

### Overview

This unit is about controlling projects. You will identify quality standards and pass them to the project team. You will set up systems for recording the quality of work against these standards, and require any unacceptable quality standards to be corrected. You will provide evidence of how the project team are kept informed on quality issues and identify how improvements are implemented.

You will identify the current legal and contractual requirements and how they are briefed to the project team. You will need to ensure that consents are obtained. You will need to take responsibility for rectifying any situations of non-compliance. You will identify any changes in requirements and, in particular, how these changes are briefed to the project team.

You will need to demonstrate the production of a project programme, with particular reference to the resources available, deviations from the agreed programme, and how deviations are identified and quantified. You will need to demonstrate a knowledge of the corrective actions required to restore progress in accordance with agreed programmes.

You will develop appropriate project value and cost control systems. You will ensure that the required value and cost data is collected and recorded. You will need to ensure that any variations are investigated thoroughly, corrective action is taken and final accounts are agreed. You will ensure that realistic opportunities for cost savings are identified and costed correctly, and recommended to the project team.

**Performance criteria**

You must be able to:

Control projects against quality standards

- P1 identify and interpret quality standards from available information and pass them to the project team for their implementation, before they start work
- P2 set up systems for inspecting, controlling and recording the quality of work against specified quality standards
- P3 require the non-compliance of quality standards to be addressed and notify the project team if this is not done within a reasonable time
- P4 inform the project team regularly about significant variations in complying with quality standards, programme and safety and suggest the decisions which they need to make and actions they need to take
- P5 identify improvements from feedback received and recommend them to the project team
- P6 agree and record amendments to the contract quality requirements and specifications

Ensure project compliance with legal and contractual requirements

You must be able to:

- P7 identify and interpret legal, contractual and industry standards requirements from available information and clarify them where there is uncertainty
- P8 ensure that required legal, contractual and industry standards requirements consents are obtained
- P9 brief the project team about their legal, contractual and industry standards requirements responsibilities to those responsible for implementing them before they start work on the contract
- P10 develop and implement monitoring systems, collect information regularly and summarise it
- P11 identify situations which do not comply with legal, contractual and industry standards requirements, investigate the circumstances thoroughly and take responsibility for corrective action
- P12 identify any changes in legal, contractual and industry standards requirements which may have an impact on the project, summarise the important details and pass this on to the project team
- P13 complete statutory submissions accurately and on time

Control project progress against agreed programme

You must be able to:

- P14 develop and implement systems to monitor and record information on the progress of the project against the agreed programme
- P15 collect and analyse information regularly and summarise it
- P16 identify inadequately and inappropriately specified resources, inform project team and specify and obtain alternative resources

**Performance  
criteria**

- P17 ensure that any progress deviations are identified and quantified
- P18 investigate the circumstances of any deviations thoroughly and agree and implement corrective action
- P19 recommend options which are most likely to minimise increases in time and help the project progress, and pass these on to the project team
- P20 regularly inform the project team and stakeholders about progress, changes to the programme, resource needs, and suggest the decisions and actions that need to be taken
- P21 identify improvements from feedback received and recommend them to project team and stakeholders

**Control project value and costs**

**You must be able to:**

- P22 ensure that appropriate project cost control systems are developed and implemented which are able to provide early warning of problems
- P23 ensure that value and cost data is collected regularly, recorded correctly and passed on to the people who need it in time for them to be able to use it
- P24 ensure that the correct work value and cost data are calculated from measurement of work quantity and payment rates
- P25 ensure that accurate value and cost data is prepared and presented in a format which will help people to make decisions
- P26 ensure that variations and trends in value and cost data are identified and quantify and cost them
- P27 ensure that any variations are investigated thoroughly and appropriate corrective action or amendment is agreed and implemented with the project team which will restore costs and expenditure to budget
- P28 ensure that systems and processes are developed and implemented for identifying opportunities for cost savings and recommend them to the project team
- P29 ensure that realistic opportunities for cost savings are identified and costed correctly and recommend them to the project team

**Knowledge and understanding**

You need to know and understand:

