

# Preliminaries in Construction Contracts

A Comprehensive Guide for Practising  
Consultant Quantity Surveyors, Construction  
Professionals and Government Officers

*From Global Context to Malaysian Practice*

Covering: Origins, Measurement Standards, Procurement Methods,  
Contract Administration, Interim Valuation, Pricing Advisory and Final Account

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## **Abstract**

This publication provides a comprehensive guide to Preliminaries in construction contracts, spanning their origins in the RICS/NRM framework, the Commonwealth dimension, and detailed Malaysian practice under SMM1 through SMM3. It covers Preliminaries across all major procurement methods, the Consultant QS's role in drafting and administering Preliminaries at tender and post-contract stages, interim valuation methodologies, contractor pricing advisory, and final account reconciliation. Written for practising Consultant Quantity Surveyors, construction professionals, and Government officers.

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# 1. Introduction and Global Context

## 1.1 What Are Preliminaries?

Preliminaries (or *prelims*) are the contractor's project-wide costs for setting up, managing, and running a construction site. They are distinct from the costs of building works themselves, but no construction project can proceed without them. The Chartered Institute of Building's *Code of Estimating Practice* describes preliminaries as "...the cost of administering a project and providing general plant, site staff, facilities, and site-based services and other items not included in the rates" [1].

Preliminaries serve a dual function: they are both an information document (describing the project, the employer's requirements, and the contractual framework) and a pricing vehicle (enabling the contractor to price the overhead costs of delivering the works). They provide a description of a project that allows the contractor to assess costs which, whilst they do not form part of any of the packages of works required by the contract, are required by the method and circumstances of the works.

Preliminaries should not be confused with preambles. Preliminaries focus on the logistical and managerial aspects of a project, whereas preambles are introductory paragraphs placed at the beginning of the Bill of Quantities to govern interpretation and application of technical specifications.

In financial terms, preliminaries represent a significant proportion of total construction costs. Various international studies report ranges spanning approximately 5% to 15% of contract value [2], with individual figures varying significantly by project complexity, duration, site conditions, procurement method, and jurisdiction. Published Malaysian research, discussed in Chapter 6, places the Malaysian range materially below widely-quoted international rules of thumb.

## 1.2 The RICS/NRM Framework — The Intellectual Backbone

The RICS New Rules of Measurement (NRM) suite provides the most rigorous and internationally influential framework for dealing with preliminaries. Although principally based on UK practice, the requirements for a coordinated set of rules and underlying philosophy behind each volume have worldwide application.

Under **NRM 1** (Order of Cost Estimating and Cost Planning), main contractor's preliminaries are classified as **Group Element 9** — separate from the building works estimate (Group Elements 0–8), overheads and profit (Group Element 10), and design team fees (Group Element 11). This establishes the principle that preliminaries are a discrete cost centre, not to be absorbed or hidden within measured rates.

Under **NRM 2** (Detailed Measurement for Building Works), the preliminaries bill is divided into two parts: **Part A — Information and Requirements** (the employer's description of the project and its constraints), and **Part B — Pricing Schedule** (where the contractor prices his own cost items). This two-part structure is the internationally accepted best-practice model and has been adopted or adapted across Commonwealth jurisdictions.

## 1.3 The Commonwealth Dimension

The British quantity surveying tradition, and with it the concept of preliminaries as a distinct section of the Bill of Quantities, was transplanted throughout the Commonwealth during and after the colonial period. Bills of Quantities are widely used in most Commonwealth countries such as Australia, New Zealand, Malaysia, Hong Kong, South Africa, India, Pakistan, Nigeria, Kenya, and the Middle Eastern countries, particularly in the traditional procurement system.

Each jurisdiction adapted the English Standard Method of Measurement to suit local conditions and practices. Hong Kong, Indonesia, Australia, New Zealand, Singapore, India, Brunei, and Malaysia have all adopted the British construction practice and procurement approach, with local modifications. For

example, Singapore developed its own SMM (CP 97); Hong Kong published its HKSMM (2001 Edition); and Australia has its own measurement standards. Across all these jurisdictions, the fundamental principles are consistent: preliminaries are non-element-specific costs, they are priced separately to enable fair tender comparison, and their proper treatment is central to cost planning, interim valuation, variation assessment, and final account preparation.

## 2. Preliminaries in Malaysia: Framework and Application

### 2.1 Historical Lineage

The Malaysian SMM has a direct lineage from the English SMM. The Preface to SMM2 records that the First Edition (Metric) of 1976 was prepared jointly by the Institution of Surveyors (Malaysia) and Jabatan Kerja Raya, based on the English Standard Method of Measurement [3]. Earlier Imperial-measurement predecessors to the metric SMM1 existed, but their formal adoption dates are not well documented in publicly accessible sources.

### 2.2 Evolution of the Standard Method of Measurement

The full evolutionary chain is as follows:

- **SMM1 (1st Edition Metric, 1976):** Prepared jointly by the Institution of Surveyors (Malaysia) and Jabatan Kerja Raya for the adoption of the metric system in Malaysia, in line with the then-current English SMM [3].
- **SMM2 (2nd Edition, May 2000):** Published by the Institution of Surveyors Malaysia (ISM). The workhorse standard for two decades, containing 20 work sections with Section B covering Preliminaries.
- **MySMM (2020):** Published by RISM. Superseded SMM2, introducing BIM-friendly features, IBS measurement rules, codification for digital BQ production, and comprehensive guidelines for drafting Preliminaries, Specifications, and Preambles [4].
- **SMM3 (3rd Edition):** Digital copy released on 8 July 2025 by RISM. Represents the formal Third Edition superseding both MySMM and SMM2 [5].

