability of the design and engineering solutions
  13. Discuss and cost possible items for inclusion in the risk register
  14. Support the Client with stakeholder consultation, including but not limited to:
      1. presentation of Design Studies, Options Studies and Design Stage Reports to Stakeholders,
      2. planning consultations including planning authority, public and statutory consultees,
      3. operations and maintenance personnel / stakeholders / contractors,
      4. Direct contractors
  15. Attend design review workshops.

### Stage 2: Concept Design – ALL CONSULTANTS

* 1. Complete the development of the Project Brief for the scheme to reflect strategy, functionality, programme, sustainability, and cost compliance.
  2. Review with the Client the output of the previous studies.
  3. Assist the Client in developing and evaluating the Project Brief, including the impacts of any changes on quality, cost, programme and risk
  4. Contribute to the development and review the sustainability strategy for the Project
  5. Facilitate and assist the Client with effective communications and information exchanges between the Client, stakeholders and the design team
  6. Prepare, in collaboration with the project team and Faithful+Gould a cost-effective scheme design consisting of drawings and outline specifications sufficient to indicate spatial coordination and arrangements, materials and appearance.
  7. In conjunction with the other consultants advise the Client on the need and extent of topographical, geological and other surveys to establish existing site construction details and adjacent building data
  8. In conjunction with the other consultants advise the Client on any site restrictions.
  9. Liaise with the Client and other appointed Consultants to develop the programme for the project ensuring that provision is made for structural planning requirements, engineering services, IT infrastructure and other identified design requirements.
  10. Cost Management Inputs.
      1. Prepare specification details and all other input and liaise with other project consultants, contractors, sub-contractors and specialist suppliers to enable the production of a enable the production of a detail Cost Estimate / Cost Plan by the Cost Managers/QS.
      2. Provide comprehensive design and as required any alternative design information to the Client’s Cost Managers to allow detailed cost plans to be prepared and assist with value engineering solutions.
  11. Review with the other consultants’ alternative design and construction approaches and provide information for consideration of cost, sustainability and maintenance and operation.
  12. Advise the Client on the need for arrangements to be made for and define the extent of topographical and dimensional surveys of the Site or surveys to obtain details of construction and/or installed building services in existence on or adjacent to the Site, special investigations or tests.
  13. Where appropriate consult any local or other authorities about matters of principle in connection with the design of the Works.
  14. Consider alternative outline solutions for the Works.
  15. Develop the Client’s Brief into a full Brief for the Works in consultation with the Client and any Other Consultants. Such Brief shall describe the Client’s performance and information requirements in respect of the Services and both the Client, and the Consultant shall work to the Brief. Comment to the Client on any restrictions the Brief may impose on any future use of the Works suggested by the Client.
  16. Prepare any reports concerning statutory utilities required and available.
  17. Keep all other requisite persons suitably informed throughout.
  18. Prepare a detailed and comprehensive end of Design Stage Report.
  19. Seek the Client’s approval via the Project Manager of the design and the Client’s consent to proceed to the next work stage.

### Stage 3: Spatial Coordination - ALL CONSULTANTS

* 1. In conjunction with other project design consultants, lead in the preparation of a spatially coordinated design that aligns with; the Project Brief, Project Budget/Cost Plan, Project Strategies and Specification, that is in compliant with Building Regulations. Ensuring that the Design *Data to a sufficient standard to be incorporation into* ***tender (or Main Contractor's proposals or as the basis of the Construction Contract), if decided to invite tenders at the end of this work stage, refer to Tender Documentation requirements****.*
  2. Align with RIBA work stage requirement to prepare developed design, including coordinated and updated proposals for structural design, building services systems, outline specifications, cost information and project strategies in accordance with design programme.
  3. Collaborate with any Other Consultants to prepare detailed proposals for presentation to the Client, drawing attention to any significant differences from the previously agreed requirements for the Works.
  4. Prepare a detailed specification specific to the Consultant’s discipline.
  5. With other consultants where appointed prepare and submit application for Building Regulations plan approval.
  6. Provide information to allow a full planning application to be made.
  7. Prepare and submit all necessary details in conjunction with other consultants, sub-contractors, and specialist suppliers to all relevant statutory and/or regulatory authorities and/or statutory consultee, including participating in any discussion/consultation/negotiate with such bodies.
  8. Provision to be made for any design review panels and public consultations.
  9. Cost Management inputs.
     1. Prepare specification details and all other input and liaise with other project consultants, (and if required with contractors, sub-contractors and specialist suppliers) to enable the production of a detail Cost Estimate / Cost Plan. priced estimate and a Contract Sum Analysis by the Cost Managers/QS.
     2. Provide comprehensive design and as required any alternative design information to the Client’s Cost Managers to allow detailed cost plans to be prepared and assist with value engineering solutions.
  10. Prepare any drawings to assist in negotiations with adjoining owners' representatives to using reasonable endeavours to ensure compliance with the Client’s legal responsibilities in respect of neighbouring properties insofar as they are made known to the Project Team.
  11. Provide reasonable assistance in preparing suitable funding, marketing and leasing material by way of reduced floor plans, elevations site layout, summary of building specification, assist, on request, with negotiations with any of the Parties in clarifying various aspects of the proposed construction, finishes and make presentations if required.
  12. Upon Faithful+Gould’s request, evaluate and advise of all the likely consequences of varying the design of any part of the project to accommodate any variations proposed by any of the Parties but only to action such variation to the design upon our express written instruction.
  13. Preparation and submission of all necessary details in conjunction with our other consultants, sub-contractors and specialists and negotiations with all relevant authorities’ bodies and companies in order to obtain Building Regulations and other statutory approvals and technical approval for those roads and services which are to be built to adoptable standards.
  14. Advise the Project Manager on any instructions needed to be given to the Main/Management Contractor. Attend all site meetings when called by the Project Manager. Ensure, as far as is possible, the issue without delay of all necessary drawings or amplification of detail to enable the works to be completed in accordance with the approved plans, specifications, agreed programme and contract documents.
  15. Attend meetings called by Project Manager and provide all requested information necessary to satisfy the reasonable requirements of any surveyors or other specialists who may be appointed by the Client.
  16. Liaising with the design team and other design team members as necessary to agree a programme for the completion of subsequent design and production information stages subject to a scheme design being approved by the Client.
  17. Attend all project and design team meetings as noted within the meeting schedule.
  18. Prepare a detailed and comprehensive end of Design Stage Report.
  19. Seek the Client’s approval via the Project Manager of the design and the Client’s consent to proceed to the next work stage.