Control projects against quality standards

- K1 what to identify as quality standards from available information (understanding)
- K2 how and why to interpret quality standards from available information (analysis)
- K3 how to pass quality standards to the project team for implementation before they start work (application)
- K4 how and why to set up systems for inspecting, controlling and recording the quality of work against specified quality standards (synthesis)
- K5 how and why to require the non-compliance of quality standards to be addressed (synthesis)
- K6 how to notify the project team if the non-compliance of quality standards is not addressed within a reasonable time (application)
- K7 how to inform the project team regularly about significant variations in complying with quality standards, programme and safety (application)
- K8 how and why to suggest the decisions which they need to make and actions they need to take (synthesis)
- K9 what to identify as improvements from feedback received (understanding)
- K10 how and why to recommend improvements from feedback received to the project team (synthesis)
- K11 how and why to agree amendments to the contract quality requirements and specifications (evaluation)
- K12 how to record amendments to the contract quality requirements and specifications (application)

Ensure project compliance with legal and contractual requirements

You need to know and understand:

- K13 what to identify as legal, contractual and industry standards requirements from available information (understanding)
- K14 how and why to interpret legal, contractual and industry standards requirements from available information (analysis)
- K15 how to clarify legal, contractual and industry standards requirements where there is uncertainty (application)
- K16 how to ensure that required legal, contractual and industry standards requirements consents are obtained (application)
- K17 how to brief the project team about their legal, contractual and industry standards requirements responsibilities to those responsible for implementing them before they start work on the contract (application)
- K18 how and why to develop monitoring systems (synthesis)
- K19 how to implement monitoring systems (application)
- K20 how to collect information regularly from monitoring systems (application)

Knowledge and understanding

- K21 how to summarise information collected from monitoring systems (application)
- K22 what to identify as situations which do not comply with legal, contractual and industry standards requirements (understanding)
- K23 how and why to investigate the circumstances of situations which do not comply with legal, contractual and industry standards requirements (analysis)
- K24 how to take responsibility for corrective action in situations which do not comply with legal, contractual and industry standards requirements (application)
- K25 what to identify as any changes in legal, contractual and industry standards requirements which may have an impact on the project (understanding)
- K26 how to summarise the important details of any legal, contractual and industry standards requirements (application)
- K27 how to pass the important details of any changes in legal, contractual and industry standards requirements on to the project team (application)
- K28 how to complete statutory submissions accurately and on time (application)

Control project progress against agreed programme

You need to know and understand:

- K29 how and why to develop systems to monitor and record information on the progress of the project against the agreed programme (synthesis)
- K30 how to implement systems to monitor and record information on the progress of the project against the agreed programme (application)
- K31 how to collect information regularly (application)
- K32 how and why to analyse information regularly (analysis)
- K33 how to summarise information regularly (application)
- K34 what to identify as inadequately and inappropriately specified resources (understanding)
- K35 how to inform project team about inadequately and inappropriately specified resources (application)
- K36 how and why to specify alternative resources (evaluation)
- K37 how to obtain alternative resources (application)
- K38 how to ensure that any progress deviations are identified and quantified (application)
- K39 how and why to investigate the circumstances of any deviations thoroughly (analysis)
- K40 how and why to agree corrective action (evaluation)
- K41 how to implement corrective action (application)
- K42 how and why to recommend options which are most likely to minimise increases in time and help the project progress (synthesis)

**Knowledge and understanding**

- K43 how to pass your recommended options on to the project team (application)
- K44 how to inform the project team and stakeholders regularly about progress, changes to the programme, resource needs (application)
- K45 how to suggest the decisions and actions that need to be taken to the project team and stakeholders (synthesis)
- K46 what to identify as improvements from feedback received (understanding)
- K47 how and why to recommend improvements from feedback received to project team and stakeholders (synthesis)

