



SCHEDULE OF SERVICES – LOT C10 MECHANICAL & ELECTRICAL (M&E) ENGINEERING CONSULTANCY

Specific Requirements

For the purposes of this agreement, the M&E Engineering design shall comprise all such services as required under the site-specific requirements of the Employer's Requirements and Contractor's Proposals. The M&E Engineer will ensure that all matters that may affect the completed building, occupation and use are incorporated into the design process as the work proceeds.

Typically, M&E Engineers are to be appointed to ICN's framework to provide M&E engineering services from project appraisal up to appointment of a Principal Contractor as required by individual project requirements. Principal Contractors will then take on the responsibility for M&E engineering design. ICN members can novate M&E Engineers to Principal Contractors. ICN members consider there are benefits in retaining a consistent design team throughout the Contractor's design phase.

The M&E Engineer is required to produce drawings, specifications and any other information required by an individual ICN member in relation to the mechanical, electrical and plumbing requirements of a proposed project. The M&E Engineer shall also verify that any design, drawing or technical approvals submitted by any other person including but without limitation any Specialist Designers, Sub-Contractors or specialist suppliers acting on behalf of the Contractor, the Employer or the Employer's Agent before or after the date of this Agreement are in accordance with the Employer's Requirements and the Contract, and the Consultant shall ensure that such designs, drawings or technical approvals are checked and coordinated with the overall design ambition.

The M&E Consultant services will be provided in connection with the following:

Mechanical – Heating, ventilation, fire suppression systems, domestic hot and cold water, lifts, above ground drainage and utility coordination.

Electrical – Lighting, emergency lighting, small power, smoke detection, fire panel, security, lightning protection, mains distribution and utility coordination.

In carrying out the services, the consultant shall address all communications, including advice to the Employer.

ICN is committed to Equal Opportunities, and you will be expected to uphold the spirit of this commitment in all your dealings on behalf of each ICN member.

The appointed practice shall demonstrate reasonable skill and care as is expected of a person deemed competent to undertake the role.

The M&E Engineer will provide all of but not be limited to the following services:

	Description of Services
<u>General Services</u>	
1.	The Services shall be carried out with reference to not only to the Building Contract but also with reference to other contracts for construction, demolition, landscaping, refurbishment, fitting out or any other works or relevant documents specified by the ICN client relating to the Project.
2.	The Consultant shall provide all the usual services to be expected of a consultant of the relevant discipline with experience of projects of a similar size, scope, complexity, and location to the Project with the standard of skill, care and diligence specified in this appointment.
3.	Coordinate all information and agree with the consultants and the ICN client such formal communication procedures, as maybe necessary to ensure the prompt, proper and uninterrupted progress of the project.
4.	Co-ordinate, control and monitor the services provided by other consultants which relate to the utilities, performance specifications and design; consulting with the Employer's Agent, Architect and advising the ICN client generally.
5.	Provide all advice and take all actions necessary to ensure compliance with The Construction (Design and Management) Regulations 2015 (as may be amended from time to time) but the Consultant is not required to act as The Principal Designer for the project.
6.	Advise on the need to carry out any special surveys, special investigations or model tests. If instructed by the ICN client arrange for such tests; to be carried out under the consultant's direction and supervision; advise on the results.
7.	Issue regular Engineers' design development / information production programme updates, updating as necessary; ensure such programmes co-ordinate with other consultants' programmes and the pre contract Programme of Works; notify the ICN client immediately if any conflict of programmes occurs and advise thereon.
8.	The Consultant will as far as is possible ensure that no material or component is used in the design or construction of the project which is generally known or suspected within the construction industry at the time of use to be deleterious to health or safety or to the durability of the project in the particular circumstances in which the same is used or specified and the Consultant will notify the ICN client as soon as is reasonably practicable if any materials that it has that it has specified for the project become classified as deleterious during the course of the project.
<u>Services in connection with performance specification</u>	
9.	Develop building services designs for the project by liaising with the ICN client and the project team and provide information when reasonably required.
10.	Advise the ICN client on any matter related to the design of the utilities and