### Stage 4: Technical Design - ALL CONSULTANTS

* 1. Prepare and coordinate detailed technical design including NBS Specification. *Data to a sufficient standard to be incorporation into tender (or Main Contractor's proposals or as the basis of the Construction Contract), if decided to invite tenders at the end of this work stage, refer to Tender Documentation requirements.*
  2. Prepare, coordinate, and integrate specialist subcontractor and/or Building Systems information.
  3. Continue to prepare production drawings / data including specification and/or schedules for incorporation into Contract documentation, including if required amplification of detail to enable the works to be carry out in accordance with the agreed Contract Sum and Programme.
  4. Continue to prepare any further information and schedules necessary to enable Contractors to undertake and complete the Works but excluding any design work that in accordance with the Building Contract has been defined as a Contractor Obligation.
  5. Align with RIBA work stage requirement to prepare technical design, including co-ordinated and updated information for the Consultant’s design with design prepared by other consultants in accordance with design programme.
  6. Prepare schedules and specifications of materials, component, building elements and workmanship which may be required to construct the Project.
  7. With other consultants where appointed prepare and submit application for full Building Regulations approval, including preparation and submission of all necessary data to satisfy Building Regulation approval.
  8. Provide information to discuss any design and/or change proposals including incorporating input of other consultants into production information.
  9. Renewable Design Data - With other consultants, where appointed, examine contractor, sub-contractors’ and specialist suppliers’ drawing details with particular reference to tolerances and dimensional co-ordination, finish, durability and appearance and compliance with the Contract Documents.
  10. Where a Contractor has been appointed to provide technical design services under a design and build procurement, examine information provided by the appointed specialist contractor throughout this Stage and comment on compliance with the requirements of information issued for tender at the end of applicable work stage.
  11. Provide input to the Lead Consultant for the development of the maintenance and operational and handover strategies up to tender stage within Stage 4.
  12. Provide input to the Principal Designer for the development of construction health and safety strategies.
  13. Liaise and share information as may be necessary with the Principal Designer, Other Consultants and any Contractors or sub-contractors to seek to address any health and safety risks arising out of the technical design Stage.
  14. Provide input to enable the Lead Consultant or Other Consultant as applicable to complete the technical design to comply with the project sustainability strategy.
  15. Prepare such calculations or design and details relating to the Works as may be required to for inclusion in submission by others to any appropriate statutory authority, excluding any submissions or applications for planning consent or approval.
  16. The Consultant shall review any Contractor design to determine that it coordinates with the over works design and has included any specialist design by sub-contractors or component manufactures details including any interface, support, or connection provisions.
  17. The Consultant shall check Contractor’s and any Sub-contractor design and drawings for compliance with overall structural design, principles, design philosophy, design standards and for compliance with the specified durability and performance of the structure.
  18. Carry out at intervals appropriate to the stage of design and/or construction of the works regular inspections of the design and/or works to satisfy the Consultant that the design is being prepared and/or the work is being carried out in accordance with the drawings and specifications and in a good and workmanlike manner. The Consultant to advise the Project Manager of any concerns or non-compliance as soon as they become aware.
  19. Assisting the design team in advising the Client as to the technical suitability for carrying out the works of persons and firms tendering for the main contract and for any specialist subcontract involving the supply and/or installation of parts of the building services.
  20. Assisting the design team and other consultants in advising the Project Manager and/or Main Contractor as to the relative merits of tender prices and estimates received for carrying out the works as detailed in the clause dealing with building services Design Elements.
  21. Check Specialist Sub-contractors design and drawings for compliance with overall design.
  22. Issue all necessary drawings or amplification of detail to enable the works to be completed in accordance with the approved plans, specifications, and contract documents and in accordance with the Contractor's agreed programme
  23. Issue all Notices and Certificates as called for under the form of building contract adopted for the project as required of the Consultant.
  24. Provide information to other consultants for any necessary revisions of their proposals.
  25. With other consultants, where appointed, provide information for revisions to cost estimate and/or changes.
  26. Advise the Project Manager on a timetable for the supply of production information.
  27. Prepare plans for proposed building works for the approval of landlords, funders, freeholders, tenants or others as may reasonably be requested by the PM and/or Main Contractor on behalf of the Client.
  28. Submit plans for proposed building works for the approval of the landlords, funders, tenants or others as may reasonably be requested by the PM and/or Main Contractor on behalf of the Client.
  29. Prepare interior design proposals and integrate Client’s furniture and fittings within the overall scheme.
  30. Prepare a detailed and comprehensive end of Design Stage Report.
  31. Seek the Client’s approval via the Project Manager of the design and the Client’s consent to proceed to the next work stage.

### Stage 5: Construction ALL Consultants

* 1. Continue to prepare any further information and schedules necessary to enable Contractors to complete the Works but excluding any design work that in accordance with the Building Contract has been defined as a Contractor Obligation, this includes any specialist sub-contractor or supplier design, any temporary works, shop fabrication and connection details.
  2. Attend design meetings as required and attend ad-hoc meetings as reasonably requested by the Client, the Project Manager and/or Contractor in connection with the design or progress of the production information.
  3. Review, comment, and co-ordinate proposals and/or design drawing or data prepared by the design team directly appointed by the Client or appointed on behalf of the Client by Faithful+Gould, that are for the purpose of clarifying the Project Brief, and/or amplifying client requirements, and or as the basis of a client requested change.
  4. Review, comment and assess proposals and design drawings submitted by Contractors and the wider sub-contractor supply chain for compliance with the Project Brief and the obligation of the Construction Contract, i.e., Renewable design data process, and advise if the data is compliant with project requirement with or without comments or is non-compliant and thereby rejected.
  5. Review, comment and assess of any value engineer or alternative proposals submitted by Contractors and the wider sub-contractor supply chain, or the wider project team for compliance with the principles of the Project Brief, determination of long-term advantages and disadvantages and impact on operation and maintenance.
  6. Review, comment, incorporate design and co-ordinate proposals and design drawings submitted by Contractors and the wider sub-contractor supply chain, if appointed to undertake design as party of this Plan of Work Stage]
  7. [Prepare and distribute as required revision and detailed for construction drawings for the construction team, if appointed to undertake design at this Plan of Work Stage]
  8. [Prepare builders work drawings based on installation proposals if appointed to undertake design at this Plan of Work Stage].
  9. Respond to and resolve design queries as they arise on site.
  10. Advise the Project Manager on the need for special inspections and/or tests arising during the construction phase.
  11. Attend with the Project Manager/Employer’s Agent/Clerk of Works/Project Supervisor such inspections and/or tests arising during the construction phase.
  12. Making such visits to the site as the consultant shall consider necessary to satisfy himself as to the performance of the contractor or any sub-contractors and to determine that the works are executed generally according to the consultant's design.
  13. Attend ad-hoc meetings as reasonably requested by the Project Manager in connection with the design, the progress of production information or other issues as may arise
  14. As reasonably required by the Project Manager, visit up to four sites within England of extraction and fabrication and assembly of materials and components to inspect special materials and workmanship before delivery to site and report to the Client Project Manager and Main Contractor.
  15. Performing any services which the consultant may be reasonably required to carry out under the contract for the execution of works including where appropriate the witnessing of any specified tests or inspection of works or samples.
  16. Delivering upon request to the Client on the completion of the works copies of the drawings prepared by the Consultant for the purpose of constructing the works, for inclusion in associated warranty documents.
  17. Before the issue of the Certificate of Practical Completion or Sectional Completion for all or any part of the Project the Consultant shall formally confirm to the Project Manager that in their view the works have been carry out in accordance with the obligation of the Building Contract taking into consideration any changes approved by the Client and formally instructed in accordance with the contractual change mechanism.

