

Design Economics
Module Code ACBA66001
Level 6
Credits 20
JACS CODE – K240

House Rules



Health and Safety Moment



Preparing a Feasibility Estimate

Cost Estimating

Estimating is the assessment of the likely cost of construction works, based on a given set of criteria.

It might take the form of a **functional unit cost**, an **elemental analysis**, or a **priced detailed measure**.

It might assess the overall cost of a project, look at an element of the structure, or focus on a particular construction detail. In addition to **labour, plant and material costs** it will consider **preliminaries, overheads, profit, risk and any other factors that might affect cost**.

There are two fundamental components of an estimate:

1. Cost
2. Specification

Cost on its own is meaningless until it has a specification associated with it. The specification must give a clear definition of what the cost represents in terms of what it covers and what it excludes.

A client has approach us in order for us to prepare an initial feasibility estimate;

What information do we need?



In order to prepare an **initial cost estimate** we need **(or assume)** the following information;

- Location of the site
- Indicative programme and the date he intends to carry out the works
- Procurement method and strategy
- If there are any appointed designers
- Initial project brief and intended use
- Floor area or number of functional units
- Site conditions
- Any Restrictions (such as planning etc)
- Budget or cashflow limitations
- Design fees and development costs
- Mechanical & Electrical requirements

The Client has told us;

They want to build a budget hotel

In SA1 Swansea (looking at purchasing a plot of land but this is confidential)

Start on site ASAP

60 Beds

Currently have no design



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RIBA Plan of Work

The RIBA Plan of Work 2013 organises the process of briefing, designing, constructing, maintaining, operating and using building projects into a number of key stages. The content of stages may vary or diverge to suit specific project requirements. The RIBA Plan of Work 2013 should be used solely as guidance for the preparation of detailed professional service contracts and building contracts.

www.ribaplanofwork.com

	0	1	2	3	4	5	6	7
Stages	Strategic Definition	Preparation and Brief	Concept Design	Developed Design	Technical Design	Construction	Handover and Close Out	In Use
Tasks								
Core Objectives	Identify client's Business Case and Strategic Brief and other core project requirements.	Develop Project Objectives, including Quality Objectives, Sustainability Aspirations, Project Budget, other parameters or constraints and develop Initial Project Brief. Undertake Feasibility Studies and review of site information.	Prepare Concept Design, including outline proposals for structural design, building services systems, outline specifications, outline Cost Information, along with relevant Project Strategies in accordance with Design Programme. Agree alterations to brief and issue Final Project Brief.	Prepare Developed Design, including coordinated and updated proposals for structural design, building services systems, outline specifications, Cost Information and Project Strategies in accordance with Design Programme.	Prepare Technical Design in accordance with Design Responsibility Matrix and Project Strategies to include all architectural, structural and building services information, specialist subcontractor design and specifications, in accordance with Design Programme.	Offsite manufacturing and onsite Construction in accordance with Construction Programme and resolution of Design Queries from site as they arise.	Handover of building and conclusion of Building Contract.	Undertake In Use services in accordance with Schedule of Services.
Procurement Variable task list	Initial considerations for assembling the project team.	Prepare Project Roles Table and Contractual Tree and continue assembling the project team.	The procurement strategy does not fundamentally alter the progression of the design or the level of detail prepared at a given stage. However, Information Exchanges will vary depending on the selected procurement route and Building Contract. A bespoke RIBA Plan of Work 2013 will set out the specific tendering and procurement activities that will occur at each stage in relation to the chosen procurement route.			Administration of Building Contract, including regular site inspections and review of progress.	Conclude administration of Building Contract.	
Programme Variable task list	Establish Project Programme.	Review Project Programme.	Review Project Programme.	The procurement route may dictate the Project Programme and may result in certain stages overlapping or being undertaken concurrently. A bespoke RIBA Plan of Work 2013 will clarify the stage overlaps. The Project Programme will set out the specific stage dates and detailed programme durations.				
(Town) Planning Variable task list	Pre-application discussions.	Pre-application discussions.	Planning applications are typically made using the Stage 3 output. A bespoke RIBA Plan of Work 2013 will identify when the planning application is to be made.					
Suggested Key Support Tasks	Review Feedback from previous projects.	Prepare Handover Strategy and Risk Assessments. Agree Schedule of Services, Design Responsibility Matrix and Information Exchanges and prepare Project Execution Plan including Technology and Communication Strategies and consideration of Common Standards to be used.	Prepare Sustainability Strategy, Maintenance and Operational Strategies and review Handover Strategy and Risk Assessments. Undertake third party consultations as required and any Research and Development aspects. Review and update Project Execution Plan. Consider Construction Strategy, including offsite fabrication, and develop Health and Safety Strategy.	Review and update Sustainability Strategy, Maintenance and Operational and Handover Strategies and Risk Assessments. Undertake third party consultations as required and conclude Research and Development aspects. Review and update Project Execution Plan, including Change Control Procedures. Review and update Construction and Health and Safety Strategies.	Review and update Sustainability Strategy, Maintenance and Operational and Handover Strategies and Risk Assessments. Prepare and submit Building Regulations submission and any other third party submissions requiring consent. Review and update Project Execution Plan. Review Construction Strategy including sequencing and update Health and Safety Strategy.	Review and update Sustainability Strategy including agreement of information required for commissioning, testing, handover, asset management, future monitoring and maintenance and ongoing completion of 'As-constructed' information. Update Construction and Health and Safety Strategies.	Carry out activities listed in Handover Strategy including Feedback for use during the future life of the building or on future projects. Updating of Project Information as required.	Conclude activities listed in Handover Strategy including Post-occupancy Evaluation, review of Project Performance, Project Outcomes and Research and Development aspects. Updating of Project Information, as required, in response to ongoing client Feedback until the end of the building's life.
Sustainability Checkpoints	Sustainability Checkpoint – 0	Sustainability Checkpoint – 1	Sustainability Checkpoint – 2	Sustainability Checkpoint – 3	Sustainability Checkpoint – 4	Sustainability Checkpoint – 5	Sustainability Checkpoint – 6	Sustainability Checkpoint – 7
Information Exchanges (at stage completion)	Strategic Brief.	Initial Project Brief.	Concept Design including outline structural and building services design, associated Project Strategies, preliminary Cost Information and Final Project Brief.	Developed Design, including the coordinated architectural, structural and building services design and updated Cost Information.	Completed Technical Design of the project.	'As-constructed' Information.	Updated 'As-constructed' Information.	'As-constructed' Information updated in response to ongoing client Feedback and maintenance or operational developments.
UK Government Information Exchanges	Not required.	Required.	Required.	Required.	Not required.	Not required.	Required.	As required.

