



BUILDING SERVICES ENGINEERING SITE MANAGEMENT (DEGREE)

Reference Number: ST0040

Details of standard

Occupation(s)

The occupation covered by this standard is that of Building Services Engineering Site Management. Building Services are environmental systems in buildings such as electrical power, air conditioning, heating and lighting. Building Services Engineering Site Management staff lead the installation of complex environmental systems in construction projects. Typical job titles can include: Assistant Building Services Engineering Site Manager, Building Services Installation Manager or Project Engineer.

Occupational profile

The main duties and tasks of a Building Services Engineering Site Manager are:

- To ensure that safe systems of work are in place on their site and that all staff adhere to them
- To translate design information to construction teams so they can install the equipment
- To manage the productivity on the site so that the project is completed on time
- To ensure that the project is completed to the specification and quality needed by the client
- To manage the activity on site in a way that adheres to cost and contract constraints
- To ensure that the site has minimal negative impact on the environment and community
- To manage interfaces between stakeholders associated with the project

Requirements: Knowledge, Skills (and behaviours)

KNOWLEDGE

WHAT IS REQUIRED

Building Services Engineering Knowledge

Understand engineering principles, codes and standards including, but not limited to: electrical, mechanical, plumbing and building management systems

Building Services Engineering Solutions

Understand the client's needs and the practicality of using certain engineering solutions

KNOWLEDGE**WHAT IS REQUIRED****Building Services**

Understand design principles, building surveys, costing, risk analysis, sustainability, Health and

Engineering Techniques

Safety, buildability, contract law.

Project Management

Understand the project management cycle including the planning, budgeting, project funding

and payment processes

People and Resources

Understand principles of teamworking, staff co-ordination, supply chain management,

performance management and the development of people.

Quality Management

Understand the importance maintaining of quality standards, using records, systems, tools

and techniques for quality improvement.

Commercial and Legal

Understand budgets, costs, various forms of contract, procurement and record keeping and

Awareness

their impact on project success

Communication

Understand different forms of communication (written, verbal, electronic) and evaluate the

best solution for different circumstances

Working with Others

Be aware of the importance of good working relationships, the needs of others and equality

and diversity in the workplace

Safe Systems of Work

Understand obligations for Health, Safety and Welfare issues on site, how to identify potential

hazards and manage the risks

Sustainability

Understand the environmental impact of building services engineering activities and how to

minimise negative impacts during all stages of the project

Commissioning

Understand the importance of the commissioning process and be able to describe typical

commissioning activities to enable a building to function effectively

SKILL	WHAT IS REQUIRED
Building Services Engineering Knowledge and Understanding	To develop and apply practical engineering solutions using established and emerging building services technologies
Building Services Engineering Application	Be able to identify, review and select techniques, procedures and methods to undertake engineering tasks. Be able to contribute to the design, development and implementation of engineering solutions and evaluate their effectiveness
Management and Leadership	Be able to plan for effective project management, plan and organise resources, tasks and people. Be able to manage teams and staff to meet project requirements and be able to manage quality processes.
Commercial Ability	Be able to prepare and control budgets and apply statutory and commercial frameworks.
Health, Safety and welfare	Be able to identify and manage risks of health, safety and welfare in line with legislation, hazards and safe systems of work so that people are kept safe on site
Sustainable Development	Be able to manage engineering activities in a way that contributes to sustainable development and implements best practice.
Interpersonal Skills and Communication	Be able to communicate well with others at all levels and discuss plans and issues. Demonstrate personal and social skills and an ability to deal with colleagues and stakeholders in a way that enhances equality and diversity.
Commissioning	Be able to commission building services engineering products after installation to enable a building to function effectively

BEHAVIOURS	WHAT IS REQUIRED
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Take Responsibility	Be responsible for your own work and that of others.
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BEHAVIOURS**WHAT IS REQUIRED****Independent Judgement**

Exercise independent engineering judgement, take responsibility for actions and decisions and

and Responsibility

operate within the constraints of own skills and knowledge.

Complying with Codes of Conduct

Operate within the Chartered Institution of Building Services Engineers Code of Conduct and implement work activities within the context of industry issues. Promote ethical behaviour in others and promote the building services industry.

Maintaining CPD

Identify own development needs and take appropriate action to meet those needs. Use own knowledge and expertise for the benefit of others.

Duration

The typical duration for this apprenticeship is three to four years but this will depend on the previous experience of the apprentice and access to opportunities to gain the full range of competence.

Entry requirements

Individual employers will set their own selection criteria for this apprenticeship. As it requires achievement to Level 6 the typical entry requirements for this Apprenticeship will be the completion of the Level 4 Construction Technician Standard; EngTech LCIBSE status, HNC in Building Services Engineering or equivalent qualifications and commensurate experience.

Qualifications

The following qualifications will be gained:

- BEng (Hons) Building Services Engineering or equivalent Level 6 Building Services Engineering Diploma, mapped to UK-Standard for Professional Engineering Competence (UK-SPEC) for Incorporated Engineer
- Industry certificates in Site Safety Plus Site Managers' Safety Training Scheme and Site Environmental Awareness Training Scheme which are required for safe operations in the workplace
- English will be required to be demonstrated at Level 3 and Maths will be required to be demonstrated at Level 5. These may be demonstrated in the BEng(Hons).

Link to professional registration

This Apprenticeship will include the knowledge, skills and behaviours required to achieve Incorporated Engineer status with the Chartered Institution of Building Services Engineers and lead to the designatory letters IEng ACIBSE. The professional review process for IEng ACIBSE is included in the final assessment process for this Apprenticeship.

Level

This apprenticeship standard is at Level 6.

Review date

This apprenticeship standard should be reviewed three years after approval of the standard.

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