

# BUILDING SERVICES ENGINEERING SENIOR TECHNICIAN (ST0041)

A building services engineering senior technician coordinates and manages the delivery of building services solutions and systems that are to be designed, manufactured, installed, or managed and maintained, within a building. They use and apply their advanced engineering knowledge and technical know-how to address building services problems, to prepare, analyse, produce and produce plans, designs and documentation, and to manage building services engineering tasks and their associated resources, to relevant codes of practice, and to industry and statutory standards.

## Core duties involve:

- **Building services engineering** – Use and apply their technical knowledge, underpinned by scientific principles and theories, propose numerous suitable techniques, procedures, and methods to undertake and deliver building services engineering solutions.
- **Information and data analysis** – Sourcing, reviewing, analysing, and evaluating a range of data and information, perform advanced calculations, and analysing building services engineering problems to reach proven solutions.
- **Communication** – Using digital technologies, such as CAD and BIM, to prepare, produce and present building services engineering information, designs and documentation to specifications, and to industry codes, practices and regulations.
- **Environmental impact and sustainability** – Consider the whole life cycle of a built asset, ensuring building

service engineering systems and projects align with United Nations Sustainable Development Goals (UNSDG), respond to net-zero emissions targets and are compliant with climate change acts, and environmental and sustainability policies and legislation.

## Key elements include:

- Working independently and as a member of a team. Informing and managing tasks, team members and resources within their allocation.
- Supervising and mentoring others (where appropriate)
- Applying appropriate project management knowledge and techniques.
- Ensuring safe systems of work are applied and risks mitigated.
- Using quality management and assurance systems, contributing to more complex projects.
- Working to improve the environmental, sustainability challenges, ethical conduct, and equality, diversity and inclusion.
- Carrying out and maintaining competence in line with professional codes of conduct.

## Approved training providers:



## Professionally recognised by:



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## Training programme:

- 30-month training plan.
- Entry with good A-levels (including Maths), BTEC in Engineering, or completion of the level 3, Building Services Engineering Technician apprenticeship typically sought.
- Minimum 20% off the job training including completion of:
  - Mandatory level 4 building services engineering qualification recognised by the Engineering Council.
  - Portfolio of evidence prior to EPA.
- Development of EngTech competence supported by on the job mentors.

## Four month EPA:

- Mandatory four month End Point Assessment (EPA) to complete apprenticeship
- EPA Gateway requires successful completion of training programme and portfolio.
- EPA includes:
  - Project set by EPA organisation.
  - Professional Interview with portfolio.
- Grades: distinction/pass/fail.
- Aligned to level 4 EngTech professional review process with CIBSE.
- Registered End Point Assessment Organisation: CIBSE.

## Funding band assigned:

£13,000 (increased from £12,000 in July 2022).

## Additional costs:

- Providers may charge employers above the funding band.
- Professional membership and Engineering Council registration fees (optional).

**Reviewed and re-approved:** Reapproved July 2022.  
First approved May 2018.

**Employers involved:** Arup, Atkins, Balfour Beatty, BDP, Canary Wharf Contractors, CBRE, Clancy, Crofton, CW

Contractors, Derry Building Services, Hoare Lee, Laing O'Rourke, Morgan Sindall, Mott MacDonald, St Mowden, Skanska, Static Systems Group, Tideway, Troup Bywaters and Anders (Chair), Waterman, WSP.

**Others involved:** BESA, Chartered Institution of Building Services Engineers (CIBSE)\*, Chartered Institution of Plumbing and Heating Engineers (CIPHE), CABE, CIOB, East Surrey College, Electrical Contractors Association (ECA), Institution of Engineering and Technology (IET), Institute of Healthcare Engineering and Estate Management (IHEEM), Leeds College of Building, London South Bank University, Solihull College and University Centre.

\*advised EPA organisations

## Technical Apprenticeship Consortium (TAC)

Association for Consultancy and Engineering (ACE),  
Leytonstone House, 3 Hanbury Drive, London, E11 1GA.  
T: 020 7222 6557 [www.acenet.co.uk/resources/tac/](http://www.acenet.co.uk/resources/tac/)