### Stage 6: Handover & Close Out - ALL CONSULTANTS

* 1. Assist the Main Contractor and/or Principal Designer, with the preparation of such “as-built” drawings as may be specified in the Contract.
  2. Assist the Project Manager and/or Main Contractor to arrange for drawings of building services installations to be provided to the Client by others in accordance with the Client’s BIM requirements.
  3. Assist the Project Manager and/or Main Contractor to arrange for the completion of maintenance and operational manuals as may be specified in the Contract, including reviewing the data to advising on any missing or inaccurate design data prepared by the Consultant.
  4. Assist the handover of the works through inspection of the works on completions and during the defects’ liability period and monitor rectification of any noted materials and workmanship problems identified.
  5. Assist the Project Manager and/or Main Contractor in the settlement of the Final Account by providing such information as may be reasonably necessary.
  6. Assist and advise the Client and other Consultants in connection with any claim or matter arising including by providing such information as may be reasonably necessary.
  7. Re-inspect at the end of the defects liability period and note any defects. Ensure defects are rectified within appropriate time scales.

### Stage 7: In Use

* 1. Conclude activities listed in Handover Strategy including Post-occupancy Evaluation, review of Project Performance, Project Outcomes and Research and Development aspect.

## Scope of Services Architectural Design Consultancy Services including role as Principal Designer

### Stage 0: Strategic Definition

As detailed above.

### Stage 1: Preparation and Brief

* 1. Source pre-application Planning advice from the Local Planning Authority including reviewing any associated planning policy or local development plans to advise the Client of any implication and inform an approach to compliance with such.
  2. Advise the Client on planning considerations.
  3. Identify any health and safety Pre-construction information required to be provided by the Client and/or by other in the project team.
  4. Coordinate and facilitate design review workshops.

### Stage 2: Concept Design

* 1. In conjunction with the other consultants advise the Client on the need and extent of topographical, geological and other surveys to establish existing site construction details and adjacent building data
  2. In conjunction with the other consultants advise the Client on any site restrictions including in relation to Listed Building Consent and Conservation requirements.

### Stage 3: Spatial Coordination

* 1. Prepare initial furniture and FF&E design layouts for approval by the Client/Users.
  2. Consult and lead discussions with building control and fire authorities including development of a fire strategy for the project.
  3. With other consultants where appointed prepare and submit application for Building Regulations plan approval.
  4. Provide information to allow a full planning application to be made, including:
     1. Conduct negotiations with the planning authorities in conjunction with the Planning Consultant if appointed.
     2. Revise the planning application as reasonably as necessary to obtain detailed planning permission for the project.
     3. Prepare and submit all necessary planning applications with requisite drawings, studies, reports, and data incorporating and co-ordinating all information prepared by all other project consultants and any subcontractors following consultation with the Client, Faithful+Gould and the relevant authorities including any relevant statutory authorities or consultee. Monitor the planning application’s progress at all stages. This excludes planning appeals and call-ins, which would be subject to an additional negotiated fee.
     4. Prepare and submit all necessary details in conjunction with other consultants, sub-contractors, and specialist suppliers to all relevant statutory and/or regulatory authorities and/or statutory consultee, including participating in any discussion/consultation/negotiate with such bodies.
     5. Provision to be made for any design review panels and public consultations.

### Stage 4: Technical Design

* 1. Develop the approved previous stage design into a fully detailed and coordinated architectural design, in collaboration with the project team.
  2. Integrate into the architectural design of the Works any requirements of other consultants, end user, specialist sub-consultants, Contractors, or sub-contractors if available at this Stage
  3. Prepare such design data, drawings, 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 other designers, specialist suppliers and/or Contractors as is available which may need to be included in such submissions.
  4. Continue to prepare any further drawings, calculations, and schedules necessary to enable Contractors to commence the Works, excluding any design work that has been defined as a Contractor design obligation.
  5. The Consultant shall review any Contractor’s design to ensure the Contractor and/or their sub-contractor or specialist designers have adhered to proper ad best practice and complied with the relevant design standard.
  6. The Consultant shall review any Contractor design to determine that it coordinates with the over works design and has included any specialist design by sub-contractors or component manufactures details including any interface, support or connection provisions.
  7. Carry out at intervals appropriate to the stage of design and/or construction of the works regular inspections of the design and/or works to satisfy the Consultant that the design is being prepared and/or the work is being carried out in accordance with the drawings and specifications and in a good and workmanlike manner. The Consultant to advise the Project Manager of any concerns or non-compliance as soon as they become aware.
  8. Assisting the design team in advising the Client as to the technical suitability for carrying out the works of persons and firms tendering for the main contract and for any specialist subcontract involving the supply and/or installation of parts of the works.
  9. Assisting the design team and other consultants in advising the Project Manager and Client as to the relative merits of tender prices and estimates received for carrying out the works.
  10. Submission of general arrangement drawings for the architectural / building works to enable the design team to co-ordinate dimensional and detailed requirements including builders' works provisions for building services and any special provisions for the fixing of components.

