

# Methods of estimating for cost planning in construction



**ASSIGN  
BUSTER**

In the Construction industry, cost planning is a vital management process for control the overrun cost of project and gets maximum returns to the client within client agreed budget. Generally Quantity Surveyor as a Cost Manager who is involve to prepare cost planning and cost controlling process for specific stages with respect to the RIBA plan of work.

There are some significant estimating methods for cost planning process utilize in construction project. Hence those methods give preliminary estimate for the client at the design stage.

And Pre-Contract Cost Planning and Cost Control process are also very important to successful planning, design and construction of projects and is aimed at providing best value solutions. Basically it is a pre-costing method of a project.

In addition, Term of life cycle costing can be described, according to the definition of Hoar and Norman (1990) noted as appropriately defined the life cycle cost of an advantage as the present value of total cost of the asset over its operating life including initial capital costs, occupational costs, operating costs, etc.

Specially, Quantity surveyor monitors the cost of every phases of a construction project as a cost manager to minimize the costs of the project and to make more cost savings for the project success.

## **INTRODUCTION**

This report emphasizes for identifying critical phases of pre contract cost planning and controlling process in the life cycle of project with respect to

the RIBA plan of work & how to manage them and how to obtain a maximum turnover of the project within the quantity surveyor's role as a cost manager.

Hence, this study will discuss significant project pre contract cost planning and controlling process, such as methods of estimates for cost planning for different stages of RIBA work plan, pre-contract cost planning and cost controlling process with respect to the RIBA plan of work a client/consultant may adopt during each stage, the term life cycle costing and related terminology and the quantity surveyor's role as a cost manager, in the life cycle of the project.

## **MAIN BODY**

### **Explain the methods of preparing estimates for cost planning for different stages of RIBA work plan.**

#### **What Is Cost Planning?**

The Cost Planning is a method of cost controlling the cost (Price to client) of a project within a pre-determined sum up to the tender stage. (Page3, Cost studies)

Cost Planning give advice to client how much will be project cost. As well, cost planning will advise when the expected expenses will most possible occur. Hence it's important for get required project finance and for determining possible project profit.

#### **Methods of Estimating for Cost Planning**

There are some significant estimating methods uses in construction industry for Cost planning process. Those methods give preliminary estimate, hence Quantity Surveyor has to modify predetermine data considering the

<https://assignbuster.com/methods-of-estimating-for-cost-planning-in-construction/>

followings, such as , market conditions, Size, number of storeys, specification level, inclusions & exclusions, service, site & foundation conditions and other factors.

#### Conference Estimating Method

RIBA Stage A of Options Appraisal and stage B Design Brief,

This method uses for preparation of the initial price estimate give to the client. It is based on a cooperative view of a group of persons, and not quantify in any particular way.

#### Financial methods

RIBA Stage A of Options Appraisal and stage B Design Brief,

This method fixes a cost limit on the building design, according to the unit of accommodation or rental values.

#### Unit method

RIBA Stage A of Options Appraisal and stage B Design Brief,

The unit method is multiplies desire standard unit of accommodation by an approximate cost per unit. Not required specific drawings, specifications, only the concept of the project relevant to the required function.

For example:

Schools – costs per pupil enplace

Hospitals - costs per bed enplace

Car parks - cost per car space

Estimate = Standard units of accommodation x Cost per unit

Cube method

Design Stage

This is the superseded method because of inherent disadvantages; this method needs some sketch drawings, historical cost data,

Superficial area method

RIBA Stage B Strategic Briefing and also can be used for Stage C

This is presently most common use method, its use for early price estimating purposes. The area of each of the floors multiplied by the cost per square meter. Mostly important Storey heights, plan shape and methods for when choose on the rate to be used.

Story enclosure unit method

This technique use weightings for the estimating the building elements

Elemental Cost estimating

Detail Design Stage (Production information Stage F)

This can use to establish the approximate cost of a construction project. It analyzes, the cost of the project on an elemental basis, using from other

<https://assignbuster.com/methods-of-estimating-for-cost-planning-in-construction/>

similar projects. Also provides cost advice during the design process. Detail drawings are required.

For example:

#### Approximate Cost estimating

Approximate quantities present additional detailed approximate estimate. No particular rules of measurement exist, Also significantly more information is required from the designer..

For example:

#### Resource analysis

(Pre Construction Stage Tender Documentation -G)

This method is traditionally adopted by contractors' estimators to decide their individual rates for measured items in bills of quantities. All individual measured items are analyzed into its element parts such as labour, materials and plant. This method is not a pre-tender method of price prediction strictly.

### **The pre-contract cost planning and cost controlling process with respect to the RIBA plan of work a client/ consultant may adopt during each stage**

#### **What Is Pre-contract Cost Planning?**

Pre Cost planning is very important to successful planning, design and construction of projects and is aimed at providing best value solutions.

basically it is a pre-costing method of a project. As well as Pre-estimation of a design proposal will give clear picture about the cost to the employer and design team.

<https://assignbuster.com/methods-of-estimating-for-cost-planning-in-construction/>

### **Pre-Contract Cost Planning Process**

The pre-contract cost planning process according to the RIBA plan of work 1998; it can be described as follows.

