COSBEDMO05 - SQA Unit Code FM72 04 Investigate and assess development options in built environment design management

Overview

This unit is concerned with investigating development options, taking into account relevant influencing factors, including environmental and social impact issues. It covers investigating and evaluating a project's development options so that they can be prioritised.

You must be able to show that you identify project goals and priorities, investigate potential development options and evaluate these against environmental and social criteria, as well as duly considering stakeholder views.

It is a more detailed analysis of the potential environmental impact of the project development options and their impact upon stakeholder's respective corporate social responsibilities and values. You must be able to investigate project requirements and identify and quantify relevant influencing factors in order to present solutions.

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Performance criteria

You must be able to:

Investigate and evaluate development options

P1 Identify goals and priorities for potential development

P2 Investigate development options to meet the goals and priorities where there is a justifiable need to undertake development

P3 investigate and identify the design, function and performance requirements of the potential development

P4 investigate economic factors and resources, environmental and ecological factors, and stakeholder views that affect the future asset value and sustainability of potential development

P5 evaluate the best balance between the potential goals and priorities

P6 recommend whether and how to implement potential sustainable development so as to achieve key goals and priorities

You must be able to:

Assess the environmental impact of development options

P7 investigate the requirements for assessing the environmental impact of development options

P8 identify the factors and relevant data to be used for assessing impact

P9 assess and quantify the significance of each factor and suggest measures which will reduce the environmental impact

P10 identify and review alternative solutions which will improve environmental quality and increase sustainability

P11 prepare a report of the assessed environmental impact of proposals in a form suitable for public consultation

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Knowledge and understanding

You need to know and understand:

Investigate and evaluate development options

K1 what to identify as goals and priorities for potential development (understanding)

K2 how and why to investigate development options where there is a justifiable need to undertake development (analysis)

K3 how and why to investigate the design, function, and performance requirements of the potential development (analysis)

K4 what to identify as the design, function and performance requirements of the potential development (understanding)

K5 how and why to investigate economic factors and resources, environmental and ecological factors, and stakeholder views that affect the future asset value and sustainability of potential development (analysis)

K6 how to evaluate the best balance between potential goals and priorities (evaluation)

K7 how and why to recommend whether and how to implement potential sustainable developments so as to achieve key goals and priorities (evaluation)

You need to know and understand:

Assess the environmental impact of development options

K8 how and why to investigate the requirements for assessing the environmental impact of development options (analysis)

K9 how and why to identify factors and relevant data which will be used for assessing impact (analysis)

K10 how and why to assess and quantify the significance of each factor (analysis)

K11 how and why to suggest measures which will reduce the environmental impact (synthesis)

K12 what to identify as alternative solutions which will improve environmental quality and increase sustainability (understanding)

K13 how and why to review alternative solutions which will improve environmental quality and increase sustainability (analysis)

K14 how to prepare a report of the assessed environmental impact of proposals in a form suitable for public consultation (application)

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Additional Information

Scope/range

Investigate and evaluate development options

1. **Goals and priorities:**
    - 1.1. security
    - 1.2. health and safety
    - 1.3. quantity
    - 1.4. quality (including design)
    - 1.5. time
    - 1.6. whole life costs
    - 1.7. environmental
    - 1.8. sustainability
    - 1.9. return on investment
    - 1.10. function
    - 1.11. performance
2. **Development options:**
    - 2.1. new build
    - 2.2. adaptation
    - 2.3. alteration
    - 2.4. refurbishment
    - 2.5. relocation
    - 2.6. not carrying out the proposal
3. Economic factors and resources:
    - 3.1. finance
    - 3.2. taxation
    - 3.3. workforce
    - 3.4. raw materials
    - 3.5. manufactured systems and components
    - 3.6. energy
4. **Environmental and ecological factors:**
    - 4.1. natural resources
    - 4.2. emissions
    - 4.3. effluent
    - 4.4. waste
    - 4.5. the effects of climate

5. **Stakeholder views:**
    5.1. client
    5.2. users

Assess the environmental impact of development options

6. **Requirements:**
    6.1. community
    6.2. meeting social and community obligations
    6.3. meeting legal and regulatory obligations
    6.4. considering significant environmental issues and effects
7. **Development options:**
    7.1. new build
    7.2. adaptation
    7.3. alteration
    7.4. refurbishment
    7.5. relocation
    7.6. not carrying out the proposal
8. **Factors:**
    8.1. social
    8.2. cultural
    8.3. economic
    8.4. political
    8.5. legal
    8.6. use
    8.7. timescale
    8.8. environmental
    8.9. sustainability
    8.10. accessibility
    8.11. health and safety
9. **Relevant data:**
    9.1. baseline information
    9.2. survey information
    9.3. standards
    9.4. legal, regulatory and policy requirements
    9.5. historical

10. Alternative solutions:

10.1. different locations

10.2. different layouts

10.3. extending the use of existing resources

10.4. use of alternative resources

10.5. changes to implementation and phasing

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Developed by	ConstructionSkills
Version number	2
Date approved	December 2012
Indicative review date	January 2018
Validity	Current
Status	Original
Originating organisation	ConstructionSkills (CIC)
Original URN	COSBEDMO05
Relevant occupations	Architects; Civil Engineers; Graphic Designers; Architectural Technologists, Town Planning Technicians; Building Surveyors
Suite	Built Environment Design Management
Key words	sustainable; environmental