## Senior Building Performance Engineer (Energy/Thermal Modelling)

### Purpose of Job:

We are looking for an experienced thermal modelling and building performance engineer to join our team and deliver sustainable, comfortable and low-energy buildings across a range of sectors. The role would be based in our London office (Euston, Camden).

This role offers excellent careers progression opportunities, with a quick route to joining the team’s senior management group.

Candidates should be able to demonstrate technical and practical knowledge of building physics, passive design, mechanical engineering, HVAC systems and would have or be working towards, Chartered Engineer status.

Ideally, candidates will be an accredited Low Carbon Consultant and Low Carbon Energy Assessor (LCEA – Energy Performance Certificates Level 5) or be willing to be trained to this level.

### Duties and Responsibilities:

* Provide strategic low energy/carbon design advice with an emphasis on passive measures
* Undertake Dynamic Thermal Modelling using IESVE software, including operational energy modelling (TM54), comfort analysis (TM52, TM59), natural ventilation air-flow modelling, Building Regulations Part L assessments, and Energy Performance Certificates (EPCs)
* Undertake IES ApacheHVAC modelling of mechanical systems and their associated controls
* Prepare Energy Assessments for Local Authority approval as part of planning applications, particularly for GLA compliance.
* Undertake Operational Energy studies (TM54 and equivalent) to support NABERS, Net Zero Carbon and other similar project aspects.
* Undertake energy audits on simple and complex buildings
* Prepare Low and Zero Carbon (LZC) technology feasibility studies
* Drafting and reviewing reports
* Produce evidence requirements for BREEAM credits requiring thermal modelling outputs: Potential for Natural Ventilation, Thermal Comfort, Reduction of energy use and carbon emissions, Energy Monitoring, Low Carbon Design, etc.
* Support junior members of staff, through mentorship and line management
* Support team management through business development and preparing fee proposals
* Understand client needs, interpret and confirm the project brief

This list is not exhaustive and we would expect the successful candidate to be willing to undertake additional duties to support the team when necessary.

### Person Specification:

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|  | Essential | Desirable |
| Knowledge | Good knowledge of how buildings are built and operated and the processes that goes into their operation and design  Good experience in using IES virtual environment and Apache HVAC  Ability to apply theoretical principles to the practical design of building systems  Operational energy/carbon analysis and prediction of future energy/carbon consumption  Ability to navigate BMS systems and implement changes  Awareness of energy and environmental related EU and UK Directives , energy audits regulations and ESOS.  An appreciation of sustainable buildings and how this can reflect upon design principles.  Mechanical engineering background with a good understanding of: HVAC systems, BMS/Controls, energy use in buildings, energy / carbon benchmarking and renewable technology | Awareness of BREEAM standards and its impact on Building Services design  Understanding statutory and regulatory compliance requirements involved in the operation of a building and knowing the risk assessments and details that are required  Understanding of codes, standards, guides and technical reference material relevant to building services design and operation  Experience of optimising in use buildings & performing energy audits  Energy procurement  Digital tool development and reporting  CFD analysis |
| Skills | A strategic thinker with a proactive attitude and attention to detail as well as good problem solving and communication skills.  Capable of researching new ideas and technologies and look for opportunities to expand the business work stream.  Engage with operators, designers and sustainability consultants, in order to challenge and verify proposals.  Carry out reviews of colleagues work and provide feedback effectively  Excellent report writing and presentation skills  Excellent team working and inter-personal skills  People management skills, including line managing.  Time management and prioritisation.  Good communication within a team and externally with other companies /clients  Able to present and explain the thought processes and engineering processes behind their own work including excellent report writing skills  Enthusiastic approach to work and problem solving  Understanding of QA/QC procedures. | Programming languages and excellent digital skills  Business development skills  Fee proposal drafting |
| Experience,  qualifications and prospects | Qualifications:  BEng, BSc, MEng or MSc in relevant sustainability or engineering subject  Experience:  Demonstrable building energy knowledge skills gained with working in a Building Services environment, (must be associated with design of buildings and operational buildings. A minimum of 6 years’ post graduate experience, more experienced people would be considered.  Software:  IES virtual environment, PowerBI, Python  Microsoft office | Software:  CFD software |
| Attributes and  Personal characteristics | Logical thinker, scientific and analytical – having an engineering approach to problem solving  Methodical, flexible attitude to work  Works on own initiative but equally can contribute to the team.  Approachable and personable.  Commitment to maintaining high quality standards with an eye for detail. | An interest in architecture, landmark buildings and new technologies alongside sustainability |