TROUP BYWATERS + ANDERS

Energy Engineer (Thermal Modelling)

Cardiff

Purpose of Job:

We are looking for an ambitious dynamic Energy Engineer to join our Energy team to deliver sustainable and low-energy design projects, based in our Cardiff office.

Candidates should be able to demonstrate relevant skills and experience in the energy services sector, have a strong technical and practical knowledge of mechanical engineering, HVAC, renewables systems, Net Zero Carbon (NZC) Buildings and would be degree qualified and have attained, or be working towards, Chartered Engineer status.

Duties and Responsibilities:

+ Provide strategic low energy design advice with an emphasis on passive measures
+ Undertake Dynamic Thermal Modelling using IESVE software, including comfort analysis, natural ventilation air-flow modelling, Building Regulations Part L assessments, and Energy Performance Certificates (EPCs)
+ Prepare Energy Assessments for Local Authority approval as part of planning applications
+ Undertake energy audits on simple and complex buildings
+ Prepare Low and Zero Carbon (LZC) technology feasibility studies
+ 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 senior members of staff in client and design team relationships
+ Understand client needs, interpret and confirm the project brief
+ Commit to supporting the strategic company sustainability policies and the internal environmental programme objectives.

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.

Training Programme requirements:

+ Commit to goals and objectives of a career development programme including attendance of in-house and external technical and non-technical training
+ Commit to achieving or maintaining Chartered Engineer status through relevant professional institution
+ Support the development of team members and undertake the mentoring of members of the engineering team
+ Familiarise and learn about sustainable low energy initiatives and to share this with other members of your team and wider within the Partnership

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Person Specification:

	Essential	Desirable
Knowledge	Awareness of energy and environmental related EU and UK Directives / Regulations. Good knowledge of Photo Voltaics (PV) and Heat Pumps and Combined Heat and Power technology. 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, and energy / carbon benchmarking.	Sound knowledge of how buildings are built and the design process that goes into their design.
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 designers and sustainability consultants, in order to challenge and verify the design process. Excellent team working and inter-personal skills. Time management and prioritisation. Able to present and explain the thought and process behind sustainability requirements.	
Experience, qualifications and prospects	<u>Qualifications:</u> + BEng, BSc, MEng or MSc in relevant sustainability or engineering subject <u>Experience:</u> + Accredited Low Carbon Consultant <u>Software:</u> + IES thermal modelling including modules such as Apache Sim, VECompliance and Macroflo.	Low Carbon Energy Assessor (LCEA – Level 5) or be prepared to be trained to attain this level. Experience using CFD software (e.g. IES Microflo)
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.