**Core Deliverables for Architectural design:**

* Provide Information showing the extent of the technical definition of design solution except where detailed design is by a Contractor in which case sufficient information will be provided for development by the Contractor. This information will be appropriate to the method of procurement and programme of the Project and sufficient, in association with the Contractor’s information, for Building Regulations submission.
* Plan layouts, section and elevations should be to a scale of at least 1:100 (to suit building size) and be fully dimensioned.
* Sectional information for the building structure.
* All critical building details at a scale appropriate for the element.
* Architectural details of sub-structure, super structure, envelope, external works, ancillary structure/building.
* Full and final detailed specification documentation.
* Internal building foul drainage.
* Rainwater drainage design.
* Road, footpaths, cycle paths, hard standing, and car park layouts details.
* Performance specifications for contractor design elements
* Provide architectural design model including appropriate geometric and object information. And compliant with the Project’s BIM requirements.
* Submitted Building Regulation Plan and Detail Application.
* Planning Approval.
* Planning Condition Discharge Tracker.
* Schedule of approved material samples.
* Schedule of material sample to be provided by contractor.
* Schedule of design data/drawing etc., to be provided by contractor.
* Schedule of Residual Design responsibility to be completed by Consultant or by Contractor and their supply chain.
* Schedule of required Renewable Design Data to be provided by Consultant or by Contractor and their supply chain.
* Schedule of any outstanding design decision or approvals required from the Client or any statutory body.
* Navigation, wayfinding, permanent graphics, and building signage design including any identification of any building work or building services required and submission of advertising Consent application.

### Stage 5: Construction

* 1. Continue to prepare any further information and schedules necessary to enable Contractors to complete the Works but excluding any design work that in accordance with the Building Contract has been defined as a Contractor Obligation.
  2. Review detailed designs, shop fabrication drawings, standard details, schedules and specifications submitted by Contractors or sub-contractors for the Works or parts thereof, in respect of conformity with the Consultant’s performance specifications.
  3. Review 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 performance specifications.
  4. Part-time engineering supervision on a visiting basis, varying in accordance with the site activity on site, but broadly, average once a fortnightly over the contract period when the structural and civil works are being undertaken.
  5. Delivering upon request to the Client on the completion of the works copies of the drawings prepared by the Consultant for the purpose of constructing the works, for inclusion in associated warranty documents.

**Core Deliverables for architectural design:**

* Completion of deliverables notes above.
* Review and approval of samples.
* Undertake Site inspection and provide reports.
* Review and comment on Design Data and Contractors’ technical submissions.
* Record of Renewable Design Data including the Consultant’s comments and approvals.
* Provide completion observation report.
* Observation on Quality and compliance with the Project Brief.
* Review and comments on any Contractor or Client proposed amendment to planning approval.
* Review and comments on any Contractor or Client proposed amendment to Project Brief, contract design/specification including but not limited to value engineering, alternative products/supplier, etc.
* Provision of any clarification and/or amplification of project brief/tender/contract design/performance/specification requirements.

### Stage 6: Handover & Close Out

* 1. Inspect the Works on completion and, in conjunction with any Site Staff, record and report any defects observed.
  2. 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
  3. Assist the Project Manager and/or Main Contractor and/or Principal Designer with the preparation of “As-built” drawings and data.
  4. Assist the Project Manager and/or Main Contractor and/or Principal Designer to arrange for drawings prepared by the project team including the Contractor to be provided to the Client in accordance with the Clients BIM requirements.
  5. Assist the Project Manager and/or Main Contractor and/or Principal Designer to arrange for the completion of maintenance and operational manuals as may be specified in the Contract.
  6. Assist the handover of the works through inspection of the works on completions and during the defect liability period and monitor rectification of any noted materials and workmanship problems identified.
  7. Assist the Project Manager and/or Main Contractor in the settlement of the Final Account by providing such information as may be reasonably necessary.
  8. Assist and advise the Client and other Consultants in connection with any claim or matter arising.
  9. Re-inspect at the end of the defects liability period and note any defects. Ensure defects are rectified within appropriate time scales.

**Core Deliverables**

* Provide completion defects list.
* Provide completion letter.

### Stage 7: In Use

* 1. Conclude activities listed in Handover Strategy including Post-occupancy Evaluation, review of Project Performance, Project Outcomes and Research and Development aspects and any other duties reasonably requested by the Client.

### Principal Designer Requirements

The preferred consultant will take on the role of Principal Designer for the scheme. As the Principal Designer the consultant shall undertake all the duties of such as defined in the Construction Design and Management Regulations 2015

**Pre-construction stage**

* Assist with the health and safety aspects of the client brief as requested,
* Assist the client with submitting the F10 notification as requested,
* Attend the site/premises to carry out a full pre-start assessment and review with respect to health and safety considerations required during the design, build and end use,
* Work with the Client and other parties to obtain, review and profile the required CDM preconstruction safety information. Identify any gaps or information requirements in respect to the CDM pre-construction information,
* Provide safety advice and support for the project team (this is maintained for the duration of the project),
* Assist the design team in the process of design risk management focusing on keys safety issues associated with build-ability, usability and maintainability of the structure,
* Ensure all H&S pre-construction information is issued for tender packs and/or direct to the Principal Contractor and other key duty holders as required,
* Make sure there is a traceable and robust co-operation and co-ordination process between all key duty holders in regard to health and safety,
* Assist designers with their duties under CDM,
* Attend project meetings as required and/or producing CDM reports throughout the project,
* Comment and assist on safety issues throughout the duration of the project,
* Ensure the prompt flow of relevant H&S information among the design team and to the Principal Contractor to enable the Principal Contractor to develop and prepare the Construction Phase Plan,
* Provide suitable and sufficient advice and assistance on the arrangements for managing projects and the review and maintenance of the arrangements with respect to health or safety,
* Advise and assist Client on workplace health and safety and “in use” issues arising from the design and construction, as required by the Workplace Regs 1992,
* Work with designers and co-ordinate amongst them so that designs pay adequate regard to health and safety in construction, cleaning, use and deconstruction and the effects on third parties,
* Facilitate the application of the principals of prevention as per Management of Health and Safety at Work Regulations 1999,
* Advise the Client on the suitability of the Construction Phase Plan.

## Scope of Services of Structural and Civil Engineering Design Consultancy Services

### Stage 0: Strategic Definition - Structural and Civil Engineering

As detailed above.