### 2.3 The JKR Standard Specification for Building Works

For Government projects, the JKR Standard Specification for Building Works provides the specification backbone. The evolutionary chain is:

- **2005 Edition:** First formal compilation of the current series [6].
- **2014 Edition:** Replaced 2005. Document No. JKR 20800-0183-14, dated 29 January 2014 [7].
- **2020 Edition:** Replaced 2014. Document No. JKR 20800-0226-20, dated 2 January 2020 [8].
- **2025 Edition (Current):** Replaced 2020. Document No. JKR 20800-0257-25, dated 14 February 2025. Section A covers Preliminaries and General Conditions [9].

### 2.4 The SMM3 Part A / Part B Structure — A Practitioner's Critique

SMM3 adopts the RICS NRM 2 two-part philosophy: Part A (Information and Requirements) is the descriptive portion drafted by the QS; Part B (Pricing Schedule) is where the contractor inserts his costs. However, experienced Malaysian QS practices have identified significant practical deficiencies in this structure:

- **Inconsistent numbering:** Part A is organised by thematic headings (Generally, Form of Contract, Statutory Obligations, etc.) while Part B is organised by cost categories (Management & Staff, Site Establishment, etc.). There is no one-to-one numerical mapping, making cross-referencing time-consuming and error-prone for contractors.

- **Contractor market maturity:** The Part B pricing schedule demands granular disaggregation into fixed and time-related charges across numerous sub-headings. The Malaysian contractor market, particularly at G5–G7 level, does not operate at this level of estimating sophistication. Forcing an immature market to adopt a format it cannot competently populate creates false precision.
- **Time-related item exposure:** Separately priced time-related items create contractual artefacts that can be exploited in prolongation claims, even where the delay is the contractor's own default.
- **Monetary items in Part A not in Part B:** Certain Part A requirements carry financial implications (e.g., S.O.'s facilities, transport, laboratory equipment) but have no corresponding pricing line in Part B, leaving costs unallocated.

For these reasons, some experienced consultant QS firms deliberately deviate from the SMM3 recommended structure, consolidating the descriptive and pricing functions into a single, sequentially numbered document that every obligation described has a corresponding pricing opportunity immediately adjacent to it. This deviation is consistent with the fundamental principle stated in the SMM itself: quantity surveyors are expected to use their discretion and provide more information where necessary.

## 2.5 Role in Malaysian Standard Forms of Contract

Malaysia operates with distinct public and private sector standard forms. In the **public sector**, standard forms are issued by Jabatan Kerja Raya (JKR), including PWD Form 203A (where bills of quantities form part of the contract), PWD Form 203, and PWD Form DB (design and build). In the **private sector**, the PAM Contract (currently PAM 2018), IEM Forms, CIDB Standard Form 2022, and AIAC Standard Form 2019 are available.

A critical distinction exists between these forms regarding the administration of preliminaries: under PAM, the Architect administers the contract but cannot negotiate on the Employer's behalf; under JKR, the Superintending Officer wears two hats (administrator and Government representative) and has broader powers. This distinction has profound consequences for how preliminary adjustments are handled, as discussed in detail in Chapter 5.

# 3. Preliminaries Across Procurement Methods

## 3.1 Traditional Procurement (Design-Bid-Build)

### 3.1.1 With Bills of Quantities

This is where the concept of preliminaries operates in its most fully developed form. The consultant QS prepares the BQ, with preliminaries forming a dedicated section — typically Bill No. 1. The two-part structure ensures a clear delineation between what the employer requires and what the contractor proposes to spend. Under this model, preliminaries are most visible, most granular, and most amenable to fair valuation and adjustment.

### 3.1.2 Without Quantities (Lump Sum)

Instead of a BQ, a Contract Sum Analysis (CSA) or Schedule of Works is used as the pricing document. The contractor inserts lump sum amounts against broad preliminary headings. There is less granularity than a full BQ, which creates valuation risk — the QS has less detailed information against which to value interim payments and variations.

### 3.1.3 Re-measurement Contracts

The preliminaries section is structured identically to a firm BQ contract. However, because quantities in the measured work sections are approximate, the contractor faces uncertainty about duration and resource intensity, making accurate preliminary pricing more difficult. As quantities are re-measured, the contract duration may extend or contract, and time-related preliminaries must be adjusted accordingly — a frequent

source of dispute.

### 3.2 Design and Build (D&B)

Under D&B, the traditional BQ becomes less relevant as the contractor assumes design responsibility. The key tender/contract documents are the Employer's Requirements (ER) and the Contractor's Proposals (CP). Preliminaries migrate into the Contract Sum Analysis, becoming less transparent. In two-stage D&B, the contractor is first selected on the basis of fee, preliminaries, overheads and profit — meaning preliminaries serve as one of the primary differentiators during contractor selection.

### 3.3 Management Contracting and Construction Management

Under management contracting, the management contractor prices his own fee and his preliminaries, which cover site-wide establishment, management staff, common plant, and general facilities. Each works package contractor also has his own package-specific preliminaries. Under construction management, the employer contracts directly with each trade contractor, and the construction manager prepares a common preliminaries budget covering site-wide items, which the employer funds directly. The employer is exposed to escalation of common preliminaries if the programme extends.

