



Pre-Contract Cost Planning and 5D BIM

Course: Elemental Cost Plans and Design Cost Control



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Introduction:

Pre-contract cost planning and 5D BIM, covering elemental cost plans and design cost control, is a 5-day course for cost managers, quantity surveyors and developer project teams on building projects, ending with a Pre-Contract Cost Plan and Design Cost Control Plan for a case developer. Building budgets are often fixed before the design is drawn, then drift stage by stage because nobody checks each design release against an elemental target. Nominees already prepare or review cost advice during design and build cost plans, benchmarks and forecasts through modelling exercises. CoreConcept Training Center delivers this pre-contract cost planning course.

Course Objectives:

- Set a client cost limit and affordability ceiling from the development brief, floor areas and functional units
- Prepare order of cost estimates and elemental cost plans using the NRM 1 group element structure
- Benchmark scheme costs against analysed projects and rebase them for time and location with tender price indices
- Extract and validate model quantities from building models and link model objects to cost codes in a 5D BIM workflow
- Check each design release against element targets, log design change costs and control the cost limit before tender
- Forecast pre-construction cash flow and present a cost report to the developer client with target variances

Target Audience:

- Cost management staff responsible for cost advice to clients during briefing and design
 - Quantity surveying staff who prepare estimates and cost plans before tender
 - Developer project teams responsible for setting budgets and approving design stages
 - Digital construction staff who extract quantities from building models for cost use
 - Design management staff who must keep design releases within an agreed cost target
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Course Outline:

Day 1: Pre-Contract Cost Management Context and the Client Cost Brief

- Client Development Brief and Affordability Ceiling Set at Inception
- Cost Manager Duties Across Briefing, Concept and Technical Design
- Procurement Route Effect on Pre-Contract Cost Certainty
- Gross Internal Floor Area Measurement for Cost Purposes
- Current-State Review of Recent Developer Budget Overruns

Day 2: Order of Cost Estimates, Elemental Structure and Cost Benchmarking

- Order of Cost Estimate Using Floor Area and Functional Units
- NRM 1 Group Element Structure for Building Works
- Cost Analysis Format for Completed Building Schemes
- Benchmarking Cost per Square Metre Against Peer Schemes
- Tender Price Indices Rebasing Costs for Time and Location

Day 3: Elemental Cost Plans and Model-Based 5D BIM Workflows

- Formal Cost Plan Development by Element and Sub-Element
- Element Unit Quantities and Element Unit Rate Derivation
- Open-Format Model Quantity Extraction for Elemental Cost Plans
- 5D BIM Linkage of Model Objects to Cost Codes
- Model Quantity Validation Rules and Items Missing From Geometry

Day 4: Design Cost Control, Target Costs and Cash-Flow Forecasting

- Cost Limit and Target Cost Allocation Across Elements
- Design Cost Checking of Each Release Against Element Targets
- Design Change Cost Register and Option Cost Comparison
- S-Curve Cash-Flow Forecast From Cost Plan and Programme
- Design Development Reserve and Risk Allowance Drawdown Tracking

Day 5: Modelling Build of a Developer Pre-Contract Cost Plan

- Case Developer Brief and Benchmark Set for Mixed-Use Scheme
 - Case Order of Cost Estimate Rebased With Price Indices
 - Elemental Cost Plan Built From Case Model Quantities
 - Client Cost Report With Target Variance and Cash Flow
 - Pre-Contract Cost Plan and Design Cost Control Plan Completion
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Skills You Will Gain:

- Order of Cost Estimating
- Elemental Cost Planning
- Cost Benchmarking and Rebasing
- Model-Based Quantity Extraction
- 5D BIM Cost Linkage
- Target Cost Allocation
- Design Cost Checking
- Pre-Construction Cash-Flow Forecasting

Why Attend This Course:

- Deliver a Pre-Contract Cost Plan and Design Cost Control Plan to the development director or client project sponsor for approval
- Decide whether a design release can proceed, must be redesigned or needs a revised cost limit before tender
- Avoid tender returns far above budget, late redesign and funding gaps caused by unchecked design growth
- Share element templates, benchmark sets and model quantity validation rules with junior surveyors and design teams

Conclusion:

Back at work, the participant presents the Pre-Contract Cost Plan and Design Cost Control Plan to the development director, client project sponsor or design manager. The team uses it to confirm the cost limit, allocate element targets, check each design release, rebase benchmarks and report forecast cash flow before the tender decision. After the first design stage closes, the unit should compare checked element costs with targets, review model quantity accuracy and adjust the benchmark set and reserve before the next stage.

Frequently Asked Questions FAQ:

What should participants know before a pre-contract cost planning and 5D BIM course?

Participants should already give or review cost advice on building projects during design and be able to read drawings and floor area schedules. Model authoring skills are not needed. Bringing an anonymised cost plan or a model extract makes the exercises more useful.

How does pre-contract cost planning and 5D BIM differ from a course on estimating or quantity surveying?

It covers cost control while the design is still changing: cost limits, element targets, benchmarks, model-based quantities and client cost reports. Estimating courses focus on estimate classes and unit rate build-up, and quantity surveying courses on bills, valuations and final accounts after tender.

Why does an elemental cost plan matter in pre-contract cost planning?

An elemental cost plan divides the budget into building elements, such as frame, envelope and services, each with a target. Every design release can then be checked element by element, so overspends are found and corrected while the design can still change.

What do participants take back from the pre-contract cost planning and 5D BIM course?

Participants take back a Pre-Contract Cost Plan and Design Cost Control Plan for a case developer scheme, with an order of cost estimate, rebased benchmarks, an elemental cost plan from model quantities, a cash-flow forecast and a client cost report format.