### Stage 1: Preparation and Brief

* 1. As instructed prepare and develop initial engineering solutions, in collaboration with the other appointed consultants, to include within the Initial Project Brief.
  2. Develop the discipline specific brief considering the project objectives including quality, project outcomes, sustainability aspirations, budget, site and any other parameters or constraints.
  3. Obtain such information as is reasonably available on existing geological and structural information and comment to the Client on any effect these may have on the works during design, construction and on completion.
  4. Advise the Client and other Consultants of any physical site restrictions which may affect the engineering options for the works.
  5. Collaborate with the other members of the design team in making initial recommendations to the Client on the technical viability of the engineering solutions
  6. Discuss and cost possible items for inclusion in the risk register.

### Stage 2: Concept Design

* 1. Visit the Site as appropriate 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.
  2. Advise the Client 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 and interpretive report 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 and recommendations of such investigations.
  3. Advise the Client on the need for arrangements to be made for 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.
  4. Where appropriate consult any local or other authorities about matters of principle in connection with the design of the Works.
  5. Consider alternative outline solutions for the Works.
  6. Evaluation of various methods of constructing the structural elements, external road, hard standings, parking and turning areas and all drainage, installations, preparation of alternative designs and selection of the most appropriate form of construction after consultation with other team members.
  7. Prepare any reports concerning engineering matters connected with the Works that are deemed expedient and ensure their early distribution to us and all of our other consultants as part of the consultation process with them.
  8. Prepare any reports concerning drainage and flood matters connected with the Works that are deemed expedient and ensure their early distribution to us and all of our other consultants as part of the consultation process with them.

### Stage 3: Spatial Coordination Developed Design

* 1. Prepare a spatially coordinated structural and civil design including sufficient calculations, drawings, schedules and specifications that aligns with; the Project Brief, Project Budget/Cost Plan, Project Strategies and Specification, that is in compliant with Building Regulations. Ensuring that the data to a sufficient standard to be incorporation into **tender (or Main Contractor's proposals or as the basis of the Construction Contract), if decided to invite tenders at the end of this work stage, refer to Tender Documentation requirements.**
  2. Prepare structural layout drawings identifying beam and column positions, levels, and relationships to other components (e.g., walls, floors, ceiling height).
  3. Integrate into the design of the Works any requirements of end users, specialist sub-consultants, Contractors, or sub-contractors (if available at this Stage).
  4. Collaborate with any Other Consultants to prepare detailed proposals for presentation to the Client, drawing attention to any significant differences from the previously agreed requirements for the Works.
  5. Prepare such representative sketches, drawings, specifications, and/or calculations in respect of the Works as are necessary to enable the preparation of the Cost Plan.
  6. Provide information showing the extent of the civil and structural solutions that are co-ordinated with the architecture, building services and landscaping.
  7. Provide any relevant information to allow a full planning application to be made.
  8. Preparation and submission of all necessary details in conjunction with our other consultants, sub-contractors and specialists (and negotiations if required) with relevant authorities’ bodies and companies in order to obtain Building Regulations and/or other required statutory approvals including technical approval for those roads and services which are to be built to adoptable standards.
  9. Developing the design of the proposal for the Structural Works in collaboration with the Principal Designer and other members of the design team. Preparing such representative sketches drawings, specifications and/or calculations as are necessary to enable the Project Manager and QS to finalise the cost plan.
  10. Consulting any local or other authorities in connection with the structural or civil design of the Works, including but not limited to Drainage, Roads, Hard-standings and other External Works.
  11. Complete the geotechnical study of the site including organising, and assessment of information obtained from the additional boreholes, trial pits and laboratory testing executed by others.
  12. Provide sufficient design information to enable a Contractor to undertake final design and fabrication of the building framework elements, design information to include;
* Design Philosophy
* Design Standards and Durability and Performance of Structure
* Design loadings and specification.
* Means of achieving building stability and acceptable locations for vertical bracing.
* Performance parameters such as maximum deflection, minimum natural frequency, etc.
* Maximum dimensions for individual components, where critical.
  1. Prepare a Building Drainage (Foul and Stormwater) layout including any required attenuation, pollution controls, connections to statutory provider systems.
  2. Review existing information and CCTV and dimensional survey of existing drainage, if available.
  3. Liaise with the local water or authority and determine their requirements regarding site discharges and attenuation.
  4. If relevant, liaise with the Environmental Agency or other relevant statutory bodies to determine requirements in respect to any water course or sensitive sites.
  5. Support, review and advise on master or site planning by the Architect in respect to all Roads, Hard-standings, Foot and/or cycle paths, Landscaping (landscaping structures or features), retaining or support structures, perimeter walls/gates, and other External Works.
  6. Prepare spatial and dimensional layout including constructional details, for all Roads, Hard-standings, Foot and cycle paths, Landscaping, landscaping structure or features, retaining or support structures, perimeter walls/gates, and other External Works.
  7. Assisting the design team in advising the Client as to the technical suitability for carrying out the structural works of persons and firms tendering for the main contract and for any specialist subcontract involving the supply and/or installation of parts of the structural works. (If relevant at the Plan of Works Stage.

**Core Deliverables for structural and civils design:**

* Provide information showing the extent of the civil and structural solutions that are co-ordinated with the architecture, building services and landscaping.
* Layout and section drawings of all floor levels indicating structural element sizes and structural zones. Drawings should generally be at a level of detail commensurate with a printed scale of 1:100 (or suitable for development).
* Typical structural system, support and restraint details. Including assessment of anticipated structural frame quantities/tonnage.
* Details of building stability elements and sizes.
* Foundation details and sizes.
* Identification of all load bearing and non-load bearing walls or structure.
* Layouts, details and performance specifications for
  + cast insitu and/or precast concrete structural frame, walls, floors, and stairs if appropriate
  + Main structural frame
  + Secondary structural frame
  + Roof structure
* Movement joints strategy.
* Sizing and construction of retaining structures.
* Drainage layouts including detailed design of the new works from the first manhole outside the building.
* Road, footpaths, cycle paths, hard standing, car park layouts details, including necessary drainage retaining structures or other civil works.
* Foundation, structural design, retaining structure for landscaping or landscaping features/structures.
* Detailed specification
* Collate all structural information for Planning Application submission.
* Collate all structural information for Building Regulations submission.
* Health and safety risk assessment

