

## Overview

This national occupational standard is about investigating and assessing the factors that could affect a utility network design. It requires using a range of technical information sources and data, then assessing it before converting it into information which will be used at a later stage to produce a range of design options. It needs an understanding of how to interpret technical data and an ability to use a range of quantitative and qualitative analysis methods and techniques. The client can be either a 'developer-client' or 'adopting utility-client/asset owner'.

## Performance criteria

*You must be able  
to:*

### **Research and interrogate technical data and information**

1. outline the plan for carrying out the research
2. use and interpret utility network design specifications to determine where different types of data and information can be obtained
3. take into account company policy, procedures and guidelines to inform the data collection and its use
4. incorporate information produced by colleagues in other departments
5. retrieve data from databases, document control systems, libraries of standards, registers and archives of drawings and supporting documents
6. use software packages to store and handle the data collected
7. carry out comprehensive research of the legislative, operational, technological and utility implications
8. work within the job role and its responsibilities

### **Assess technical data and information**

9. assess the effects of operational implications determined through network models, method statements, work programmes, historical records, risk and operational maintenance cycles, and operating procedures
10. assess the effects of technological implications determined through national and international standards, manufacturing and customers specifications, procedures manuals, and operating parameters
11. assess the utility requirements for materials, safety, tolerances, physical dimensions, working and operational characteristics
12. assess geotechnical information to ascertain ground conditions and likely areas of contamination
13. address any impacts which might arise from future demand on the network
14. take into account, during the assessment process, final costs and time to produce
15. incorporate the implications of legislative requirements in the assessment equation

### **Interpret technical data and information**

16. interpret the assessments according to the design briefs which will be produced subsequently

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17. check the interpretation of results is valid
18. base the interpretation on results which can be shown to be as reliable as possible
19. show any distinction between the results and the interpretation placed upon them
20. prioritise the factors that will affect the design specification
21. highlight potential risks associated with factors which impact on the design briefs
22. draw attention to any unexpected outcomes

**Present technical data and information**

23. produce documentary information and offer verbal support where required
24. structure and present the information in a format which will be understood by the design team
25. support textual information with drawings, calculations, sketches, and schedules
26. present data and information using word processing and spreadsheet software

## Knowledge and understanding

*You need to know and understand:* **General**

1. UK legislative requirements for health and safety and the environment, standards, directives and guidelines, and working practices
2. UK standards, procedure manuals, and operating parameters
3. principles of design, including design data from the latest versions of uk standards
4. utility industry accepted working practices and industry guidelines
5. utility network engineering principles and processes
6. structure and content of client specifications
7. structure and content of manufacturing specifications

### **Specific**

8. analysis methods and techniques
9. company lines of communication and reporting procedures
10. how to address ethical issues and regulatory constraints
11. how to structure and present data and information
12. how to test the validity of interpretative techniques
13. how to use information sources and document systems
14. methods for confirming reliability of data
15. research methods and investigative techniques used commonly in the utility industry
16. risks associated with analytical techniques used and how to manage them
17. the legislative implications on operational, technological, and utility requirements

**Behaviours**

**You work in a manner which:**

1. responds positively and creatively to setbacks
2. takes pride in delivering high quality work

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**Originating Organisation** Energy & Utility Skills

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**Relevant Occupations** Engineering; Construction, planning and the built environment; Draughtpersons and Building Inspectors; Design Associate Professionals

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**Suite** Multi-Utility Network Design

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**Keywords** research methods, investigative techniques, risk, interpretation

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