Control project value and costs

**You need to know and understand:**

- K48 how to ensure that appropriate project cost control systems are developed and implemented which are able to provide early warning of problems (application)
- K49 how to ensure that value and cost data is collected regularly, recorded correctly and passed on to the people who need it in time for them to be able to use it (application)
- K50 how to ensure that the correct work value and cost data is calculated from measurement of work quantity and payment rates (application)
- K51 how to ensure that accurate value and cost data is prepared and presented in a format which will help people to make decisions (application)
- K52 how to ensure that variations and trends in value and cost data are identified (application)
- K53 how and why to quantify variations and trends in value and cost data (analysis)
- K54 how and why to cost any variations and trends in value and cost data (analysis)
- K55 how to ensure that any variations are investigated thoroughly and appropriate corrective action or amendment is agreed and implemented with the project team which will restore costs and expenditure to budget (application)
- K56 how to ensure that systems and processes are developed and implemented for identifying opportunities for cost savings and (application)
- K57 how and why to recommend systems and processes for identifying opportunities for cost savings to the project team (synthesis)
- K58 how to ensure that realistic opportunities for cost savings are identified and costed correctly (application)
- K59 how and why to recommend realistic opportunities for cost savings to the project team (synthesis)

Scope/range

Control projects against quality standards

- 1 Quality standards:
  - 1.1 statutory requirements
  - 1.2 project specifications
  - 1.3 British Standards
  - 1.4 International Standards
  - 1.5 Codes of Practice
  - 1.6 organisation standards
  - 1.7 trade advisory guidance and best practice
  - 1.8 setting out information
  - 1.9 benchmarks
  - 1.10 dimensional control checks
  - 1.11 certification and accreditation of products, systems and personnel
- 2 Project team:
  - 2.1 client
  - 2.2 workforce
  - 2.3 contractors
  - 2.4 consultants
  - 2.5 subcontractors and suppliers
  - 2.6 partners in the programme
- 3 Systems:
  - 3.1 inspection and test plans
  - 3.2 implementing corrective action
  - 3.3 records
  - 3.4 comparison with standard documentation
  - 3.5 comparison with manufacturer's documentation
  - 3.6 meetings
  - 3.7 contractors' reports
  - 3.8 site inspection reports
  - 3.9 dimension checks
  - 3.10 supply chain management
  - 3.11 audits

Scope/range

Ensure project compliance with legal and contractual requirements

- 4 Legal, contractual and industry standards requirements and responsibilities for:
  - 4.1 planning approvals and conditions
  - 4.2 building regulation
  - 4.3 environmental health
  - 4.4 health, safety and welfare
  - 4.5 environment (e.g. noise, dust, transport, emissions, waste management)
  - 4.6 compliance for new products & technologies
  - 4.7 certificates & accreditation on products, systems and personnel
  - 4.8 fire
  - 4.9 utilities
  - 4.10 highways
  - 4.11 heritage and conservation
  - 4.12 ecology
  - 4.13 development licenses and building permits
  - 4.14 employment practice
  - 4.15 community benefits
  - 4.16 bylaws
  - 4.17 non-statutory guidelines
  - 4.18 energy use
  - 4.19 insurance
  - 4.20 warranties
  - 4.21 project activities
  - 4.22 security
- 5 Project team:
  - 5.1 client
  - 5.2 workforce
  - 5.3 consultants
  - 5.4 contractors
  - 5.5 subcontractors and suppliers
  - 5.6 partners in the programme
- 6 Monitoring systems:
  - 6.1 inspection and test plans



Scope/range

- 6.2 implementing corrective action
- 6.3 records
- 6.4 audits
- 6.5 comparison with design requirements
- 6.6 comparison with standard documentation
- 6.7 checking manufacturers' documentation
- 6.8 checking delivery notes
- 6.9 sampling
- 6.10 testing
- 6.11 site inspection reports
- 6.12 contractors' reports
- 6.13 meetings
- 6.14 dimension checks
- 6.15 supply chain management
- 7 Corrective action:
  - 7.1 instigate contingency action
  - 7.2 restore compliance
  - 7.3 agree waiver