### Stage 4: Technical Design

* 1. Develop the approved previous stage design into a fully detailed and coordinated structural and civil design, in collaboration with the project team.
  2. Integrate into the structural and civil design of the Works any requirements of other consultants, end user, specialist sub-consultants, Contractors, or sub-contractors if available at this Stage
  3. Prepare such design data, drawings, 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 other designers, specialist suppliers and/or Contractors as is available which may need to be included in such submissions.
  4. Preparing sufficient calculations drawings estimates of reinforcement and final specifications of the structural works to enable the Project Manager and QS to prepare a detailed cost estimate and/or other tender documents.
  5. Continue to prepare any further drawings, calculations, and schedules necessary to enable Contractors to commence the Works, but excluding Co-ordination Information, designs and details for temporary works, formwork, shop fabrication and connection details, unless expressly requested / instructed by the Project Manager to undertake (and subject to prior agreement of any associated additional fee).
  6. In the case of reinforced concrete work, general arrangement information and information of non-standard details should be prepared sufficient to enable a Contractor to prepare full details and bar bending schedules for the Works.
  7. In the case of superstructure works, general arrangement information including structural member sizes for both the main and secondary structural members and information of non-standard details should be prepared sufficient to enable a Contractor to ascertain the quality/tonnage of materials required and to enable a Contractor to prepare full details for the works including calculations and design connection or interface details.
  8. The Consultant shall review any Contractor’s calculations and details for the structural and civil design to ensure the Contractor and/or their sub-contractor or specialist designers have adhered to proper ad best practice and complied with the relevant design standard.
  9. The Consultant shall review any Contractor design to determine that it coordinates with the over works design and has included any specialist design by sub-contractors or component manufactures details including any interface, support or connection provisions.
  10. The Consultant shall check Contractor’s and any Sub-contractor design and drawings for compliance with overall structural design, principles, design philosophy, design standards and for compliance with the specified durability and performance of the structure.
  11. Carry out at intervals appropriate to the stage of design and/or construction of the works regular inspections of the design and/or works to satisfy the Consultant that the design is being prepared and/or the work is being carried out in accordance with the drawings and specifications and in a good and workmanlike manner. The Consultant to advise the Project Manager of any concerns or non-compliance as soon as they become aware.
  12. Assisting the design team in advising the Client as to the technical suitability for carrying out the structural works of persons and firms tendering for the main contract and for any specialist subcontract involving the supply and/or installation of parts of the structural works.
  13. Assisting the design team and other consultants in advising the Project Manager and/or Main Contractor as to the relative merits of tender prices and estimates received for carrying out the structural works as detailed in the clause dealing with Structural Design Elements.
  14. Preparing such final calculations and details relating to the structural works listed in the clause dealing with Structural Design Elements as may be required for submission to any appropriate authority.
  15. Submission of general arrangement drawings for the structural works listed in the clause dealing with Structural Design Elements to enable the design team to co-ordinate dimensional and detailed requirements including builders' works provisions for building services and any special provisions for the fixing of non-structural cladding and other components.
  16. Preparing any further detail drawings including reinforcement bending schedules and the like where appropriate for the information of the Contractor to enable him to carry out the Structural Works listed in the clause dealing with Structural Design Elements excluding shop fabrication details relating to the Structural Works or any part thereof.
  17. Check Specialist Sub-contractors design and drawings for compliance with overall structural design.

**Core Deliverables for structural and civils design:**

* Provide Information showing the extent of the technical definition of civil and structural solution except where detailed design is by a Contractor in which case sufficient information will be provided for development by the Contractor. This information will be appropriate to the method of procurement and programme of the Project and sufficient, in association with the Contractor’s information, for Building Regulations submission.
* Plan layouts should be to a scale of at least 1:100 (to suit building size). Fully dimensioned and including all section sizes and reinforcement requirements for concrete elements but not including reinforcement details or bar bending schedules.
* Sectional information for the building structure.
* All critical building structure details at a scale appropriate for the element.
* Details of all foundations, layouts of piles (if required) including reinforcement requirements and typical details for buildings of structural concrete and other materials.
* Super Structure general arrangement information including structural member sizes for both the main and secondary structural members and information of non-standard details
* Structural reinforced concrete work, general arrangement information and information of non-standard details.
* Details of all retaining structures.
* Detailed elemental specification documentation.
* Below slab and external drainage details including attenuation and connection to main drains.
* Road, footpaths, cycle paths, hard standing, and car park construction details.
* Performance specifications for contractor design elements
* Provide structural design model including appropriate geometric and object information. And compliant with the Project’s BIM requirements.

### Stage 5: Construction

* 1. Continue to prepare any further information and schedules necessary to enable Contractors to complete the Works but excluding any design work that in accordance with the Building Contract has been defined as a Contractor Obligation.
  2. Advising in the preparation of structural design criteria checking and commenting upon the effects upon the primary structure of design work undertaken by other specialist sub-contractors and suppliers for building elements or equipment fixed to or loaded onto the structure such information to be provided by others; for example (but not by ways of limitation) windows, curtain walling, cladding systems, prefabricated stairs, specialist roofing systems engineering plant and the like.
  3. Review 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 performance specifications.
  4. Part-time engineering supervision on a visiting basis, varying in accordance with the site activity on site, but broadly, average once a fortnightly over the contract period when the structural and civil works are being undertaken.
  5. Delivering upon request to the Client on the completion of the works copies of the drawings prepared by the Consultant for the purpose of constructing the works, for inclusion in associated warranty documents.

**Core Deliverables for structural and civils design:**

* Completion of deliverables notes above.
* Undertake Site inspection and provide reports
* Review and comment on Design Data and contractors’ technical submissions.
* Provide completion observation report.

### Stage 6: Handover and Close Out

* 1. Inspect the Works on completion and, in conjunction with any Site Staff, record and report any defects observed.
  2. 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
  3. Assist the Project Manager and/or Main Contractor and/or Principal Designer with the preparation of “As-built” drawings and data.
  4. Assist the Project Manager and/or Main Contractor and/or Principal Designer to arrange for drawings prepared by the project team including the Contractor to be provided to the Client in accordance with the Clients BIM requirements.
  5. Assist the Project Manager and/or Main Contractor and/or Principal Designer to arrange for the completion of maintenance and operational manuals as may be specified in the Contract.
  6. Assist the handover of the works through inspection of the works on completions and during the defects liability period and monitor rectification of any noted materials and workmanship problems identified.
  7. Assist the Project Manager and/or Main Contractor in the settlement of the Final Account by providing such information as may be reasonably necessary.
  8. Assist and advise the Client and other Consultants in connection with any claim or matter arising.
  9. Re-inspect at the end of the defects liability period and note any defects. Ensure defects are rectified within appropriate time scales.