### 3.4 EPC / Turnkey

In EPC/turnkey contracts, preliminaries as a separately identified pricing document largely disappear from the employer's view. The contractor provides a single lump sum price for the complete facility. His internal cost build-up includes preliminaries, but these are subsumed within the overall contract price. There is limited ability to value or adjust preliminaries separately. Interim payments are based on a schedule of payments linked to milestones, not on measured work plus preliminaries.

### 3.5 NEC Suite

The NEC family treats preliminaries differently from the JCT, PAM, or FIDIC traditions. Under Option A (Priced Contract with Activity Schedule), the NEC does not have a separate "Preliminaries Bill." Instead, preliminary costs are embedded within activities on the Activity Schedule. Management and site costs (referred to as Preliminaries on other forms of contract) should be shown and allocated appropriately on the Schedule. An activity is paid when it is complete — not progressively. If a compensation event extends the programme, the contractor recovers increased preliminaries through a new activity added to the schedule.

### 3.6 Comparative Summary

Procurement	Documentation	Visibility	Valuation Basis
Traditional (BQ)	Standalone Preliminaries Bill	Highest — full granularity	Item-by-item valuation
D&B	Contract Sum Analysis	Reduced transparency	CSA-based assessment
Management	Common + package prelims	Split visibility	Cost reimbursable / scheduled
EPC/Turnkey	Subsumed in lump sum	Minimal / none	Milestone-based
NEC Option A	Activity Schedule	Embedded in activities	Activity completion

## 4. Administration: Tender Documentation Stage

### 4.1 The Consultant QS's Role in Drafting Preliminaries

The consultant QS is the architect of the Preliminaries Bill. Before drafting, the QS must assemble inputs from all consultants and the employer: the form of contract, insurance and bond requirements, temporary works obligations, OSH obligations (particularly under the JKR Standard Specification 2025 for

Government projects), and any project-specific constraints. The draft Preliminaries should be issued to the client for approval, and the QS should check whether the client has any requirements regarding authorisation from legal or insurance advisers.

## 4.2 Arrangement and Composition

In the Malaysian BQ, the Preliminaries Bill is typically Bill No. 1, preceding all measured work sections. Its composition comprises:

- **Descriptive/Information items:** Non-priced items providing project information — description of works, names of consultants, site location, contract period, form of contract, list of drawings. The contractor reads but does not price these.
- **Priced obligation items:** Items requiring the contractor to insert a lump sum price — provision of S.O.'s office, signboard, progress photographs, safety plan, temporary water/power, hoarding, security, cleaning, testing.
- **P.C. Sums and Provisional Sums:** In standard Malaysian BQ practice, these are housed in their own standalone bill(s), separate from the Preliminaries Bill. Only project-specific preliminary-related P.C. or Provisional Sums (e.g., insurance premiums, temporary service diversions) may appear within Preliminaries.
- **Contingency Sum:** A global sum for unforeseen items, expended only upon instruction.

## 4.3 Measurement Method

Preliminaries are not measured by quantity in the conventional sense. They are described and priced as items (lump sums). However, within a single Preliminaries Bill, the measurement basis is not uniform:

- “Item” (Lump Sum) — the vast majority of preliminary obligations.
- Rate-based items — where the duration or extent is measurable (e.g., security guard service x months).
- P.C. Sums — stated as a fixed sum; the contractor adds only profit and attendance.
- Provisional Sums — stated as a fixed sum; expended only upon instruction.

## 4.4 Rate Rationalisation of Preliminary Prices

Rate rationalisation adjusts the internal distribution of rates and prices within the contract sum so that a fair and reasonable set of rates is obtained for valuing interim payments, variations, and the final account — whilst preserving the total contract sum unchanged. It is not a renegotiation of the contract price. This publication recommends that the tender documents include a preamble clause conferring upon the Contract Administrator the power to rationalise rates and prices without requiring the contractor's agreement, on the basis that consent is given by the act of tendering. The general framework for rate rationalisation — including the recommended clause, legal basis, and essential safeguards — is a subject for a separate publication. This section addresses the specific difficulties of rationalising *preliminary* prices.

### 4.4.1 Why Preliminary Prices Are Different

For measured work rates, rationalisation is relatively straightforward: a rate per unit quantity can be compared against first-principles build-ups, market norms, and the CQS's own cost data. The rate can be adjusted up or down with reference to objective benchmarks, and the adjustment is arithmetically verifiable.

Preliminary prices are fundamentally different. They are lump sums reflecting the contractor's own method of working, organisational structure, staffing model, plant fleet, overhead recovery strategy, and commercial risk appetite. Two contractors tendering on the same project will legitimately arrive at very different preliminary figures — not because one is wrong, but because their businesses operate differently. There is no “correct” rate against which to rationalise.

Moreover, preliminary items are typically priced as undifferentiated lump sums against descriptive obligations. The contractor inserts a single figure against “Provision of site office for the S.O.” without being required to show whether that figure covers procurement, delivery, installation, rental, maintenance, furnishing, utilities, or all of these. The lump sum is the contractor’s commercial judgement — not a build-up amenable to analytical dissection by the CQS.

#### 4.4.2 The Limits of CQS Intervention

The CQS should **not** attempt to rationalise preliminary lump sums in the same manner as measured work rates. Specifically, the CQS should not:

- Dictate the contractor’s resource levels (e.g., “you have priced for 3 site staff but we think 2 is sufficient”);
- Impose assumed durations or programme assumptions on time-related items;
- Substitute the CQS’s own cost build-up for the contractor’s commercial pricing; or
- Redistribute preliminary lump sums across items in a way that alters the contractor’s intended cash flow or risk allocation.