*Variable task list - In creating a bespoke project or practice specific RIBA Plan of Work 2013 plan, the client and the project team can specify that a task is omitted from a number of options.

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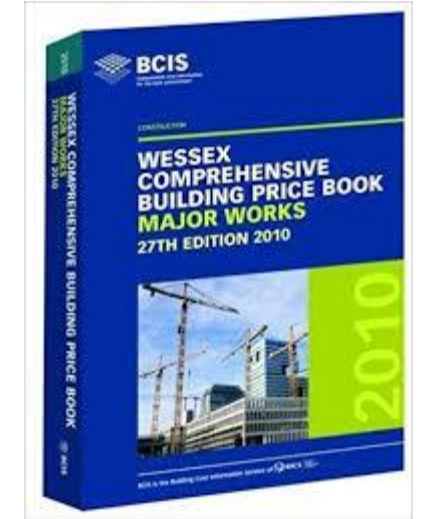
Potential Source of Cost Data.

SPON's Architect and Builder Price Book

Wessex Price Book

RICS – Building Cost Information Services

Building Magazine – Cost Modelling



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Feasibility Estimate						
Project Brief						
The provision of a New Build, mid-range 60 bedroom hotel with 50-60 m2 per bedroom.						
	60 Beds		£ 155,000.00		£ 9,300,000.00	
	30 car parking spaces		£ 2,700.00		£ 81,000.00	
			Sub total at 4Q19		£ 9,381,000.00	
	Inflation Adjustment					
			4Q19	598	£ 9,381,000.00	
			4Q20	614	£ 9,631,996.66	
	Location Adjustment					
			Outer London at	1.00%	£ 9,631,996.66	
			Wales	0.86%	£ 8,283,517.12	
	TOTAL CONSTRUCTION COST AT 4Q20				£ 8,283,517.12	

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Note and Assumptions							
This estimate has been prepared without any design specifications and is based on general industry standards							
We assume that there is adequate services provision and drainage capacity available and are adjacent to the site							
We assume that there are no abnormal ground conditions and there are no service diversions needed							
We anticipate a construction commencement date of 4Q20							
It is assumed that the scheme will be competitively tendered through a design and build method of procurement and will be delivered through a single procurement exercise.							
The project will be constructed as a single phase with a construction programme duration of 14 months							
	Exclusions						
	1 Future inflation beyond 4Q20						
	2 Works beyond the established scope						
	3 Any implications arising from planning consents and commuted sums						
	4 Any major earthworks to deal with large changes in ground level						
	5 Any demolition works						
	6 External Works and car parking provision						
	7 Equipment, fixtures and fittings						
	8 Removal of any contamination in the ground						
	9 Land costs and associated legal fees						
	10 Professional Fees						
	11 VAT						