
07

WORK METHODOLOGY

BACKGROUND

A description of the approach, methodology and work plan for performing the assignment, including a detailed description of the proposed methodology and staffing for training, if the Terms of Reference specify training as a specific component of the assignment

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Methodology and Work Plan

1. Preamble

Expert cost advice is essential if a building is to be designed and constructed optimally within the Clients brief and budget

The various roles to be carried out by Building Scope Ltd in Quantity Surveying Consultancy for the Proposed Works can best be described under the various stages of the design process:-

2. Inception

This is the stage when the original idea of the project is formulated and thought given to issues such as:-

- (a) Nature, size and function of the proposed works
- (b) Timescale and financial limits
- (c) Confirmation of site ownership, boundaries, restrictive covenants and other associated consideration- by site visit

3. Outline Proposals

At this stage various schemes will be developed by the design team and passed on to us for preparation more detailed cost estimates.

We will maintain close contact with all the other professionals to determine the cost implication of the alternative proposals as they are prepared and to subsequently ensure that the proposals keep within the budget and outline cost plan.

5. Scheme Design

Once the outline proposals have been finalized, the process moves on to scheme design where wider issues of appearance, method of construction and outline specifications are discussed.

We will at this point develop a cost plan showing the proposed distribution of costs to the various components of the project works e.g. partitions, finishes, electrical and mechanical works etc.

A wide range of design and construction matters will be considered at this stage and our cost estimates for the various alternatives (incorporating both initial and future costs) will be essential in comparing the various alternative proposals.

This will be an interactive process between the design team and Client that finally leads to approval by the Client regarding the design, budget and cost plan.

6. Detail Design

The design will be developed in depth at this stage with the final decisions being taken in respect of all the individual components which together make up the complete works.

During this stage we will be engaged in the preparation of estimates of cost for the alternatives proposed and will continue with cost checks on the cost plan to ensure that the employer's budget is not exceeded.

We will then prepare a detailed report incorporating the design teams' detailed document including our refined cost plan.

i. Preparation of Bills of Quantities

Prior to the preparation of Bills of Quantities, the full design for the whole development, specifications for building materials, fittings, fixtures and every component of the proposed works shall have been concluded in the Production Information Stage.

When preparing the Bills of Quantities we will continuously check all particulars including cross references, and will prepare a query list for the Architect and Engineers covering the omission of necessary information, discrepancies and ambiguities.

This query list will in turn provide the Architect and Engineers with an opportunity to clarify these points and amend the documentation prior to the tender stage.

We will also check the adequacy of Prime Cost Sums (usually provided by Services Engineers) and Provisional Sums and ensure that no information is outstanding from fellow Consultants and that all consents have been received and conditions complied with.

We will liaise with the other members of the Consortium and the Client Representative to review each building system and component. Value, quality, and life expectancy are key components we use to determine which recommendations will best meet the needs of our clients. We use a formalized process to identify, present, and track each value engineering option with detailed submittals for each item, along with a tracking log that offers an overview of the progress of the value engineering process.

When presenting value engineering options to a client, our team categorizes each option according to our key considerations during value engineering:

Cost Reduction – A less expensive alternative to a specified product or system, which may or may not include a difference in quality?

Value Added – A higher quality product that may or may not carry a higher price but will bring added value to the project;

Life-Cycle Analysis – During our review of products and systems, we typically identify options that will allow us to strike the proper balance between initial construction cost and long-term operational costs;

Maintainability – We review the building from the perspective of the owner's maintenance staff and recommend products that can produce long-term savings through reduced maintenance costs.

