



Business area: Nuclear and Power

Requirements:

Minimum 2.2 Bachelors/BEng degree in Mechanical Engineering, Building Information Modelling (BIM), Mechatronics or other mechanically focused degrees.

Our teams and what they do

Bristol

Based here you'll find yourself working on projects primarily in the civil nuclear industry. We deliver solutions to complex problems across the full lifecycle of nuclear, which ranges from design through to site-based engineering support, our work is wide ranging and includes:

- Engineering services to support the continued safe operation and end-of-life of the UK nuclear fleet as part of the Technical Support Alliance for EDF Energy Nuclear Generation.
- New build projects supporting the design and construction at Hinkley Point C (HPC) and Sizewell C (SZC).
- Decommissioning projects including support to the Magnox fleet; and to other clients such as HMNB Devonport and AWE.
- Engineering design, consultancy and project management services to the next wave of nuclear reactors comprising small modular reactors, advanced modular reactors and nuclear fusion.

We are looking for candidates from a Mechanical Engineering or mechanically focussed background. Whichever team you join you will be making an important and rewarding contribution to the energy and environmental security of the UK and beyond, with great opportunities to develop while delivering client work that contributes directly to the UK's Net Zero targets. In the Bristol office you could work in one of the following groups:

Plant Systems and Safety

The Plant Systems and Safety group supports clients with the changes to design and operation of nuclear power plant mechanical systems. The work is focused primarily on the operating Advanced Gas Reactor and Pressurised Water Reactor nuclear power plants in the UK, ensuring their continued safe operation and transition to end-of-life. There are a variety of opportunities and secondments available to work at client sites, within offices or at station. The group has a close working relationship with our clients, and you will have the opportunity to engage with our clients from the start of your career. Technically our work is broad and you could be involved in the following areas: safety case development, engineering design and substantiation, hazard assessment and project management. Everything we do centres around a safety conscious approach to work, requiring an attention to detail and methodical work process. We learn to apply a questioning attitude to all aspects of work which is facilitated by an inclusive and supportive culture within our team.

Design and Analysis

The Design and Analysis group specialises in novel design, substantiation, and integrity assessment of systems in a wide range of temperatures and environmental conditions, often pushing the boundaries of current assessment techniques to achieve life extension of critical infrastructure. Our team has core capabilities in mechanical analysis, mechanical design, materials and corrosion and automation & tool development. Project work is predominantly nuclear focussed but there are also opportunities to undertake technical work within our wider energy portfolio such as net zero energy. The constant in our work is the challenging nature of the jobs and the chance to provide innovative solutions to a range of problems for our clients.

Reactor Decommissioning

The Reactor Decommissioning group works across numerous plant areas, each with different technical challenges, but with a focus on nuclear decommissioning and waste management. Project work can include design and assessment of Intermediate Level Waste (ILW) and Low Level Waste (LLW) retrieval and processing techniques, packaging of waste for transportation and long-term storage, assessment of existing plant and support to the planning and infrastructure required for decommissioning. You will be expected to help define the problem, identify an appropriate methodology (utilising both traditional and latest digital technologies), and justify the optimum solution.

Integrated Engineering Solutions

The Integrated Engineering Solutions group is a multi-disciplinary team of Mechanical, Electrical, Building Services and Project Engineers who work across all stages of the project lifecycle from new build to decommissioning to deliver multi-disciplinary packages of work on key facilities, systems and components across the full spectrum of Nuclear Power. As a mechanical engineer working out of the Bristol office you would be working in roles related to the design, analysis and assessment of Heating, Ventilation and Air Conditioning (HVAC) systems and Mechanical Process systems. These can be stand-alone technical tasks or part of large multi-disciplinary projects. Work is varied and can involve working both in a specialised mechanical capacity as well as across and alongside other engineering disciplines.

New Nuclear Technologies

The New Nuclear Technologies team is looking to the future. You will have the opportunity to join a growing and inclusive team to work across our New Nuclear Technologies portfolio which includes fusion energy projects, SMR (Small Modular Reactor)/AMR (Advanced Modular Reactor) projects and other advanced reactor technologies. All of this demands using core mechanical principles to deliver solutions to problems that have not yet been broached in the nuclear engineering industry.