To do any of these would be to impute to the CQS a knowledge of the contractor’s internal operations that the CQS does not and cannot possess — the very deficiency identified in Chapters 2 and 3 of this publication as the reason why the CQS applies a percentage allowance rather than a detailed Preliminaries costing in the first place.

#### 4.4.3 What the CQS Should Do

Whilst the CQS cannot rationalise preliminary lump sums in the conventional sense, the CQS has a professional duty to review the contractor’s preliminary pricing for the following purposes:

- **Detection of front-loading:** Where the contractor has loaded disproportionate value into early-performing preliminary items (e.g., mobilisation, site establishment) at the expense of later items (e.g., de-mobilisation, completion obligations), the CQS should identify this and advise the employer. Front-loading distorts interim valuations and exposes the employer to overpayment risk if the contractor defaults mid-contract.
- **Detection of gross unreasonableness:** Where individual preliminary lump sums are manifestly out of proportion to the obligation described — for instance, RM 500,000 against “Provision of signboard” on a RM 5 million contract — the CQS should interrogate the basis and flag the anomaly to the employer.
- **Request for breakdown:** The CQS is entitled to request a detailed breakdown of the contractor’s preliminary lump sums. This breakdown serves two purposes: it enables the CQS to classify items as initial, periodic, or completion for interim valuation purposes (see Chapter 5); and it provides a basis for valuing the consequential effect of variations on preliminaries (see Chapter 7). The breakdown does *not* convert the lump sums into measured items amenable to re-measurement.
- **Classification for interim valuation:** Using the breakdown, the CQS should classify each preliminary item or component as fixed (initial or completion) or time-related (periodic). This classification is essential for the interim valuation methods described in Section 5.3. The classification exercise is an administrative act by the CQS for valuation purposes; it does not alter the contractor’s entitlement to the total preliminary sum.
- **Advice to the employer:** Where the CQS identifies front-loading, gross unreasonableness, or anomalies that create post-contract risk, the CQS should advise the employer in writing, setting out the specific items of concern, the nature of the risk, and the recommended course of action.

#### 4.4.4 When the Contractor Refuses to Revise

The practical question is this: what happens when the CQS advises the employer of anomalous preliminary pricing, and the contractor declines to revise? As established earlier, withdrawing the award over a preliminary pricing disagreement is disproportionate in a lump sum contract. The employer cannot compel the contractor to revise figures that were part of his bona fide tender and accepted by the LOA. The contractor's total preliminary sum is protected by the lump sum principle.

However, the CQS does not need the contractor's agreement to *value* preliminaries fairly. The contractor's pricing determines his *total entitlement*; the CQS's professional assessment determines the *timing and basis of payment*. These are different things. The CQS's practical toolkit, all of which operate within existing contractual and professional authority, is as follows:

- **Apply a progress-capped valuation methodology:** Where front-loading is identified, the CQS applies the progress-capped three-category split (Method 3) or the Hybrid Method (Method 6) described in Section 5.3 to ensure that preliminary payments do not run ahead of actual work progress. This does not alter the contractor's total entitlement — he still receives his full preliminary sum over the contract — but it controls the *timing* of payment to reflect reality. This is within the CQS's existing professional competence and does not require the contractor's agreement.
- **Classify items by CQS's professional assessment:** The CQS classifies preliminary items into initial, periodic, and completion categories based on the CQS's own professional judgement (informed by the contractor's breakdown if obtained, or by the CQS's assessment of the obligation if not). The classification determines payment timing, not entitlement. The contractor may disagree, but the interim certificate is the CQS's professional assessment — challengeable through the contract's dispute mechanism but not requiring prior agreement.
- **Tie releases to verified performance:** Where specific items are grossly unreasonable and the CQS suspects the pricing has been deliberately distorted to game interim valuations, the CQS applies a site-verification overlay. If the contractor has priced RM 300,000 for five site staff but only deploys three, the CQS values on the basis of resources actually deployed, not resources priced. This is not a rationalisation; it is a valuation of actual performance against the contractual obligation.
- **Record and protect:** The CQS records the anomalous pricing and the contractor's refusal to revise in writing, ensuring that the employer has a clear documentary trail. The preamble clause addressing non-performance of priced obligations (see Section 4.5) applies: items priced at inflated values must still be performed to the standard described. Non-performance or under-performance of a priced obligation is a basis for reduced valuation — not as a rationalisation, but as a valuation of actual delivery against the contractual obligation.

The critical principle is this: the CQS's duty is to certify fairly. The contractor's lump sum entitlement is protected by the contract; the CQS's valuation methodology is protected by the CQS's professional duty. The CQS does not need the contractor's permission to do his job properly.

#### 4.4.5 The Unpriced or Nil-Priced Preliminary Item

A specific rationalisation concern arises where the contractor has priced certain preliminary items at nil or at a nominal sum, whilst inflating other items to absorb the cost. This is a form of internal cross-subsidy that the contractor is commercially entitled to adopt. However, it creates a practical difficulty: if the nil-priced item is not performed, the CQS has no basis for deduction; if the inflated item is subject to a variation omission, the contractor is overpaid.

