

EUSMUND5

Assess factors that impact on utility network designs



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'.

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Performance criteria

You must be able to:

Research and interrogate technical data and information

- P1 outline the plan for carrying out the research
- P2 use and interpret utility network design specifications to determine where different types of data and information can be obtained
- P3 take into account company policy, procedures and guidelines to inform the data collection and its use
- P4 incorporate information produced by colleagues in other departments
- P5 retrieve data from databases, document control systems, libraries of standards, registers and archives of drawings and supporting documents
- P6 use software packages to store and handle the data collected
- P7 carry out comprehensive research of the legislative, operational, technological and utility implications
- P8 work within the job role and its responsibilities

You must be able to:

Assess technical data and information

- P9 assess the effects of operational implications determined through network models, method statements, work programmes, historical records, risk and operational maintenance cycles, and operating procedures
- P10 assess the effects of technological implications determined through national and international standards, manufacturing and customers specifications, procedures manuals, and operating parameters
- P11 assess the utility requirements for materials, safety, tolerances, physical dimensions, working and operational characteristics
- P12 assess geotechnical information to ascertain ground conditions and likely areas of contamination
- P13 address any impacts which might arise from future demand on the network
- P14 take into account, during the assessment process, final costs and time to produce
- P15 incorporate the implications of legislative requirements in the assessment equation

You must be able to:

Interpret technical data and information

- P16 interpret the assessments according to the design briefs which will be produced subsequently
- P17 check the interpretation of results is valid
- P18 base the interpretation on results which can be shown to be as reliable

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- as possible
- P19 show any distinction between the results and the interpretation placed upon them
- P20 prioritise the factors that will affect the design specification
- P21 highlight potential risks associated with factors which impact on the design briefs
- P22 draw attention to any unexpected outcomes

You must be able to:

Present technical data and information

- P23 produce documentary information and offer verbal support where required
- P24 structure and present the information in a format which will be understood by the design team
- P25 support textual information with drawings, calculations, sketches, and schedules
- P26 present data and information using word processing and spreadsheet software

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Knowledge and understanding

You need to know and understand:

General

- K1 UK legislative requirements for health and safety and the environment, standards, directives and guidelines, and working practices
- K2 UK standards, procedure manuals, and operating parameters
- K3 principles of design, including design data from the latest versions of uk standards
- K4 utility industry accepted working practices and industry guidelines
- K5 utility network engineering principles and processes
- K6 structure and content of client specifications
- K7 structure and content of manufacturing specifications

You need to know and understand:

Specific

- K8 analysis methods and techniques
- K9 company lines of communication and reporting procedures
- K10 how to address ethical issues and regulatory constraints
- K11 how to structure and present data and information
- K12 how to test the validity of interpretative techniques
- K13 how to use information sources and document systems
- K14 methods for confirming reliability of data
- K15 research methods and investigative techniques used commonly in the utility industry
- K16 risks associated with analytical techniques used and how to manage them
- K17 the legislative implications on operational, technological, and utility requirements

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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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Relevant occupations Engineering; Construction, planning and the built environment; Draught persons and Building Inspectors; Design Associate Professionals

Suite Multi-Utility Network Design

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