

Overview

This unit is concerned with securing contracts with clients to carry out design work for them. The words “estimate”, “bid” and “tender” are all used in the industry, and are taken here to be synonymous. It is about deciding how design function will be carried out. You must be able to get all the information that you need, decide the best way of working, produce a method statement, and agree this with the project team. It is about deciding how much the design work will cost. You must be produce a working programme, decide what resources are needed, calculate the costs, and discuss them with the project team.

Performance criteria

You must be able to:

Evaluate and recommend work methods

- P1 assess the available **project data** and summarise it to enable decisions on **construction, installation and work methods** to be made
- P2 obtain more information from **relevant sources** in cases where the available **project data** is insufficient
- P3 identify **work methods** which will make the best use of resources and which meet project, statutory and contractual requirements
- P4 evaluate the **work methods** against relevant **technical** and **project criteria** and recommend the one which best meets the **criteria**
- P5 prepare an outline method statement which is accurate, clear, concise and acceptable to all the people involved

Estimate the resource requirements and costs within a tender

You must be able to:

- P6 develop a proposed plan of work and draft programme which meet the **tender rules, project requirements and phasing**
- P7 **estimate** what **resources** will be needed, their sources, availability and costs
- P8 modify the cost to take into account any relevant **external factors**
- P9 produce the overall **estimate** of costs and check that it is complete, accurate and in a form which is suitable for a judgment to be made
- P10 explain and clarify the tender assumptions to support the projected costs
- P11 collate, arrange and submit tender offer information in accordance with tender instructions
- P12 collate together all the tender information, record it, store it securely and only pass it on to people who have the authority to receive it

Knowledge and understanding

You need to know and understand:

Evaluate and recommend work methods

- K1 how and why to assess the available **project data** (analysis)
- K2 how to summarise **project data** to enable decision on **construction, installation and work methods** to be made (application)
- K3 how to obtain more information from **relevant sources** in cases where the available **project data** is insufficient (application)
- K4 what to identify as **work methods** which will make the best use of resources and which meet project, statutory and contractual requirements (understanding)
- K5 how and why to evaluate the **work methods** against relevant **technical** and **project criteria** (evaluation)
- K6 how and why to recommend the **method** which best meets the **criteria** (synthesis)
- K7 how and why to prepare an outline method statement (application)

Estimate the resource requirements and costs within a tender

You need to know and understand:

- K8 how and why to develop a proposed plan of work and draft programme which meet the **tender rules, project requirements** and **phasing** (synthesis)
- K9 how and why to **estimate** what **resources** will be needed, their sources, availability and costs (analysis)
- K10 how to modify the costs to take into account any relevant **external factors** (application)
- K11 how and why to produce the overall estimate of costs (analysis)
- K12 how to check that the overall **estimate** of costs is complete, accurate and in a form which is suitable for a judgment to be made (application)
- K13 how to explain and clarify the tender assumptions to support the projected costs (application)
- K14 how do you collate, arrange and submit tender offer information (application)
- K15 how to collate together all the tender information (application)
- K16 how to record, store and pass on all the tender information (application)

Scope/range

Evaluate and recommend work methods

- 1 Project data:
 - 1.1 contractual obligations and scope and scale of works
 - 1.2 specifications
 - 1.3 detailed drawings
 - 1.4 health and safety plans
- 2 Construction, installation and work methods:
 - 2.1 sequencing and integration of work operations
 - 2.2 construction and installation techniques
 - 2.3 prefabrication and standardisation
 - 2.4 working conditions (health, safety and welfare)
- 3 Relevant sources:
 - 3.1 project team
 - 3.2 regulatory authorities
 - 3.3 technical/trade literature
 - 3.4 standard lists and procedures
- 4 Technical criteria:
 - 4.1 materials and components performance and availability
 - 4.2 health, safety and welfare
 - 4.3 access
 - 4.4 plant and equipment performance and availability
 - 4.5 sustainability
 - 4.6 buildability
 - 4.7 site conditions
- 5 Project criteria:
 - 5.1 cost/value
 - 5.2 client and user needs
 - 5.3 contract requirements for time, quantity and quality

Estimate the resource requirements and costs within a tender

- 6 Tender rules:
 - 6.1 invitation to tender
 - 6.2 form of tender

Scope/range

- 6.3 procedures for submitting tenders
- 7 Project requirements:
 - 7.1 construction
 - 7.2 installation and maintenance work
 - 7.3 supply of goods and materials
 - 7.4 consultancy services
 - 7.5 technology required
- 8 Phasing:
 - 8.1 planning
 - 8.2 design
 - 8.3 procurement
 - 8.4 construction
- 9 Estimate:
 - 9.1 cost based on a quotation
 - 9.2 unit cost built up from basic data
 - 9.3 internal and historical cost data
 - 9.4 published cost data
- 10 Resources:
 - 10.1 people (in-house, external)
 - 10.2 plant and equipment
 - 10.3 materials
 - 10.4 finance
 - 10.5 time
- 11 External factors:
 - 11.1 location
 - 11.2 contractual requirements
 - 11.3 special working conditions and methods
 - 11.4 resourcing conditions

COSBEDO11- SQA Unit Code H6AE 04
Prepare tenders in built environment design



Developed by ConstructionSkills

Version number 2

Date Approved November 2012

Indicative review date July 2019

Validity Current

Status Original

Originating organisation ConstructionSkills

Original URN COSBEDO11

Relevant occupations Civil engineers; graphic designers; architectural technologists; town planning technicians; draughtspersons; building surveyors

Suite Built Environment Design

Keywords evaluate; recommend; work; methods; estimate; resource; requirements