The CQS should identify such anomalies during the rationalisation review and recommend that the contractor re-allocate at least a nominal value against each obligation item. If the contractor declines, the CQS should record the position in writing and include a preamble clause deeming the costs of unpriced items to be absorbed within other items of the contract — with the consequence that no deduction shall be made for non-performance of unpriced items, and no additional payment shall be made for their performance. This is addressed further in Section 4.5.

#### 4.4.6 Summary: The CQS's Role in Preliminary Rationalisation

In summary, the CQS's role in rationalising preliminary prices is *diagnostic and advisory*, not *prescriptive*. The CQS reviews, interrogates, classifies, and advises. The CQS does not rewrite the contractor's commercial pricing. The contractor's total preliminary sum — as a component of the lump sum contract — is his entitlement provided he performs the obligations described. What the CQS ensures is that the *distribution* of that sum across items and across time is transparent enough to support fair interim valuation and variation assessment throughout the contract.

#### 4.5 Unpriced Preliminary Items

Where the contractor leaves obligation items unpriced despite being given the opportunity, the QS should:

- Record this formally in writing, listing the specific unpriced items.
- Include a preamble clause deeming costs absorbed elsewhere — no deduction for non-performance of unpriced items, no additional payment for performance of unpriced items.
- Consider inserting notional values as an agreed allocation for administration purposes.
- If the contractor still refuses, advise the employer of the asymmetric risk in writing: the employer loses the ability to deduct for non-performance but retains the right to require performance.

## 5. Administration: Post-Contract Stage

### 5.1 A Critical Contractual Distinction: PAM vs JKR

Under the PAM form, the Architect occupies a dual but circumscribed role. The Architect is the contract administrator and, at the same time, the Employer's agent for the purpose of securing completion of the works. However, the Architect's role as contract administrator is administrative and certifying, not negotiating or commercial. The Architect administers the contract as it stands; he does not negotiate amendments to it on the Employer's behalf.

**The variation clause (PAM Clause 11) empowers the Architect to vary the Works** — the design, quality, and quantity of the permanent and temporary works. It does **not** empower the Architect to issue a Variation Instruction to add, omit, or change a preliminary obligation as such. The contractor has the right to ask the Architect to specify which clause empowers any instruction; if the Architect cannot point to a specific clause, the instruction is not valid.

Under JKR/PWD 203A, the S.O. wears two hats — contract administrator and Government officer acting on behalf of the employer. The S.O. has broader powers than the PAM Architect, including the ability to give directions on behalf of the employer.

### 5.2 Practical Framework for Preliminary Adjustments

Given this critical distinction, the practical framework for adjusting preliminary obligations is:

- **Layer 1 — Changes arising from variations to the Works (foolproof):** The Architect issues a variation to the Works under Clause 11; the consequential impact on preliminaries is assessed by the QS as part of the variation valuation under Clause 11.6/11.7. This is the only mechanism that passes entirely through the Architect's hands.
- **Layer 2 — Direct Employer-Contractor agreement:** Where the change does not flow from a variation to the Works but is a standalone adjustment to a preliminary obligation, the Employer must negotiate directly with the Contractor. The agreed change is recorded in an exchange of letters between the contracting parties. The Architect is notified so that he can take the agreed change into account in his administration.
- **Layer 3 — Non-performance without agreement:** Where the contractor simply fails to perform a preliminary obligation, the QS does not certify payment for that item. This is not a variation; it is

non-performance. The QS values the item at nil (or at a reduced amount reflecting partial performance) in the interim valuation.

- **Layer 4 — Disputed non-performance:** Where the contractor argues that his non-performance was caused by the employer, the dispute is resolved through the contract’s dispute resolution mechanism.

A Supplementary Agreement is only warranted for a fundamental change to the preliminary obligations — such as a wholesale restructuring of the contract administration arrangements.

**5.3 Interim Valuation of Preliminaries**

The simple two-category split (fixed versus time-related) creates a fundamental risk: time-related items, if valued purely on elapsed time, will be fully paid out before the work is completed. Experienced QS practices have therefore developed more sophisticated valuation frameworks.

**5.3.1 Method 1: Simple Two-Category Split (Fixed / Time-Related)**

Each item is classified as fixed or time-related. Fixed items are paid when performed; time-related items are paid proportionally against elapsed time. This method risks overpaying the contractor before work completion and is inadequate for projects of material duration.

**5.3.2 Method 2: Three-Category Split (Initial / Periodic / Completion)**

Each item is classified as Initial (mobilisation), Periodic (running), or Completion (demobilisation). Initial items are paid when discharged at the start; completion items are held back until the end. This is an improvement but periodic costs remain vulnerable to time-based overpayment.

**5.3.3 Method 3: Three-Category Split Tied to Work Progress (Recommended)**

This is the practical standard for experienced Malaysian consultant QS practices. Items are classified into Initial, Periodic, and Completion. However, the overall value of periodic preliminaries released at each valuation is capped by the overall percentage of measured work completion. The amount certified is the lesser of the time-elapsed accrual or the progress-capped amount. This protects the employer against overpaying time-related costs when the contractor is behind programme.

**5.3.4 Method 4: S-Curve / Programme-Weighted Valuation**

The QS prepares a preliminary payment schedule aligned to the contractor’s accepted programme and expressed as an S-curve. Each preliminary item’s payment profile is derived from the planned resource deployment pattern. This is the most accurate method but resource-intensive; suitable for large complex projects.

