

CIVIL ENGINEERING SITE MANAGEMENT Trailblazer Apprenticeship Standard

Occupation(s)

The occupation covered by this standard is that of Civil Engineering Site Management. Typical job titles can include: Site Manager, Sub Agent, Assistant Site Manager or Section Engineer. They are associated with the management of civil engineering and infrastructure projects and are based on sites or in offices.

Occupational profile

The main duties and tasks in Civil Engineering Site Management 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 construct the project effectively and efficiently
- 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
Civil Engineering Knowledge	Understand engineering principles, codes and standards including, but not limited to: transportation, buildings, infrastructure, utilities and structures.
Civil Engineering Solutions	Understand the client's needs and the practicality of using certain engineering solutions to meet those needs, taking into account constraints and opportunities.
Civil Engineering Techniques	Understand design principles, building surveys, costing, risk analysis, sustainability, Health and Safety, buildability, contract law.
Project Management	Understand the project management cycle including the planning, budgeting, project funding and payment processes so as to lead to effective project delivery.
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 Awareness	Understand budgets, costs, various forms of contract, procurement and record keeping and their impact on project success, profitability and meeting the budget.
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 civil engineering activities and how to minimise negative impacts during all stages of the project

Skill	What is required
Civil Engineering Knowledge and Understanding	To develop and apply practical engineering solutions using established and emerging civil engineering technologies such as, but not limited to, new materials or off-site manufacture
Civil 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 to ensure profitability and adherence to budget.
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.
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. Be able to proactively transfer information to teams and staff.

Behaviours	What is required
Take Responsibility	Be responsible for your own work and that of others.
Independent Judgement and Responsibility	Exercise independent engineering judgement, take responsibility for actions and decisions and operate within the constraints of own skills and knowledge.
Complying with Codes of Conduct	Be able to operate within the Institution of Civil Engineers Code of Conduct and implement work activities within the context of industry issues. Promote ethical behaviour in others and promote the construction industry.
Maintaining Continuing Professional Development	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 and a high level of Maths the typical entry requirements for this Apprenticeship will be the completion of the Level 4 Construction Technician Standard; EngTech TMICE status; HNC in Civil Engineering or equivalent qualifications and commensurate experience.

Qualifications

The following qualifications will be gained:

- BEng (Hons) Civil Engineering or equivalent Level 6 Civil 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 for Incorporated Engineer status. These may be demonstrated in the BEng(Hons) Civil Engineering.

Link to professional registration

This Apprenticeship will include the knowledge, skills and behaviours required to achieve Incorporated Engineer status with the Institution of Civil Engineers and lead to the designatory letters IEng MICE. The professional review process for IEng MICE 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.