**Core Deliverables**

* Provide completion defects list.
* Provide completion letter

### Stage 7: In Use

* 1. Conclude activities listed in Handover Strategy including Post-occupancy Evaluation, review of Project Performance, Project Outcomes and Research and Development aspects and any other duties reasonably requested by the Client.

## Scope of Services for Building Services Engineer Design Consultancy Services

### Stage 0: Strategic Definition Building Services Engineer

As detailed above.

### Stage 1: Preparation and Brief

* 1. Review such information as is reasonably available from existing data on the existence and extent of relevant public services such as water, gas, electricity, foul and surface water drains and sewers, and telecommunications services. Comment to the Client on any effect that these may have on the Works, both during construction of the Works and on completion.
  2. Advise the Client and other Consultants of any physical site restrictions which may affect the engineering options for the works.
  3. Attend any design review workshops.
  4. As instructed prepare and develop initial engineering solutions, in collaboration with the other appointed consultants, to include within the Initial Project Brief.

### Stage 2: Concept Design

* 1. Advise the Client and other Consultants of any physical site restrictions which may affect the engineering options for the works.
  2. 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
  3. Visit the Site as appropriate 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.
  4. Advise the Client on the need for arrangements to be made for and define the extent of topographical and dimensional surveys of the Site or surveys to obtain details of construction and/or installed building services in existence on or adjacent to the Site, special investigations or tests.
  5. Where appropriate consult any local or other authorities about matters of principle in connection with the design of the Works.
  6. Consider alternative outline solutions for the Works.
  7. Assist other Consultants to assess the thermal performance standards for the building envelope and details of any external shading/solar control. Analyse the preliminary heat gains and losses for the purpose of developed sizing of the MEP engineering services.
  8. Evaluation of various building services systems options, preparation of alternative designs and selection of the most appropriate solution after consultation with other team members and the Client taking into account the Project Brief and any sustainability, operational and maintenance requirements.
  9. Prepare any reports concerning engineering matters connected with the Works that are deemed expedient and ensure their early distribution to us and all of our other consultants as part of the consultation process with them.
  10. Prepare any reports concerning statutory utilities required and available.
  11. Keep all other requisite persons suitably informed throughout.
  12. Prepare a detailed and comprehensive end of Design Stage Report.
  13. Seek the Client’s approval via the Project Manager of the design and the Client’s consent to proceed to the next work stage.

**Core Deliverables**

Provide concept design Stage report relating to MEP engineering matters within the scope of the Services, including the following:

* recommendations for renewable energy sources
* considerations for off-site manufacture
* Building Control requirements
* preliminary assessment of loads
* noise and acoustic impact
* fire and smoke control systems
* adequacy of utilities supplies
* constraints arising from the Brief or local authority policy
* High level metering strategy
* Provide concept design information including appropriate spatial and geometric detail and object information.
* Provide concept design Builders’ Work Requirements as applicable.
* Provide outline performance information for tendering MEP services, if required, depending on procurement strategy.
* Provide information for concept design Stage life-cycle cost and life-cycle assessment studies.
* Provide concept stage Cost Plan for building services based on floor area, building type or similar approximate estimating methodology.
* Provide preliminary energy statement for planning submission, where required by the planning authority.
* Provide preliminary thermal model to assess comfort conditions and overheating risk.
* Provide preliminary estimate of in-use energy consumption.
* Provide notes of any proposals or agreed outcomes following participation in any Soft Landings process.
* Assess adequacy of existing MEP services to incorporate extended or refurbished works.
* Health and safety risk assessment

### Stage 3: Spatial Coordination Developed Design

* 1. Prepare schematical and building service layout drawings identifying building services positions, levels and relationships to other components.
  2. Integrate into the design of the Works any requirements of end users, specialist sub-consultants, Contractors or sub-contractors (if available at this Stage).
  3. Provide information showing the extent of the building services systems solutions that are co-ordinated with other design disciplines.
  4. Provide information to allow a full planning application to be made.
  5. Developing the design of the proposal for building services systems in collaboration with the Principal Designer and other members of the design team. Preparing such representative sketches drawings, specifications and/or calculations as are necessary to enable the Project Manager and QS to finalise the cost plan.
  6. Provide sufficient design information to enable a Contractor to undertake final design and fabrication of the building framework elements.
  7. Provide information indicating the planning requirements for the MEP engineering services showing locations and approximate sizes of plant rooms, major items of plant, major ducts/chimneys and service runs and provide the approximate size and weight of any item affecting the structural design.
  8. Provide information to indicate to any Other Consultants the developed Builders’ Work Requirements in connection with the MEP engineering services.
  9. Assist other Consultants to assess the thermal performance standards for the building envelope and details of any external shading/solar control. Analyse the preliminary heat gains and losses for the purpose of developed sizing of the MEP engineering services.
  10. Assess MEP engineering services system loads as applicable and prepare developed load schedules.
  11. Agree and document with the appropriate utility providers the works required for provision of necessary incoming services.
  12. Provide input to the Lead Consultant for the development of the maintenance and operational and handover strategies.
  13. Prepare such calculations or design and details relating to the Works as may be required to for inclusion within the submission by others to any appropriate statutory authority, excluding any submissions or applications for planning consent or approval.
  14. Provide input to the Principal Designer for the development of construction and health and safety strategies.
  15. Liaise and share information as may be necessary with the Principal Designer, Other Consultants and any Contractors or sub-contractors in order to seek to address any health and safety risks arising out of the developed design Stage.
  16. Provide input to enable the Lead Consultant or Other Consultant as applicable to complete the developed design Sustainability.
  17. Present the developed design information to the Client, in conjunction with Other Consultants as required, in a format that highlights key points and identifies significant changes to concept design proposals.
  18. Prepare a detailed and comprehensive end of Design Stage Report.
  19. Seek the Client’s approval via the Project Manager of the design and the Client’s consent to proceed to the next work stage.