“Green Building Works”

Though this may fall under the scope of the Architect, we will advise during our design meetings on how to make the fit out Green.e.g

1. Use of engineered timber floor finishes such as bamboo flooring
2. Advising both the Architect & the Electrical engineer to use energy saving bulbs
3. Advising the Architect to design the offices and Bank fit out in such a manner that we have cross ventilation thus reducing on the cost of using Air Conditioning.
4. Use of solar heating as an option instead of electricity. We can consider an option of the backup systems power e.g. UPS and power backup batteries to be charged using solar power
5. Use of MDF in Partitions and large windows to enable natural lighting
6. as consultants, advocating for communication via e-mail so as to avoid printing
- 6b.The Design to include structural cable networking to allow employees share data via network as opposed to printing.
7. Using some of the “waste” from hacking the walls and floors can be used as Cabro works bedding instead of sand/or quarry chips.
8. Use motion sensors in in some of internal and external lighting so as to save electricity
9. Allow for a waste water recycling plant and reuse it for gardening
10. Surface Design:-advise the Architect to use lighter and or brighter colours so as to maximize on natural lighting.
11. Use of nontoxic Eco Paints
12. Allow for design that incorporates flower pots for natural plants and landscaping.
- 12b.Greenvertising: Using plants to advertise by intelligently cutting them to read say the name of the institution in the landscaping works.
- Pedestrian Paving blocks can have gaps in between and we can have grass grown in between.
13. Use of excess spaces wisely under stairs for instance can be used as a photocopier space or designed as additional cabinets for storage

ii. Tender Action

This will entail pre-qualification of bidders through an appropriate method to be agreed with the CLIENT and as per the Procurement regulations. We will advise on the pre-qualification and short-listing of qualified bidders.

Bidding:

- (a) We shall submit final bidding documents to the Client for comments and / or approval.
- (b) We shall issue the documents to the pre-qualified Contractors, making sure that the Client is kept abreast of the procedure and has all the necessary documents in their possession.
- (c) Opening of the bids shall be at a venue and on a date and time and conforming to a procedure Pre-determined and approved by the Client and in conformity with the laid down procurement regulations

Bid Evaluation:

We will carefully examine the priced bid documents for technical and financial evaluation. The resulting evaluation reports will include the following information: -

- (a) Basic data: List of bidders, list of those who returned their documents, date that bids were opened, total prices as read out and as corrected
- (b) Evaluation of Prices: We will examine the quoted prices to check for the following: -
 - (i) Their consistency throughout the bid documents and comparability to the current market prices
 - (ii) Their capacity to remain applicable throughout the contract period when weighted against market forces like inflation, currency fluctuations, etc.
- (c) Technical Evaluation: The following shall be checked: -
 - (i) Similar projects carried out in the past.
 - (ii) Suitability of Contractors equipment and manpower.
- (d) General: Look at the responsiveness of the tender generally and any possible deviations from the conditions lay out in the tenders.

Recommendation of Award:

Based on the foregoing evaluation, we will recommend the award of the Contract to the bidder considered most appropriate.

The tender evaluation reports will be sent to the Client under confidential cover for consideration and actual award of the contracts. The Consultants then in liaison with the Client will prepare the necessary contract documents for signatures.

The award of the contract will however be at the discretion of the Client and all tenderers will have been informed during the prequalification process that the Client does not commit itself to award the contract to the lowest or indeed any tenderer.

iii. Financial Contract Administration:

Financial Contract Administration works will form a very important part of the project and we intend to give it due attention. During this stage we undertake the following tasks: -

1. At the outset, guide the Contractor in the draw-up of a comprehensive and realistic works programme

In accordance with the bid document.

2. Produce cash-flow projections for use by the Client for planning purposes(if required)
3. Ensure that the Main Contractor and his Sub-Contractors have complied with all the statutory requirements as may be required, including insurances, performance bond etc.
4. Attend the routine matters e.g. Prepare well in advance for site meetings and inspections, etc. as appropriate.
5. Prepare periodic Project Financial Appraisal Reports including monitoring of variations if any.
6. Prepare the necessary Monthly Interim Valuations for payment certificates as appropriate.
7. Prepare the Final Account in liaison with the Main Contractor and the rest of the Project Team.
8. Recommend final payments and conclude the Main Contract and sub-contracts in a final report detailing what has transpired and defining the final product and what it entails.