	creation of the performance specifications.
11.	Investigate data and information relating to the project and relevant to the performance specifications and consider any reports relating to the project. Report to the ICN client on preliminary technical appraisals.
12.	Prepare such documents as are reasonably necessary to enable the ICN client to consider the consultant's general proposals for the performance specifications in the light of any investigations carried out.
13.	Establish, in consultation with the ICN client and with local, statutory, and other authorities as necessary, general considerations affecting the choice of energy sources, considering environmental factors, consider and select the most suitable and cost-effective system for the performance specifications to be included in the project.
14.	Review the requirements of the Fire Engineer and Acoustician and integrate into the design specifications.
15.	Consider the ventilation strategy required and how this is to interact with the building façade, external noise criteria and thermal constraints (u-values). Apply previously used and proven design techniques to achieve a design solution.
16.	Consideration of air quality and the effect this will have on the supply air arrangements, apply previously used and proven design techniques to achieve a design solution.
17.	Advise the ICN client on the preferred outline design solution for the performance specifications and obtain ICN client approval. Provide any documents, costs in use, energy and maintenance options, or other document necessary to clarify the outline design solution.
18.	Assess and prepare schedules of power, heating, and cooling loads as applicable; confirm with the project team the insulation and glazing standards for use in SAP calculations.
19.	Analyse the Employer's Requirements; prepare, describe, and illustrate outline performance specification design of the project including the location of plant and major distribution routes and their physical properties.
20.	Produce finalised performance specifications for all elements of the mechanical and electrical requirements of the project.
21.	Provide all information and advice on or about the performance specifications as may be necessary for the purpose of enabling tenders to be obtained; produce and issue documentation, drawings and other information to tenderers if required.
22.	Consider the spatial and zone requirements of the M&E services and ensure routing through the building is co-ordinated and achieved.
23.	Provide sufficient information in the performance specifications to enable other consultants to produce their sketch plans, estimates and reports, including cost saving options/ Value Engineering exercise undertaken with the ICN client and Employers Agent.
24.	Advise on conditions of contract, Employer's Requirements, Contractor's Proposals, and other tender documentation which may be relevant to the performance specifications.
25.	Review and advise on the adequacy of the Contractor's design solution for the utilities as set out in the Performance Specifications.

Services in connection with utilities...	
26.	Carry out a survey of sites or existing works including the calculations of existing supplies and/or loads; report as required by the ICN client / Local Authority.
27.	Investigate the nature and strength of existing utilities; advise on the desirability of model tests or special investigations. If requested by the ICN client arrange and supervise such tests or investigations and advise on the results.
28.	If required consult and meet with any local, statutory, or other authorities on any matter related to or in connection with the utilities.
29.	Develop the design of the utilities in collaboration with other consultants; prepare calculations, drawings, reports, estimates and specifications of the utilities to enable the design to be progressed and a bill of quantities, employer's requirements or other documents to be prepared.
30.	Consult any local, statutory, or other authorities in connection with the design of the utilities; prepare and submit details and calculations as required, including details and calculations concerning any works to be carried out beyond the boundary of the site.
31.	Ensure that all local, statutory, and other authorities are advised of the utility requirements of the project, including the diversion and/or extension of existing utilities into or within the site.
32.	Carry out work in connection with any application by the ICN client for any order, sanction, licence, permit or other consent, approval, or authorisation necessary in connection with utilities.

Deliverables / Outputs

RIBA Stage 2	
1.	MEP RIBA Stage 2 Report
2.	SAP Calculations
3.	BRUKL Calculation
RIBA Stage 3	
4.	General tender information, common parts, risers, plant rooms, modify and refine layouts / room types, refine energy strategy from planning documentation, confirm utility loads and progress design, confirm space and volume study, define electrical layouts, progress commissioning review and documentation.
5.	Prepare a detailed design brief to define the MEP room layouts etc. This would also include IT (if required).
6.	Report on the utility strategy, the servicing of any public realm, the energy strategy including the requirements and route to compliance with SAP L1A renewables strategy.
7.	Report on a corridor overheating mitigation strategy.
8.	Full MEP Performance specification production.
9.	Thermal Model (TM59) / IES Model Geometry
RIBA Stage 4	
10.	Review, report on and approve that the Contractors RIBA Stage 4 M&E design meets the M&E Engineers proposed design intent at RIBA Stage 3.

This appointment is being executed as a deed. Documentation and guidance relating to matters arising from the Building Contract may be sought for the full term of the deed.