

## Role summary

We are looking for an Environmental Design Analyst with expertise in Energy Modelling to join our growing Environmental Engineering Department. You will conduct research and simulation on the energy, thermal, comfort, and operational carbon aspects of the built environment. To contribute to the Practice's sustainable planning, master planning, benchmarking and strategic sustainability output for projects

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## Role definition

**Job Title:** Environmental Design Analyst (Energy Modelling)

**Reporting to:** Partner on a day-to-day basis and ultimately to the Senior Partner

## Responsibilities

- Conduct research and simulation on the energy, thermal, comfort, and operational carbon aspects of the built environment.
- Advise and support design teams in the integration of environmental design concepts and the assessment of building performance.
- Liaise with other members of the team towards the integration of energy efficient/low carbon solutions in shaping architectural form and guiding the environmental system design.
- Work with cost consultant to undertake cost benefit analysis of different sustainable strategies and advanced system options to recommend the optimal solution.
- Support design teams in the use of environmental simulation tools.
- Devise methodologies for analysis and visualisation of specific environmental design problems.
- Present analysis results in the form of reports and presentation to clients and design teams internally.
- Thorough knowledge of and compliance with Foster + Partners procedures and standards.
- Contribute, or otherwise assist, as required.

## Qualities and skills required

- Able to demonstrate ability to undertake the above responsibilities
- Legally able to work in the country in which the position is based
- Experience in a related field (Energy Modelling and Building Physics) for minimum of 3 years
- Master's degree in Environmental Design or equivalent relevant experience
- Chartered or Registered to a professional board (C.Eenv, C.Eng, MCIBSE, MIE, MIEMA...), or working towards this status
- Advanced proficiency in at least one of the following tools/ software packages: IES-VE (compulsory), Energy Plus, OpenStudio, Grasshopper Honeybee Energy Modelling
- Experience in carrying out thermal simulations/ analysis following the "ASHRAE 90.1 Appendix G", "Building Regulation Part L" approach, CIBSE TM52 overheating assessment, and CIBSE TM54 energy modelling guidelines and benchmarks
- Experience in operational carbon calculation principals (ideally in an international context)

- Good understanding of bioclimatic, low-energy and passive design of buildings, including CIBSE AM10 Natural Ventilation sizing methodology
- Good understanding of building services and mechanical systems and their energy modelling approaches
- Excellent knowledge of Low and Zero Carbon technologies and their application to the built environment
- Capability to resolve environmental problems using building physics as a basis
- Understanding of Environmental Assessment procedures (BREEAM, LEED etc)
- Good understanding of application and integration of renewable technologies
- Ability to disseminate research knowledge to the Practice
- Enthusiasm to pursue Environmental Design and Analysis as the central part of the individual's career development
- Good communication and presentation skills
- Able to demonstrate initiative and a proactive approach to daily tasks
- Able to work under pressure and to tight deadlines
- Excellent organisational skills
- Able to manage sensitive and sometimes confidential information
- Self-motivated and able to take responsibility
- Able to manage and prioritise tasks and time efficiently
- Good interpersonal skills and able to work independently and as part of an effective team
- Flexible attitude
- Able to build relationships at all levels, internally and externally

## **Desirable**

- Proficient in Computer Aided Design and 3D modelling, preferably Rhino and Revit
- Knowledge and experience in soft landing and other 'build-to-perform' methodologies, including but not limited to NABERS UK, Post-Occupancy Evaluation (POE), etc.
- Experience in thermal bridge modelling using THERM software
- Experience in detailed glazing properties calculation using LBNL Optics and Window packages
- Actively participating into the advisory groups of the leading energy modelling standards/guides such as LETI UK, NABERS, etc.
- Very Good to Excellent Graphic skills
- Experience in coding environment (including but not limited to Python, Excel VBA and C++)
- Knowledge in using Computational Fluid Dynamics (CFD) suites
- Experience in the use of the following tools/ software packages: Radiance, InDesign, Excel, Power BI
- Professional accreditation preferred: LEED, BREEAM, WELL, Estidama, GSAS, etc.

This description reflects the core activities of the role but is not intended to be all-inclusive and other duties within the group/department may be required in addition to changes in the emphasis of duties as required from time to time. There is a requirement for the post holder to recognise this and adopt a flexible approach to work. Job descriptions will be reviewed regularly and where necessary revised in accordance with organisational needs. Any major changes will be discussed with the post holder.