Variations & Corrective Action

We appreciate that the projects are dynamic and in many instances the Client has a better feel after the setting out has been carried out, and construction commenced. Instances of “block here and add an entrance there” are common.

We will seek to advise the Clients to minimize variations, though in the event that these variations are absolutely necessary, we will strive to arrest these variations immediately. Those that call for a change in specification, we will engage the suppliers and the contractor to give us a rate which we will compare with the supply cost and negotiate with the contractor to ensure that the Client gets value for money at an optimal cost.

We are well aware that at this stage the contractor is not subject to competitive bid and may seek to give high rates. (See also addendum below on dispute avoidance)

We also advise the Client to approve variations expeditely following our due diligence to avoid a case of claims on delay.

We also appreciate that the nature of Contract that we advise the Client to sign (JBC building contracts) which is a supply and fix/full contract, cuts out delays caused by delays in procurement as is in the case of self-built projects

Work program: - the contractor is required to provide a work program which he is required to adhere to

Communication Channels:-At commencement it is imperative to inform all parties on the correct communication channels to avoid any consultant or Contractor citing delay due to lack of a detail and/or information

Cost Saving Measures, Methods and technic used at Building Scope Limited

We appreciate that each project comes about with its own peculiarities and intricacies and it is hard to predict some of the Challenges & savings in cost that can come about.

Some of the measures methods and technics that can be used or have used.

1. We always re-measure provisional works. Experience has shown that more often than not the amounts allowed for in provisional sums are higher than actual cost of works carried out.
2. Instance where a variation arises we always cross check with suppliers to counter check the prices of the materials. We then engage the contractor on how he built his rate if we feel he is charging too high. This also enables us to negotiate with the contractors to reduce the rates of variation items from a point of knowledge
3. We also ensure that in our bills of quantities we have a schedule of materials at the end. We are able to do this by anticipating alternative material that can be used instead of the current one specified. This assists in ensuring cost control and given that they form part of the contract we avoid a situation of a contractor over charging simply because there is no competition during construction.
4. Pre tender/bid consultants meeting. Specifically when projects are at design stage we hold several design stage meetings to deliberate on design materials and ways of cutting down costs.
 - 4b. If allowed some of the waste from hacking the walls and floors can be used as Cabro works bedding instead of sand/or quarry chips. From this we can make a saving on the contractors cost of carting away waste from site.
5. In some instances the initial design is expensive and has to be revised. For instance, Bank of Africa Digo road Mombasa
The initial design indicated a roof slab which would delay delivery of the works. We suggested that the engineer consider a pitched roof as an alternative which may cut down costs.
6. Client supplied materials. In Kirichwa Creek Town houses we advised the Clients to purchase some of the finishes from China and Spain. This they confirmed enabled them save substantially.
7. In some instances we appreciate that main contractors do not carry out the work and instead they hire domestic subcontractors e.g. aluminum windows and joinery. This essentially leads to double charging i.e. the subcontractors charge their rates and the main contractors mark up their profit. In Kirichwa Creek apartments and the Lofts along Wood Avenue we had aluminum windows omitted from main contract and sub contracted these items directly and even with the extra charge on contractors profit and attendance we did manage a saving.
One has to be careful though in such a situation since problematic contractor can choose to put up a claim for loss of income.
8. Clerk of Works:-We would propose that if it is possible we have a full time Clerk of Works. They enable quick responses in matters to do with details required by the contractor and any challenge on site.
9. On time delivery of works:-when work is delivered on time, the Client saves in various ways. They would stop paying rent where they are currently operating from and the return on investment period starts counting immediately.

Building Scope Client & Contractor relationships

Building Scope appreciates and always seeks to foster good relationship amongst its clients and contractors.

