EUSUND1

Develop utility network design briefs

Overview

This standard is about working with stakeholders to develop utility network design briefs. Stakeholders may be internal or external to the organisation. The design brief will summarise the explicit design requirements.

It involves establishing design objectives, analysing detailed information, determining the feasibility of meeting design objectives and developing design briefs with project stakeholders.

This standard is for utility network designers.

Performance criteria

You must be able to:

1. collect sufficient information about the key drivers behind utility network designs in line with organisational procedures and industry standards
2. develop relationships with stakeholders which facilitate the development of design briefs and are in line with organisational procedures
3. consult with project stakeholders throughout the process using communication methods which suit their purpose and time in line with organisational procedures
4. formally agree requirements for utility networks before beginning the design process
5. establish design objectives for function, performance, installation method, materials, costs, environment and aesthetics of utility networks
6. use information from existing designs, research and tests and trials to inform development of the design brief
7. develop design briefs that take account of international and national standards of network design
8. determine any building regulation constraints or unique or specific features that need particular consideration
9. carry out analysis which determines technical, regulatory, legal, network security, reliability and cost implications that need particular consideration
10. determine the feasibility of achieving requirements by assessing the features required against the factors which could affect them
11. use complex technical data and information to inform the assessment process
12. use detailed analytical and modelling processes to inform decision making
13. produce a brief which confirms objectives, shows the functionality of their requirements and the feasibility of achieving them in line with organisational procedures and industry standards
14. give clear details of specific issues to which stakeholders need to give particular consideration in line with organisational procedures
15. provide a copy of briefs to stakeholders in line with organisational procedures
16. keep records of the design brief in line with organisational procedures

Knowledge and understanding

You need to know and understand:

1. standards, directives, industry guidelines, organisational procedures, systems and manuals, operating parameters and working practices appropriate to the network being designed
2. network engineering principles and processes that apply to the network being designed
3. legislative requirements for health and safety, the environment and the network being designed
4. patents, copyright, and intellectual property issues relevant to the work
5. industry standards, specifications, details, and formats
6. feasibility studies and their purpose
7. the drivers for network design and how these can affect network designs including stakeholder requirements, security and capacity of the network to meet demand
8. the different types of internal and external stakeholders that you normally work with and their role
9. how to determine who to contact in stakeholders' organisations and the procedures to be followed
10. the processes for obtaining information from internal and external stakeholders, and for assessing its accuracy
11. the information to help establish requirements gained from stakeholder's technical requirements, hazard and risk assessments, and environmental impact assessments
12. how to use information from conceptual design, detailed design, network demand considerations, existing equipment, national and international standards, codes and specifications
13. the effects that emerging technology and environmental considerations have on network design and how to keep abreast of those changes
14. how to ensure compliance with legislation and regulation for utility network design
15. the types of feature to be considered unique or specific, and the importance of giving them particular consideration
16. the factors affecting the feasibility of achieving stakeholder requirements including contractual, cost, timescale, availability, health and safety, environmental,

quality

17. when to ask for advice and guidance beyond own level of competence
18. methods for preparing and structuring a brief
19. how to record data and information using organisational systems

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Developed by	Energy & Utility Skills
Version Number	2
Date Approved	01 Mar 2025
Indicative Review Date	01 Mar 2028
Validity	Current
Status	Original
Originating Organisation	Energy & Utility Skills
Original URN	EUSGNEM20
Relevant Occupations	Building and Construction, Design Associate Professionals, Draughtspersons, Engineering, Network Designers
Suite	Utility Network Design
Keywords	Utility; utilities; gas; water; power; network; design; briefs; objectives; stakeholder; relationship; network engineering; patents, copyright and intellectual property issues; specifications, details and formats; feasibility studies