**5.3.5 Method 5: Pro Rata to Measured Works Value**

Preliminaries are valued as a flat percentage of the measured works value certified. Extremely simple but crude — does not reflect the reality that certain costs genuinely front-load or back-load. Useful as a cross-check against the primary method, not as a standalone approach.

**5.3.6 Method 6: Hybrid Method (Best Practice)**

Combines Methods 2, 3, and 4 with a site verification overlay. The QS physically verifies that the resources claimed are actually deployed. If the contractor claims 5 site staff but only 3 are observed on site, the QS adjusts accordingly. This is the gold standard for medium-to-large projects.

**5.3.7 Comparison of Methods**

Method	Mechanism	Advantage	Risk	Complexity	Rating
1: Fixed/Time	Two-category split by time	Simple to apply	High	Low	Inadequate

Method	Mechanism	Advantage	Risk	Complexity	Rating
2: I/P/C split	Three-category, no cap	Holds back completion	Medium	Low	Acceptable
3: I/P/C + cap	Three-category, progress-capped	Prevents overpayment	Low	Medium	Recommended
4: S-curve	Programme-weighted profile	Most accurate	Low	High	Best (large)
5: Flat %	Pro rata to measured works	Simplest possible	Medium	Lowest	Cross-check
6: Hybrid	Combined + site verification	Gold standard	Lowest	Highest	Best practice

## 6. Contractor Pricing Advisory

### 6.1 The Fundamental Principle: Bottom-Up, Not Top-Down

The single most important advisory point is this: preliminaries must be priced from the bottom up, not as a flat percentage. A contractor who simply applies “10% for prelims” without building up each item from first principles is exposing himself to under-recovery or over-pricing.

The correct approach is: (1) read the entire Preliminaries Bill and identify every obligation with a financial consequence; (2) determine the resource requirement for each; (3) price each resource against its duration — initial, periodic, or completion; (4) build up the total from individual items; and (5) cross-check the total against a percentage benchmark.

### 6.2 Building Projects vs Civil Engineering Projects

Building projects are characterised by higher site management intensity, more complex temporary works, greater welfare facility requirements, and longer periods of multi-trade coordination. The preliminary cost profile is front-loaded and management-heavy. Civil engineering projects (roads, bridges, drainage) have a fundamentally different profile: linear or dispersed works over large areas, heavy reliance on plant (often measured in the BQ rather than in preliminaries), lower site management intensity per unit of work, and shorter durations per work location.

Peer-reviewed Malaysian research by Abas et al. (2017), analysing 25 tender evaluation documents from six civil infrastructure tender exercises conducted by CIDB-registered Grade G7 contractors, concluded that the preliminaries of civil infrastructure works fall between 3.26% and 6.38%, compared with building works between 3.60% and 7.94% [10]. The civil infrastructure preliminary percentage is approximately 16.5% lower than building works. The building works figures are drawn from the earlier Malaysian studies by Keng and Ching (2012) and Keng (2016) [11][12]. An earlier Malaysian study by Ghani (2006) placed the range between 5% and 10% [13]; the Abas (2017) finding revises the lower bound downward by approximately 28%. Turner & Townsend’s International Construction Market Survey (2016) reported that Malaysian preliminaries constitute approximately 10% of the tender sum [14].

These figures differ materially from the 10–20% band commonly quoted as an international rule of thumb. The Malaysian peer-reviewed range is substantially lower, and practitioners should calibrate their cost planning against local empirical data rather than international generalisations.

**An important regional caveat:** the Abas (2017) sample, and the Keng and Ghani studies it builds upon, are drawn predominantly from Peninsular Malaysian tender exercises. The Peninsular contractor market is deep, mature, and competitive in a way that the Sabah and East Malaysian markets are not. Applying these Peninsular ranges directly to Sabah understates the local cost reality. The structural reasons for the Sabah uplift, and the resulting implications for cost planning, are addressed in Section 6.3.1.

### 6.3 Contract Value and Scale

It is widely accepted in QS practice that the relationship between contract value and preliminaries percentage is inverse — smaller contracts tend to carry a higher preliminary percentage because fixed costs of site establishment (mobilisation, management staff, bonds, insurances) do not scale down proportionally with contract value. Conversely, large projects benefit from economies of scale in site-wide plant, management team deployment, and temporary works amortisation.

**A caveat on quoted ranges.** Contract-value banding tables that propose specific preliminary percentage ranges for defined value bands are commonly circulated in QS training material and online publications but are rarely traceable to primary empirical research. Any figures quoted by band should be treated as indicative practitioner experience rather than statistically validated benchmarks, and must be reconciled against locally sourced tender data. For example, the peer-reviewed Malaysian research cited in Section 6.2 reports empirical ranges (3.60%–7.94% for building works, 3.26%–6.38% for civil infrastructure) that are materially lower than the 10–20% figures commonly quoted internationally or in unattributed practitioner tables.

Practitioners preparing cost plans or advising contractors on pricing should therefore:

- Reference the published peer-reviewed Malaysian ranges as the primary empirical benchmark, supplemented by firm-specific tender data;
- Treat any value-banded tables encountered in general publications with caution and, where used, disclose the source or acknowledge that the figures are practitioner rules of thumb rather than validated research; and
- Calibrate percentages against project-specific factors — duration, site remoteness, procurement method, IBS content, and market conditions — rather than relying on generic banding.