Clients

1. **Bank of Africa Kenya Limited:** We have had a long and fruitful relationship during which we have served **Bank of Africa** diligently. We have provided personalized service which more often than not has attention of the Principal Partner.
2. **Spartan Developers:** you will note from our Schedule of works we have established a good relationship with them and we still have two more jobs which are on our desk.
3. **Deacons (K) Limited.** We have been their key quantity surveyors and they have learnt to trust us. In some instances we have worked with drawings from South Africa (Mr. Price & Wool Worthy) And Hong Kong (Bossini Brand) and have run a project to completion without a supervising architect.
4. **Rippling Waters Limited**
5. **Sayani Enterprises Limited.**

Contractors

With contractors we have worked well with most of them and reference can be made to Chartered Engineering, Model builders, Flooring and Interiors to mention few.

It is for this reason that, on our own accord, we added the caption on *Practices and processes in minimizing and solving disputes*.

We have never been to Arbitration with any contractor and one that we came close to, **Royal Nairobi Gym and Spa** (this arose due to delayed payments to the contractor) we managed to resolve it between the contractor the principal partner Building Scope (G. Masese) and the past chairman Royal Nairobi Golf Club C. Kahura and the then chairman of Royal Nairobi Golf Club (Mr. Z. Parikh). We were able to bring down a claim by the contractor from about 30 million to Kshs 6million.

One of the ways that we managed to do this is by direct interaction between the contracting parties and avoiding letter writing by his quantity surveyors.

We believe in good correlation and always believe that when you are fair to all then in future you can always call upon a contractor to bid for works and he will always come in for you and for clients they will have faith in you and can always count on you to ensure their interests are safe

Addendum

We note that minimizing disputes attendance to the same at an early stage is crucial for a project of this nature which has tight timelines is very important.

It is thus important to mention some of our practices which seek to cut down the risk of dispute to the contracting parties and their Agents/associates

Practices and Processes in Minimizing and Dealing With Dispute

- **Project Ownership:-**Emphasizing /preaching project ownership by all parties involved. We at Building Scope will always advise the contractor to own the works – to treat the works as his own. We always emphasize that when the product is good the contractor looks good, the Client looks good and the whole team looks good.
- **Attendance to variations in due time:-**A major cause of dispute is variations, as Quantity Surveyors we will strive to minimize variations. At initial contract documentation we try to

visualize as many *measurable* items that can bring about variations and include them in the bills. Those not measurable include them as Day work rates or in the Schedule of Rates

- Provisional Sums:-Request for details and re-measurement while dealing with Provisional Sums. Seek confirmation of Bills of Variations with the main contractor and advise both on the cost implication
- The early involvement of head contractors, designers and specialist subcontractors with the client and other project sponsors (including end users, financiers, and operators) to boost trust levels and team relationship.
- There are strategic decisions that clients and contractor can take during the earliest stages of project initiation in cases where difficulties are encountered.
- We recognize that each construction project involves the creation of a new group of people with diverse interests. Therefore create a culture within the group which is project oriented but which recognizes the financial and social requirements of each participant, and facilitates the building of trust between them.
- Creation of agreed-upon processes for realistically and rationally dealing with unexpected events that channels the parties' problem-solving efforts constructively; avoid the chaos that can ensue if there are no recognized rules for dealing with a problem; encourage the parties to "fix the problem rather than fix the blame;" and prevent a problem from escalating into an adversarial confrontation or a dispute.
- Project Documentation: - Have site meetings regularly and keep a record of the same. Take photos of work of alterations and restorations they always help jog the mind
- Privileged Information and contracting Parties:-Learn about contracting parties & Consultants. We do your due diligence on the consultants and contractors which prepare us. If there is a consultants known to delay provision of details, push for these details through approved channels so that the contractor does not claim delay (thus claims). We talk to our fellow
- Consultants and if a contractor is claim conscious we will advise the Client at tender award. If this contractor is still awarded the work then we will be on guard.
- Advice on a clear dispute resolution process failure to which Arbitration is last result and ensure this is minute.
- Advise the Architect and Engineers to always note all site instructions down on the site instruction book and if possible follow it with an e-mail
- Advise the Client on the cost implication of variation of Quality and if possible always seek to get a guiding of what the contractor will charge to effect the change

Health & Safety

As a consulting SME we don't have a very elaborate health and Safety outfit compared to those in manufacturing plant as our risk is relatively minimal.

