

Role summary

Foster + Partners are an integrated architectural + engineering practice, committed to delivering sustainable and environmentally responsive projects that reflect the targets of The Paris Agreement.

Our teams are focused on delivering net-zero energy and carbon solutions, net positive water systems, climatically resilient responses, the protection of natural resources, integration and expansion of green/ blue infrastructure, and providing sustainable urban planning for our projects around the world.

We are looking for a new member of the team to bring their experience and enthusiasm in the delivery of innovative and sustainable solutions to all our projects around the world.

The ideal candidate will be experienced in performance engineering and computational analysis, with a focus on net zero solutions. With a passion for sustainability and collaboration, you will be responsible for the development of environmentally responsive and energy efficient design solutions for projects around the world.

Role definition

Job Title: Senior Environmental Design Analyst (Performance Modelling)

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

Responsibilities

- Provide leadership in the development and demonstration of net zero performance for Foster + Partner projects
- Undertake computational simulations to deliver improved performance in all aspects of the built environment, including energy performance, thermal comfort, microclimatic, and health and wellbeing.
- Advise and provide support to design teams, from the integration of environmental design concepts during the design stages to the detailed assessment and analysis of a building's operations.
- Liaise with other members of the team towards the integration of energy efficient/low carbon solutions in shaping architectural form - - towards our Net Zero future.
- Continued our development of energy tools for all scales of development – from individual buildings to new campus and cities.
- Support design teams in the use of environmental simulation tools.
- Devise methodologies for analysis and visualisation of specific environmental design challenges and their solutions.
- Continue to evolve the clear and informative representation of environmental analysis results, including presentations, visuals/ diagrams, videos, and interactive reporting to both clients and Foster + Partner design teams.
- Contribute, or otherwise assist, as required
- Thorough knowledge of and compliance with F+P procedures and standards

Qualities & Skills required

Essential

- Able to demonstrate ability to undertake the above responsibilities
- Legally able to work in the country in which the position is based
- Clear and demonstratable experience in advanced Energy Modelling and Building Physics, notionally with 5 or more years of experience

- Master's degree in Environmental Design or equivalent relevant experience
- Chartered or Registered to a professional board (C.Env, C.Eng, MCIBSE, MIE, MIEMAetc), 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 ASHRAE 90.1 (Appendix G) , Part L of the Building Regulation, CIBSE TM52 and TM59 for overheating assessment, CIBSE TM54 energy modelling guidelines and benchmarks, and NABERS UK.
- Experience of and continued research into operational energy calculation principles and protocols
- Good understanding of bioclimatic, low-energy and passive design solutions, including CIBSE AM10 Natural Ventilation sizing methodology
- Good understanding of building services and mechanical systems, and approaches to their accurate performance modelling
- 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
- Good communication and presentation skills
- Able to demonstrate initiative and a proactive approach to daily tasks
- Ability to work with clarity 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, UK Net Zero Standard etc.
- Good Graphic and Illustrative skills
- Experience in the coding environment (including but not limited to Python, Excel VBA, and C++)
- Knowledge and practical delivery of Computational Fluid Dynamics (CFD) analysis
- 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.