
Overview

This national occupational standard is about producing different types of utility network drawings - in clearly defined formats – which are suitable for the intended purpose. It requires understanding the standards and conventions used in the industry and interpreting them into the detailed drawings. It requires meticulous attention to detail and checking and getting approval of multiple facets of the design requirements.

Performance criteria

You must be able to:

Produce detailed technical drawings

1. produce a range of different types of drawings which are one, two, and three dimensional, and which are suitable for the purposes they are to be used for
2. produce drawings to support analysis, obtaining consents, site installation, procurement, contract, production, sub-contract and specialist details, and presentation
3. produce location, assembly and component drawings which meet the design specification
4. produce working drawings which meet the design requirements and will optimise the network's operation
5. produce and use sketches to facilitate understanding
6. use standard drawing conventions and justify any deviations from them
7. select and use manual or electronic media consistent with the resources and time available
8. clarify any information to be included which is incomplete and inconsistent, and make accurate amendments

Obtain checks and approvals

9. get all the required checks and approvals for positioning; shape, dimensions; tolerances, composition, fixing, technical content, accuracy, and completeness
10. get all the required checks and approvals for status, annotation, symbols and conventions, referencing, presentation, cross-referencing and correlation with associated documents, and interoperability of CAD

Maintain records and document storage

11. record document approval and revision in the designated place
12. keep incoming and outgoing drawing and document registers up-to-date
13. maintain quality assurance documentation and records

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. different types of drawings and their purposes
9. how to complete and keep accurate and up-to-date records
10. how to identify and justify deviations
11. how to maintain consistency with quality assurance procedures
12. how to use drawing conventions to comply with standards and regulations
13. the industry codes of practice, industry standards and practice, methods of coordination
14. types of drawings used in the utility industry
15. types of manual and electronic design media
16. when and how to get checks and approvals

Behaviours

You work in a manner which:

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

Developed by	Energy & Utility Skills
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Status	Original
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Originating Organisation	Energy & Utility Skills
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Original URN	MUND7
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Relevant Occupations	Engineering; Construction, planning and the built environment; Draughtpersons and Building Inspectors; Design and development engineers; Design Associate Professionals
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Suite	Multi-Utility Network Design
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Keywords	specifications, sketches, approvals, industry standards, codes of practice
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