We are however taking cognizant of the health and safety matters as below

Employer's duties

At Building Scope we have a duty to ensure the employees' safety, health and welfare at work as far as is reasonably practicable. In order to prevent workplace injuries and ill health the employer is required, among other things, to:

- Provide and maintain a safe workplace which uses safe plant and equipment

- Prevent risks from use of any article or substance and from exposure to physical agents, noise and vibration
- Prevent any improper conduct or behavior likely to put the safety, health and welfare of employees at risk
- Provide instruction and training to employees on health and safety
- Provide protective clothing and equipment to employees
- Appointing a competent person as the organization's Safety Officer

Employees' duties

We also emphasize on the duties of employees while at work. These include the following:

- To take reasonable care to protect the health and safety of themselves and of other people in the workplace
- Not to engage in improper behavior that will endanger themselves or others
- Not to be under the influence of drink or drugs in the workplace
- To undergo any reasonable medical or other assessment if requested to do so by the employer
- To report any defects in the place of work or equipment which might be a danger to health and safety

Risk assessment and safety statement

Under the Safety, Health and Welfare at Work Act every employer is required to carry out a risk assessment for the workplace which should identify any hazards present in the workplace, assess the risks arising from such hazards and identify the steps to be taken to deal with any risks.

The employer must also prepare a safety statement which is based on the risk assessment. The statement should also contain the details of people in the workforce who are responsible for safety issues. Employees should be given access to this statement and employers should review it on a regular basis. The Health and Safety Authority has published [guidelines on risk assessments and safety statements](#).

Protective equipment and measures

It is our policy at Building Scope to tell employees about any risks that require the wearing of protective equipment. The employer should provide protective equipment (such as protective clothing, headgear, footwear, eyewear, gloves) together with training on how to use it, where necessary. An employee is under a duty to take reasonable care for his/her own safety and to use any protective equipment supplied. The protective equipment should be provided free of charge to employees if it is intended for use at the workplace only. Usually, employees should be provided with their own personal equipment.

Site Visits to carry out valuations Or Site meetings

We insist on all Building Scope employees attending site meeting to ensure they wear safety gear i.e. safety shoes helmets and overall.

Contract Documentation

However being consultants who prepare the contract documents, health and safety is emphasized

in our documentation under preliminaries.

This includes but not limited:-

1. Hoarding and securing the site
2. Notice board and signs. We insist that the contractor erects a notice board which will inform people that there is construction work going on
3. Noise reduction the contractor is always advised to take up measures to reduce noise at all times. This is an item that is in the preliminary and he may cost it if he feels that it would be an additional cost
4. Lighting. The site should be well lit the contractor is advised to have his works well lit to avoid accidents
3. Clauses on safety gear that the contractor should adhere to
4. Working hours overtime and shifts (this is to avoid the contractors long working hours which may lead to a workers loss of concentration thus risk accidents) long hours

Technical Resources

We would like to confirm that we have sufficient technical resources to execute assigned works fully.

From the team mentioned in the next page the following would be assigned to undertake the works.

1. Principal partner George Masese BA Building Economics [UON]
2. Associate Partner Fervent Thumbi BA Building Economics [UON]
3. Assistant Quantity Surveyor Amos Sang Bachelor of Quantity Surveying [TUK]
4. Assistant Quantity surveyor Emma Wachira Bachelor of Quantity Surveying [UON]