As part of the team, you'll be empowered and encouraged to take part in a variety of work such as technical projects, project management, commercial projects and/or business development projects either in support of one or several clients; allowing early career engineers to guide their own career progression. We have worked on a variety of projects at the forefront of the nuclear industry such as working with the UK Atomic Energy Authority (UKAEA) on their Spherical Tokamak for Energy Production (STEP) and Hydrogen 3 Advanced Technology (H3AT) or the International Thermonuclear Experimental Reactor (ITER) based in the south of France as we aim to deliver different pathways for commercially viable fusion energy.

Across our portfolio, you'll be involved in the optioneering, design, analysis, and assessment of fusion relevant technologies and systems, whether that be on stand-alone technical tasks or as part of large multi-year consultancy support contracts. By working closely with our UK and international clients, you'll be building strong relationships, developing a comprehensive understanding of their requirements, and delivering cost effective and innovative solutions. You'll also take a proactive role within projects, co-ordinating within teams and providing technical assistance and shadowing senior engineers.

Glasgow

You'll find yourself working primarily on projects in energy systems assets market. Our portfolio of projects encompasses asset integrity, design, and assurance for a variety of clients across a broad spectrum of facilities ranging from district heating, biomass, gas and Combined Heat & Power networks to large scale generation plant, gas and oil storage and decentralised energy assets. The broad nature of the energy systems assets project portfolio means you will be working on a variety of projects ranging from large interdisciplinary design and construction projects to supporting clients with discipline specific technical advice. The teams and projects you will be working with are at the core of the company's long terms focus on diverse, clean power generation and have an emphasis on achieving net zero, your work will be an important part of this.

Accountabilities will include performing engineering calculations to support design and assess systems, performing stress analysis of plant equipment, carrying out site surveys, and producing technical

reports. There is the potential for significant time spent on site engaging with clients, inspecting plant, and deploying a range of cutting-edge digital tools to capture site information. We're looking for candidates who have a keen interest in structural & mechanical design and analysis, pressure and pipework systems or rotating equipment working across all of the various energy sectors with a Mechanical Engineering degree or an integrated Mechanical and Electrical Engineering degree.

A desire to learn and develop your technical understanding to apply mechanical engineering concepts to provide solutions to our client's complex problems is key. Being a committed and trustworthy team player with integrity, exhibiting a desire to ensure quality and do the right thing, is essential to maintaining our client relationships and strong company reputation. In return you will have the opportunity to be involved in projects at the forefront of the Net Zero energy transition, deploying cutting edge digital tools and technology solutions that will keep you developing skills that ensure you will have a fulfilled and relevant career.

Sheffield

Based in our brand-new city centre office in Sheffield, our Mechanical Design team develops solutions to advanced mechanical handling problems and provides mechanical engineering expertise to clients across multiple industries. The team enjoys a particularly diverse work stream, working across many sectors such as Nuclear Generation, Defence, Nuclear Decommissioning, Nuclear New Build, Transportation, Water, Offshore and more.

Day-to-day you can expect to work collaboratively with a supportive international team, based both in our own office as well as client sites. As a graduate engineer in this team, you will develop design specifications, produce design and substantiation calculations, and write technical reports underpinning our design solutions. Throughout your project work you will apply your technical skills and knowledge to develop innovative designs and solutions.

Whitehaven

You'll be part of a forward thinking, highly innovative Mechanical team working at the cutting edge of digital design and pushing the standard norms of how engineering projects are delivered in the 21st Century. Working on some of the most complex and challenging decommissioning projects within the Nuclear industry from initial concept through to detailed design and delivery, you will find the work diverse, immersive and ultimately very rewarding. The ideal candidate will have an interest in static and dynamic mechanical loading and have a real passion for 3D digital innovation and 3D modelling with a vision for how this can shape the future of engineering.

For Whitehaven, we are looking for candidates who have specific experience in mechatronics or robotics only. Please only apply if this is the case.

Locations for this business will include:

- Bristol
- Derby
- Epsom
- Glasgow
- Sheffield
- Warrington
- Whitehaven

To apply, please return to the main job specification