**Core Deliverables:**

* Provide information showing the extent of the building services that are co-ordinated with the project design prepared by others.
* Provide a developed design report including the following in connection with the MEP engineering services:
  + constraints arising from the Brief, Local Authority policy or other external factors.
  + recommendations for renewable energy sources.
  + considerations for efficient construction methodology including off-site manufacture.
  + Building Control requirements.
  + assessment of building services loads.
  + acoustic noise and vibration impact.
  + fire and smoke control issues.
  + adequacy of utilities supplies.
  + high-level metering strategy
  + Lift and/or Escalator brief
* Provide developed design information in accordance with the agreed schedule of deliverables and at the agreed level of graphical detail and non-graphical information.
* Provide updated schedule of developed design Builders’ Work Requirements.
* Provide updated information for life-cycle assessment and/or through-life cost studies.
* Provide an approximate Cost Plan for MEP engineering services based on floor area, building type and typical system type or other agreed approximate methodology.
* Provide report on adequacy of existing MEP to incorporate proposed extended or refurbished works, to a pre-agreed level of intrusion and physical testing if applicable.
* Develop design proposals to modify, refurbish or replace existing MEP and to incorporate new and extended MEP engineering services as part of an integrated system if applicable.
* Provide developed thermal model to assess comfort conditions and overheating risk.
* Provide developed estimate of in-use energy consumption.
* Provide developed energy statement for planning submission, based on agreed energy strategy.
* Provide any information (over and above that which is already contained in the developed design information) that is required in connection with any application for planning permission including reviews and/or appeals where applicable.
* Provide report on any quotations received for equipment that needs to be selected at this Stage to meet particular Work’s requirements.
* Detailed specification
* Collate all structural information for Planning Application submission.
* Collate all structural information for Building Regulations submission.
* Health and safety risk assessment

### Stage 4: Technical Design

* 1. Develop the approved previous stage design into a fully detailed and coordinated building services, in collaboration with the project team.
  2. Integrate into the building services design of the Works any requirements of other consultants, end user, specialist sub-consultants, Contractors, or sub-contractors if available at this Stage
  3. Develop the technical design to the agreed level of graphical detail and non-graphical information for the MEP engineering services suitable for tender action in collaboration with any Other Consultants, Contractors or specialists that have been appointed at this Stage.
  4. Assemble and provide summaries of all information obtained from the appropriate utility providers in connection with provision of necessary incoming services, to enable the procurement of such incoming services to be carried out by others.
  5. Provide updated information to indicate to others the Builders’ Work Requirements in connection with the MEP engineering services up to tender stage, based upon which the Builders’ Work Details can be prepared.
  6. The Consultant shall review any Contractor design to determine that it coordinates with the over works design and has included any specialist design by sub-contractors or component manufactures details including any interface, support or connection provisions.
  7. Assisting the design team and other consultants in advising the Project Manager and/or Main Contractor as to the relative merits of tender prices and estimates received for carrying out the works as detailed in the clause dealing with building services Design Elements.
  8. Check Specialist Sub-contractors design and drawings for compliance with overall design.

**Core Deliverables for structural and civils design:**

* Provide Information showing the extent of the technical definition of building services except where detailed design is by a Contractor in which case sufficient information will be provided for development by the Contractor. This information will be appropriate to the method of procurement and programme of the Project and sufficient, in association with the Contractor’s information, for Building Regulations submission.
* Provide information showing the extent of the building services that are co-ordinated with the project design prepared by others.
* Provide a developed design report including the following in connection with the MEP engineering services:
  + constraints arising from the Brief, Local Authority policy or other external factors.
  + recommendations for renewable energy sources.
  + considerations for efficient construction methodology including off-site manufacture.
  + Building Control requirements.
  + assessment of building services loads.
  + acoustic noise and vibration impact.
  + fire and smoke control issues.
  + adequacy of utilities supplies.
  + high-level metering strategy
  + Lift and/or Escalator brief
* Provide developed design information in accordance with the agreed schedule of deliverables and at the agreed level of graphical detail and non-graphical information.
* Provide updated schedule of developed design Builders’ Work Requirements.
* Provide commissioning plan.
* Provide information for whole-life cost studies.
* Provide technical design Stage information for incorporation into building log book.
* Provide updated information for life-cycle assessment and/or through-life cost studies.
* Provide report on adequacy of existing MEP to incorporate proposed extended or refurbished works, to a pre-agreed level of intrusion and physical testing if applicable.
* Develop design proposals to modify, refurbish or replace existing MEP and to incorporate new and extended MEP engineering services as part of an integrated system if applicable.
* Provide developed thermal model to assess comfort conditions and overheating risk.
* Provide developed estimate of in-use energy consumption.
* Provide developed energy statement for planning submission, based on agreed energy strategy.
* Provide any information (over and above that which is already contained in the developed design information) that is required in connection with any application for planning permission including reviews and/or appeals where applicable.
* Provide report on any quotations received for equipment that needs to be selected at this Stage to meet particular Works’ requirements.
* Provide health and safety risk assessment
* Performance specifications for contractor design elements
* Provide building services design model including appropriate geometric and object information. And compliant with the Project’s BIM requirements.

### Stage 5: Construction

* 1. Examine installation Information, fabrication information and Builders’ Work Details submitted by Contractors and/or sub-contractors for the Works or parts thereof, in respect of the design intent and compliance with performance criteria and to assess any health and safety issues.
  2. Part-time engineering supervision on a visiting basis, varying in accordance with the site activity on site, but broadly, average once a fortnightly over the contract period when the structural and civil works are being undertaken.
  3. Making such visits to the site as the consultant shall consider necessary to satisfy himself as to the performance of the contractor or any sub-contractors and to determine that the works are executed generally according to the consultant's design.
  4. Performing any services which the consultant may be required to carry out under any contract for the execution of works including where appropriate the witnessing of any specified tests or inspection of works or samples.
  5. Delivering upon request to the Client on the completion of the works copies of the drawings prepared by the Consultant for the purpose of constructing the works, for inclusion in associated warranty documents.
  6. Examine the proposals of Contractors or sub-contractors for carrying out user training relating to building systems.

**Core Deliverables for structural and civils design:**

* Completion of deliverables notes above.
* Undertake Site inspection and provide reports
* Review and comment on Design Data and contractors’ technical submissions.
* Provide completion observation report.
* Provide comments on draft Record Information and operating and maintenance manuals.

### Stage 6: Handover and Close Out

* 1. Inspect the Works on completion and, in conjunction with any Site Staff, record and report any defects observed.
  2. 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 Work.s

**Core Deliverables**

* Provide completion defects list.
* Provide comments on Record Information and operating and maintenance manuals.
* Inspect Works on completion of the Contractor’s defects liability period and, in conjunction with any Site Staff, record and report on observed defects.
* Provide completion letter

### Stage 7: In Use

* 1. Conclude activities listed in Handover Strategy including Post-occupancy Evaluation, review of Project Performance, Project Outcomes and Research and Development aspects and any other duties reasonably requested by the Client.

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