#### 6.3.1 The Sabah and East Malaysian Uplift

The peer-reviewed Malaysian preliminaries data referenced in Section 6.2 is drawn predominantly from Peninsular Malaysian tender exercises and reflects the cost structure of a mature, deep contractor market with established supply chains, plant rental networks, and competitive subcontract pricing. These conditions do **not** hold uniformly across Malaysia. In Sabah, and to a comparable extent in Sarawak, structural market characteristics push preliminaries materially higher than the Peninsular benchmarks would suggest.

The Sabah-specific factors that uplift the preliminary percentage include:

- **Limited contractor depth.** The number of experienced and capable contractors at each CIDB grade is materially smaller than in the Klang Valley or Penang. Reduced competitive pressure permits higher preliminary loadings to be retained in tendered prices.
- **Plant and equipment scarcity.** Tower cranes, specialist formwork systems, large-capacity generators, and other common-user plant are in shorter supply locally. Where plant must be mobilised from Peninsular Malaysia or imported, freight, port handling, and transport across Sabah's road network add cost that Peninsular-based studies do not capture.
- **Skilled labour shortages.** Site management, technical supervision, and certain specialist trades carry higher wage premiums in Sabah, reflecting scarcity rather than productivity. Welfare facilities, accommodation, and transport for staff sourced from outside the immediate project area add further to time-related costs.
- **Materials supply and freight.** A significant portion of finishing materials, M&E components, and proprietary systems is sourced from Peninsular Malaysia or imported. Although the cost of materials themselves falls within measured rates, the consequential preliminaries impact — extended procurement lead times, larger storage and double-handling requirements, contingency for shipping

disruption — increases site establishment and management overheads.

- **Geographic dispersion and remoteness.** Project sites in interior Sabah, Sandakan, Tawau, the islands, and the East Coast carry meaningful logistical premiums. Mobilisation, demobilisation, and ongoing site servicing for remote projects can drive preliminary costs well beyond conventional ranges.
- **Monsoon and weather exposure.** The Sabah weather pattern, particularly during the northeast monsoon, extends contract durations and increases weatherproofing, drainage, and protection-of-works costs that are typically priced through preliminaries.
- **Statutory and authority dealings.** Local authority and utility coordination in Sabah operates differently from the Peninsular framework, and coordination costs for water, power, telecommunications, and road authority approvals are frequently more time-intensive.

**Practitioner observation.** In Etika Hijau's practice experience, Sabah preliminary percentages for building works frequently exceed the upper Peninsular bound reported by Abas et al. (2017) of 7.94%, with figures of 10% to 15% commonly observed on small-to-medium contracts in remote or logistically constrained locations. These figures are firm practitioner judgement based on accumulated tender analysis, not peer-reviewed research, and are presented as illustrative rather than as published benchmarks. Sabah practitioners should maintain their own tender data records to develop locally calibrated benchmarks, as no peer-reviewed Sabah-specific preliminaries study is presently available in the public literature.

The corollary for Sabah CQS practice is that the cost planning percentage for Preliminaries should not be drawn directly from Peninsular Malaysian or international benchmarks without an explicit Sabah uplift. The uplift quantum is project-specific and depends on the factors set out above.

#### 6.4 Composition of Preliminary Costs

The composition of a building project preliminary sum varies significantly by project type, duration, and contractor organisation. The indicative shares set out below are based on general QS practitioner experience and should be treated as illustrative rather than statistically validated benchmarks. Contractors and CQS firms should calibrate these against their own tender analysis data:

- **Site management and staff (~35–45% indicative):** Project manager, site supervisor, QS, safety officer, general workers, administrative staff. Almost entirely time-related.
- **Site establishment and temporary works (~20–30% indicative):** Hoarding, site offices, welfare facilities, temporary roads, signage, scaffolding. Mix of initial, periodic, and completion.
- **Common-user plant and equipment (~10–15% indicative):** Tower cranes, hoists, generators. Predominantly time-related.
- **Insurance, bonds, and fees (~5–10% indicative):** CAR insurance, performance bond, SOCSO, CIDB levy, authority fees. Predominantly initial.
- **Temporary services (~5–8% indicative):** Temporary power, water, telephone. Mix of initial and periodic.
- **Safety and environmental (~3–5% indicative):** Safety equipment, PPE, environmental management. Mix of initial and periodic.
- **Completion and handover (~2–5% indicative):** De-mobilisation, final cleaning, as-built drawings, O&M manuals. Completion items.

#### 6.5 Key Advisory Points

- Never use a flat percentage. Always build up from first principles, aligned to the actual programme and method of working.

- Understand the contract duration's impact on time-related costs. Every additional month of unplanned duration erodes profit.
- Read the Preliminaries Bill as a contractual obligation document. Every item described becomes a binding obligation upon contract execution.
- Do not front-load preliminaries to improve cash flow unless the QS is unlikely to challenge it during rationalisation.
- For civil engineering projects, check carefully whether plant costs are in Preliminaries or in measured work sections.
- For large projects, invest in a dedicated preliminary estimating exercise with a resource histogram aligned to the programme.
- Preliminaries are crucial to the contractor's profit margin. Turner & Townsend's 2016 International Construction Market Survey reported a typical Malaysian medium-commercial-scale profit margin of approximately 12.5% [14]. Poor preliminaries pricing will erode the entire margin.