Pre-Design

Inception of Feasibility

Pre-stage A

Work Stage A (1)

Work Stage B (2)

Establishing the need (Establish the budget)

Options Appraisal (Cost of preferred solution)

Strategic Briefing (Target cost)

Pre-construction Stage

Work Stage C

Work Stage D

Work Stage E

Outline proposals (Prepare initial cost plan)

Detailed Proposals (Firm Cost Plan)

Final Proposals (Cost checks, design against cost plan)

<https://assignbuster.com/methods-of-estimating-for-cost-planning-in-construction/>

## Work Stage F

Production Information (Final cost checks of design against cost plan)

### Graph – 2. 1

#### **Pre-stage A (Establish the budget)**

Client appointing client's management team (Consultants) such as, client representative, cost consultant, according to his requirements.

Identify objectives, physical scope of project, standard of quality of building and services, timeframe and establishing the budget.

Emphasis nature of client's problems and functional requirements on proposed project.

#### **Work Stage A (Options Appraisal)**

Consultant has to identify of client prerequisite and possible limitation on development and cost of the ideal solution.

Prepare technical, functional and cost studies by consultant and then it should enable to the client to take decision on his project whether he can continue the first proposal or could do some changes to the first proposal etc. also select the possible procurement method.

#### **Work Stage B (Strategic Brief)**

Consultant has to prepare initial cost suggestion to the client based on an outline statement of client's needs, also to determine target cost. This establish an initial budget for client



Client has to investigate availability of finance for the project and value of money framework.

### **Pre Contract Cost Control**

Generally Pre contract cost controlling process is implement from this stage according to the RIBA plan of work as mentioned by chart 1. 2,

Pre Contract Cost Control process give ensure the cost of the project is within the client's budget or not. Hence pre contract cost control is very essential in a project since it is planning, design finalizing and tendering and selecting a suitable contractor too.

### **Outline Proposals- Stage C**

Consultant has to involve preparing outline proposal and estimate of cost as initial cost plan. As well as Investigate the site conditions and preliminary sketches for requirement of cost plan.

Evaluate strategic brief through consideration of time, cost, risk and environmental issues. Also establish design management procedures.

### **Detailed Proposals – Stage D**

At this stage, consultant prepares full detailed proposals for the client, and also prepares firm cost plan & detailed elemental cost plan etc.

Client tem evaluate outline proposals for make the final decision,

Receive design and cost input from client appointed team and extend detailed design solution. And review procurement advice.

**Final Proposals – Stage E**

Consultant has to prepared final proposal at this stage.

Carry out cost check of the design as it develop against the cost plan, hence it Confirmation of the cost limits for the project.

Most cost effective in satisfying level of project brief to confirm or put final budget and to check the elemental cost targets.

Consultant prepares all required submission for legal approvals.

**Production Information – Stage F**

All legal approvals should have completed when at this stage.

This is the assessment of lowest acceptable tender price based on completed contract documents. And also ensure that the completed designs are controlled within the cost limits.

Supply all required information for final cost checks of design against cost plan.

**Explain the term life cycle costing and related terminology.****Definition of the life cycle costing**

According to definition of Hoar and Norman (1990) appropriately defined the life cycle cost of an advantage as the present value of total cost of the asset over its operating life including initial capital costs, occupational costs, etc.

Hence life cycle costing related with the time stream of costs and benefits that flow throughout the life of the project.

There are number of term use in industry to identify different stages in the life cycle costing techniques, hence following are the specially use in construction industry.

#### Life cycle cost analysis (LCCA)

Quantity surveyor assist to prepare this, based on collection and analysis of historic data on actual costs of occupying building (running cost and performance).

#### Life cycle cost management (LCCM)

Actually it is derived from life cycle cost analysis and identities, by this way client can be compare building cost and controlling occupancy cost throughout the life of building to get maximum value.

#### Life cycle planning (LCCP)

This is as part of life cycle cost management; it is constitute the prediction of total costs of a building, part or individual element taking account of initial capital costs, subsequent running cost and residual values.

There are several costs related with acquiring, operating, maintaining & disposing of a construction or building system. Hence related costs generally fall into Initial Costs, Energy Costs, Operation, Maintenance, and Repair Costs, Replacement Costs, Residual Values, Finance Charges, Non-Monetary Benefits or Costs.

For Example:

Sieglinde Fuller Source: Sustainable Building Technical Manual / Joseph J. Romm, Lean and Clean Management, 1994.

Life cycle costing Terminology

## **Explain the Quantity Surveyor's role as a cost manager, in the life cycle of the project.**

### **Role of the Quantity Surveyor as a Cost Manager**

Quantity surveyor is the person/ firm who manage the cost relating to the construction projects, such as new constructions, maintenance work and renovations. Quantity surveyor monitors the cost of every aspects of a construction project as a cost manager.

Furthermore when study about Quantity Surveyors in Cost manger position also have to be identified their duties and Responsibilities properly.

He should conducting feasibility studies and writing procurement reports at project inception stage.

He should manage estimating and cost planning process and presenting the final cost plan.

He should manage the procurement process, and make certain that all phases with pre-qualification, enquiry, analysis, selection and contract preparation are carried out effectively.

Ensuring that post-contract cost variances and change control tasks are directed effectively.

Involving with cost checking and valuation works to manage them effectively.

Preparation of monthly post-contract cost reports and presenting them to the client.

Preparation of value engineering and life cycle costing, and also final accounts negotiated and agreed process.

Give leadership role manage the client and other consultants, at all project phases.

Working with top managers and directors, and identify and performing new opportunities to improve the cost management procedures.

## **CONCLUSION/RECOMMENDATION**

Pre contract stages are vital important phases of construction project to execute pre-contract cost planning and controlling process in a proper way for completion of project successfully within client brief, hence as identified thorough this report, Quantity Surveyor has critical responsibility as cost manager involve to carried out entire pre-contract cost planning process in a proper way.