

JOB DESCRIPTION

Job Title: Graduate Building Services Engineer

Business Line: Building Engineering

Locations: All UK & Ireland

Salary: Competitive

JOB SUMMARY

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A *Fortune 500* firm, see how we deliver what others can only imagine at aecom.com and @AECOM.

AECOM is one of the world's largest professional engineering consultancies, bringing a comprehensive portfolio of building services and engineering skills to projects encompassing all types of building and use from World Class Sporting Venues through to Commercial Properties, Healthcare & Research, Hotels, Industrial & Manufacturing, and Infrastructure both in the UK and increasingly overseas.

Building services engineers work closely with the design team to ensure the projects we create together sustainably perform to the brief and budget. Increasingly we work with our other internal business lines such as Architecture, Environment, Transportation, and our own Project Managers to provide a one stop solution to our clients. If you can bring passion and flair to our work, have a real interest in improving the built environment and want to now apply your engineering skills to the real world then we want to hear from you. Our Building Services Disciplines Include:

Mechanical Engineering - The quality of a building's internal environment plays a significant role in determining its fitness for the purpose for which it was designed. The mechanical engineer by the application of modern control technology allied to energy efficient heating, ventilation and air-conditioning systems, allows occupants to vary conditions within the building although this all starts with working with the architect to ensure the buildings form is sufficiently thermally efficient to enable energy targets to be met or exceeded.

Electrical Engineering - We deliver expert thinking to drive efficient solutions for High and low voltage power supplies, utilities, standby generation, UPS, resilient systems, small power, fire alarms, security, lighting and power. We pay attention to critical systems and resilience levels.

Public / Environmental Health Engineering - Water is life. Energy and water efficient solutions are delivered for hot and cold water systems, solar thermal, sprinklers, drainage systems, water treatment, fire suppression and irrigation systems as well as sophisticated water reclaim and recycling systems for optimum water conservation and Sustainable Drainage Solutions (SuDS)/Water Sensitive Urban Design (WSUD).

(Within Building Engineering we are also looking for specialists in IT, Security, CFD/Building Physics, Fire, Lighting, Building Structures, Façade Engineering & Acoustics.)

Examples of projects the Building Services team are involved in include:

- **Forbury Place, Reading** – AECOM were involved with the development of two new-build office developments totaling circa 400,000 sq ft. Building 2 has recently won the prestigious BCO regional award and has been put forward for the national finals. The offices were completed to category A standard, achieving BREEAM Excellent, EPC A rated and Wired Scope Platinum. Sustainable features include 700m² photovoltaic panels (350m² per building), air source heat pumps and rainwater harvesting.
- **Medical and Dental Facility, RAF Valley, Anglesey, Wales.** The detailed design and specification for a new facility based on the RAF site on Anglesey in North Wales. The building services needed to be designed in accordance with the usual British Standards and Building regulations as well as incorporating relevant parts of the Health technical Memoranda (HTM's) as required for compliance with Hospital standards. Further, to this, the facility also had to comply with the JSP Guidelines for MOD establishments in the UK. The project was delivered in 3D to aid with clash detection and coordination with the building and structural elements
- **Westferry, Isle of Dogs** – 11 residential blocks ranging up to 40 stories with large dock heating and cooling scheme. We are providing MEP services, security, ICT, lighting, sustainability, noise & vibration monitoring, fire, acoustics & air quality
- **Old Bailey, London** – Major plant replacement for central plant, including lifts. Project going on over 11 years in phases whilst the site is occupied and fully operational. AECOM are providing MEP services, lifts, and structures.
- **Broadway Development, London** – Mixed use high end residential with offices and retail. AECOM are providing MEP services, fire, acoustics, and sustainability.
- **Birchwood, Cambridgeshire** – Office and lab facility comprising of a campus of 4 separate buildings including offices, conference room building, forum containing canteen and presentation suite, and tech barn. Centralised ground source heat pumps and PV. AECOM are providing MEP services, fire, acoustics, sustainability, transport, air quality, lighting, ICT & security
- **TU Dublin West Quad Business School, Grangegorman** - This project will feature a range of specialist and shared learning spaces which will cater to the needs of a changing third level education environment for the College of Business. This project includes dynamic thermal modelling and natural lighting BER A3 - NZEB, sustainable design, full mechanical and electrical detailed design, to include a wide range of specialist services. Part of what will be the Academic Hub of the new TU Dublin Campus, the West Quad building will be ideally located to the co-habited DCC and Campus libraries, student housing and the west side of the Grangegorman campus site.

JOB RESPONSIBILITIES

When a graduate starts with us we pair them with an experienced engineer who will guide and mentor them through their initial period working on live projects.

The following description lists a fairly typical approach to foundational training in your discipline; however, business needs, project task availability, and your training interests will also influence the scope and order of training. For your first year you will learn the following skills:

- Variety of analyses for different buildings from Offices to Hospitals to Data Centre's and Hotels
- AECOM standards and symbols
- Microstation, AutoCad and REVIT
- Load calculation and Modelling software
- How to use Technical Practice Network
- Learning to navigate through codes and/or guidelines
- Complete our Safety Training

Job responsibilities:

- System load calculations to enable central and secondary plant to be accurately sized
- Ensuring plantrooms and distribution routes are adequately sized
- Report writing for the appropriate RIBA stage
- Compiling technical specifications appropriate for the system components selected
- Determining the best technical solution and evidencing reasoning.
- Working on projects using REVIT & AutoCad
- Giving structure to ideas – lots of 'taking a first pass' at spreadsheets, reports and analyses for discussion later rather than instruction
- Attending meetings and workshops, learning from listening, asking questions and discussion
- Working with people from other disciplines to gain knowledge on new subjects
- Assisting in developing our designs through the different stages
- Inspecting and monitoring installations during the construction phase.
- Taking on more responsibility in managing our projects from inception through to completion as the graduate role develops.

REQUIREMENTS

- An accredited Bachelor degree (min 2:1 or equivalent) in Mechanical, Electrical, Building Services, Architectural Environment Engineering or Public Health Engineering with honors, **plus** either an appropriate Masters degree or Engineering Doctorate (EngD) accredited by a professional engineering institution or an accredited integrated MEng degree, to pass or higher. Accreditation being with CIBSE, IMechE or IET.
- Good Bachelor's degrees may be acceptable for an Electrical or Public Health Engineering position depending on an applicant's other merits.
- Maths and Sciences A-Levels (or equivalent) would be advantageous, at grade 'B' or above
- Microstation, AutoCad and/or Revit would be advantageous
- Relevant Industry related work experience would be advantageous

TRAINING

Our Graduate Development Programme (GDP) along with our huge scope of projects across the globe will challenge and inspire you to make a real difference to the world we live in. Our GDP forms a core part of our business strategy globally, designed to develop the best talent across numerous disciplines to lead our business into the future. We have over 750 graduates on our programmes across the UK & Ireland, from over 40 different disciplines, each and every one of them making a tangible difference to the environment we all live & work in.

We will provide you with all the tools and support you need to achieve your professional development ambitions, including Chartership with the relevant international professional institution – where we have graduates working towards over 30 professional institutions in the UK & Ireland. We will push you to achieve the highest standards and expect our graduates to pass their professional review first time. You will be assigned a mentor to support & guide your development, and undertake regular training modules throughout the programme. There will be on-the-job technical development and classroom training where required, and the opportunity to work on live client projects, with significant multi-disciplinary exposure.