## 7. Final Account Stage

### 7.1 Reconciliation Principles

At final account, the consultant QS must reconcile every preliminary item against actual performance:

- **Itemised lump sum items:** Reviewed against whether the obligation was performed. Items fully performed are paid at the tendered lump sum. Items partially performed are valued pro rata or at a fair value. Items not performed are subject to a deduction for non-compliance — but only if they were priced.
- **P.C. Sums:** Adjusted to actual expenditure. The tendered P.C. Sum is omitted and replaced with the actual cost plus the contractor's tendered profit and attendance percentage.
- **Provisional Sums:** Adjusted to actual expenditure as instructed by the CA. Unexpended provisional sums are omitted entirely.
- **Contingency Sum:** Any unexpended balance is returned to the employer.
- **Time-related items:** If the contract period was extended due to employer-responsible delays, the additional time-related preliminaries form part of the contractor's Loss and Expense claim — assessed at actual cost incurred, not at the tendered rates.

### 7.2 The Lump Sum Contract Principle

Under PAM (With Quantities), the contract is a lump sum contract. The Contract Sum is adjusted only by formal variations, fluctuations, and other express contract provisions. Errors in the Preliminaries Bill do not automatically entitle the employer to a deduction — a formal variation instruction must be issued for items within the Works. For preliminary items outside the Works, the employer must rely on the practical framework described in Chapter 5.

The contractor is entitled to the lump sum he tendered for each preliminary item, provided he has performed the obligation. The employer cannot reopen the contractor's pricing to argue that the actual cost was lower than the tendered sum. However, the QS is entitled to examine whether each preliminary obligation has been actually performed. Non-performance is a basis for non-payment or deduction.

### 7.3 The Unpriced Items Problem at Final Account

Where the contractor left items unpriced (and the preamble clause deems costs absorbed elsewhere), the final account treatment follows the same principle: no deduction for non-performance of unpriced items, no additional payment for performance of unpriced items. The contractor accepted this risk at tender stage.

## 8. Conclusion

Preliminaries are not merely the “first section of the BQ.” They are the contractual, administrative, and financial scaffolding upon which the entire construction project operates. Their significance cuts across five critical domains:

- **Tendering:** They establish the level playing field upon which tenderers compete, ensuring all bidders price against the same logistical, regulatory, and administrative requirements.
- **Cost management:** They represent a discrete and significant cost centre (typically 10–20% of contract sum) that must be planned, monitored, and controlled as rigorously as any trade element.
- **Interim valuation:** Distinguishing between initial, periodic, and completion items, and tying periodic items to work progress, is essential for fair and accurate monthly valuations.
- **Claims and disputes:** In delay and disruption scenarios, time-related preliminaries form the backbone of the contractor's prolongation claim. The differing treatment under PAM, AIAC, and JKR forms creates real commercial consequences.
- **Contract administration:** For Government officers administering contracts under JKR/PWD forms, the Preliminaries and General Conditions section effectively defines the administrative regime for the entire project.

The professional QS who masters the preliminaries — from drafting and pricing through interim valuation, variation assessment, and final account — commands a skill that is indispensable to every construction project. The administration of preliminaries demands a continuous thread of professional discipline across the entire project lifecycle. Shortcuts invite disputes; rigour prevents them.

## Sources, Methodology and Caveats

This publication is provided as a professional reference for practitioners. Numerical claims, dates, and document references have been verified against primary sources where available. Where peer-reviewed empirical research exists for the Malaysian context, it has been preferred over general industry rules of thumb. Where figures are practitioner experience or generalised industry convention, they have been clearly identified as such within the body of the publication.

### Methodology Notes

- **Empirical figures (Sections 6.2, 6.5):** The Malaysian preliminaries percentages and contractor profit margin reference are drawn from peer-reviewed research and a published international cost survey, cited at [10]–[14].
- **Indicative figures (Sections 6.3, 6.4):** The narrative discussion of contract value scaling and the composition of preliminary cost shares are presented as illustrative practitioner experience rather than statistically validated benchmarks. Practitioners should calibrate against firm-specific tender data.
- **Standard documents (Sections 2.2, 2.3):** SMM and JKR Standard Specification editions are verified to publishing source where available, cited at [3]–[9].
- **Contractual clause references (Chapters 4, 5, 7):** Clause numbering for PAM 2006/2018 and JKR 203A is given for practitioner orientation. Practitioners are advised to refer to the current contract text in any specific application.
- **Six interim valuation methods (Section 5.3):** Distillation of established Malaysian QS practitioner methodologies. Method classification and ranking reflect the views of the firm's principal.

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### Limitations of Available Sources

Practitioners should be aware that:

- Comprehensive published Malaysian preliminaries cost data is limited; the Abas et al. (2017) study, drawing on 25 tender documents from a single contractor grade and project type, remains the principal peer-reviewed Malaysian benchmark.
- **The published Malaysian research is predominantly Peninsular in sample composition.** No peer-reviewed Sabah-specific or East Malaysian-specific preliminaries cost study is presently available in the public literature. Sabah and Sarawak practitioners should treat the published Peninsular ranges as a lower bound and apply an explicit local uplift reflecting the structural market characteristics of East Malaysia (limited contractor depth, plant scarcity, freight, monsoon exposure, and remoteness). See Section 6.3.1.
- International figures (Turner & Townsend, RICS) are useful for cross-reference but do not always reflect Sabah or East Malaysian conditions, where logistics, freight, and remoteness materially affect preliminary cost profiles.
- Standard form contract clause references should be checked against the current published edition of the relevant form, as amendments and replacement editions may alter clause numbering.
- Where a figure or claim in this publication carries no citation, it should be treated as the firm's practitioner judgement based on its accumulated professional experience, rather than published research.

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