Control project progress against agreed programme

- 8 Information:
  - 8.1 inspection and testing
  - 8.2 resource records
  - 8.3 site inspection reports
  - 8.4 contractors' reports
  - 8.5 certified payments
  - 8.6 written, graphical and electronic records of actual work against programmed work
  - 8.7 photographs
  - 8.8 meetings
  - 8.9 organisational procedures
  - 8.10 management reports
  - 8.11 benchmarks
  - 8.12 comparison with project requirements

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- Scope/range
- 8.13 programmes
  - 8.14 schedule of deliverables
  - 8.15 supply chain management
  - 9 Programmes:
    - 9.1 digital timeline model
    - 9.2 bar charts
    - 9.3 flow charts
    - 9.4 network analysis
    - 9.5 critical path
    - 9.6 line of balance
    - 9.7 time chainage
    - 9.8 action lists
    - 9.9 method statements
    - 9.10 check costs
    - 9.11 control systems
    - 9.12 as built programme
    - 9.13 project expenditure forecasts
  - 10 Resources:
    - 10.1 people
    - 10.2 plant and equipment
    - 10.3 materials and components
    - 10.4 finance
    - 10.5 time
    - 10.6 specialist services
    - 10.7 public utility services
    - 10.8 information
  - 11 Project team:
    - 11.1 client
    - 11.2 workforce
    - 11.3 consultants
    - 11.4 contractors
    - 11.5 subcontractors and suppliers
    - 11.6 partners in the programme

Scope/range

- 11.7 facilities/asset manager
- 12 Deviations:
  - 12.1 resource shortages
  - 12.2 design problems and constraints
  - 12.3 industrial disputes
  - 12.4 lack of essential construction information
  - 12.5 construction errors and rework
  - 12.6 weather conditions
  - 12.7 physical constraints
  - 12.8 legal
  - 12.9 environmental
  - 12.10 poor scope definition
  - 12.11 contract variation
  - 12.12 force majeure
- 13 Quantify:
  - 13.1 method study work
  - 13.2 study production
  - 13.3 analysis cost
  - 13.4 implication
- 14 Corrective action:
  - 14.1 restore progress in accordance with agreed programme
  - 14.2 agree new completion dates
  - 14.3 secure additional resources
  - 14.4 alter planned work
- 15 Stakeholders:
  - 15.1 the client
  - 15.2 prospective occupiers/owners
  - 15.3 prospective users
  - 15.4 regulatory authorities
  - 15.5 government agencies
  - 15.6 public interest organisations
  - 15.7 public utilities

Scope/range

Control project value and costs

- 16 Project cost control systems:
  - 16.1 contractual procedures and meetings
  - 16.2 operational procedures and meetings
  - 16.3 open book accounting
  - 16.4 electronic recording
- 17 Value and cost data:
  - 17.1 materials and quantities
  - 17.2 plant and equipment
  - 17.3 people
  - 17.4 sub-contractors
  - 17.5 dayworks
  - 17.6 periodic valuations
  - 17.7 final accounts
  - 17.8 retention sums
  - 17.9 forecasts of expenditure
  - 17.10 performance information
  - 17.11 indirect costs
  - 17.12 variations
  - 17.13 contract programme and progress
- 18 Corrective action:
  - 18.1 contract programme and progress
  - 18.2 control expenditure to conform with budgets
  - 18.3 agree additional costs
  - 18.4 make a contract claim
  - 18.5 mitigation strategy
- 19 Project team:
  - 19.1 client
  - 19.2 consultants
  - 19.3 contractors
  - 19.4 subcontractors and suppliers
  - 19.5 partners in the programme
- 20 Opportunities for cost saving:

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Scope/range

- 20.1 increase productivity
- 20.2 waste reduction and management
- 20.3 modify project management systems
- 20.4 resource management and logistics
- 20.5 applications of new technologies and materials
- 20.6 energy management
- 20.7 water
- 20.8 recycling/materials
- 20.9 alternative sources and types of materials
- 20.10 reduce plant and labour resource
- 20.11 variations in quality
- 20.12 standardisation
- 20.13 value engineering
- 20.14 apply lean construction principles
- 20.15 design out waste
- 20.16 lean manufacturing principles
- 20.17 offsite construction



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Control projects in construction management



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