

THE BENEFITS OF UTILIZING A QUANTITY SURVEYOR

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What are the benefits of utilizing a quantity surveyor

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Submitted in fulfillment of part of the requirements
for the Degree of B.Sc (Hons) (Quantity Surveying)

In the Faculty of Engineering, Built Environment
and Information Technology

University of Pretoria

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October 2009

Declaration by student

I, the undersigned, hereby confirm that the attached treatise is my own work and that any sources are adequately acknowledged in the text and listed in the bibliography.

A handwritten signature in black ink, appearing to be 'J. J. J.', is written over a light blue rectangular stamp. The signature is slanted and stylized.

Signature of acceptance and confirmation by student

Abstract

Title of treatise : What are the benefits of utilizing a quantity surveyor

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In the construction industry, the services rendered by quantity surveyors, are often seen to be a luxury component, only to be utilized in respect of large developments in the commercial sector. It is however of substantial benefit for the private homeowner and for smaller scale commercial developers to consider employing the services of a quantity surveyor to assist and on a continuous basis evaluate and assess the building process.

The debate pertaining to the necessity and the level of skill required when approaching any construction project, be it on a small or a large scale, will be discussed throughout the dissertation and supporting factors substantiating the benefits the services of a quantity surveyor offers, will be thoroughly assessed and evaluated.

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Chapter 1 – A comprehensive investigation into the Quantity Surveying Profession

1.0 Introduction

In the construction industry, the services rendered by quantity surveyors, are often seen to be a luxury component, only to be utilized in respect of large developments in the commercial sector. It is however of substantial benefit for the private homeowner and for smaller scale commercial developers to consider employing the services of a quantity surveyor to assist and on a continuous basis evaluate and assess the building process.

The debate pertaining to the necessity and the level of skill required when approaching any construction project, be it on a small or a large scale, will be discussed throughout the dissertation and supporting factors substantiating the benefits the services of a quantity surveyor offers, will be thoroughly assessed and evaluated.

1.1 Statement of the main problem

The problem in question is, “What are the benefits of utilizing a quantity surveyor?”

Clients of quantity surveyors are erroneously assumed to be limited to big development companies due to the misperception that when constructing or developing on a smaller scale, the services of a quantity surveyor is not required. Those who intend building small developments, be it in the form of a house, an office building or a petrol garage to name a few, will in all probability employ an architect and a builder, and in certain instances, potentially the services of an engineer, depending on the complexity of the design. But quantity surveyors are commonly left out of the equation of professional staff when endeavoring such a project, and evidently the disadvantages of same justifies an in depth investigation into the benefits of employing a quantity surveyor.

1.2 Statement of the sub problems

The sub problems which have been chosen in order to help solve the main problem are the following:

1.2.1 What services does a quantity surveyor offer?

Evaluating the benefits of establishing what the requisite services to be employed in giving effect to the preferences of the client are, and further the incorporation of expertise into the building project.

1.2.1.1 Hypothesis

The spectrum of services offered by a quantity surveyor are very broad. This chapter breaks down some of the services offered by a quantity surveyor and ultimately shows that all the services offered by a quantity surveyor are aspects that require attention. These services include estimating and cost advice, documentation and procurement of contracts, general contract administration, and the final account stage, to name a few. Successful construction or any construction based development, requires these professional services and each service caters for a different aspect or division of the development project.

1.2.2 How will a quantity surveyor promote the financial viability of the project, and assist in saving costs?

Evaluating the benefits of advice and assistance by a quantity surveyor when entering the design phase of the building project, considering and calculating financial viability of the incorporated designs and proposed tenders, and procuring the required documentation as in accordance with professional and statutory requirements.

1.2.2.1 Hypothesis

By applying experience and expertise, the quantity surveyor assists the client in establishing whether the financial viability of the project is suited to the

client's financial means and makes economical sense. A lack of proper financial planning will result in more costs being expended over a longer period of time. The quantity surveyor secures any doubts the client may have, caters for potential risks, losses and calculates potential profits. A development project or any construction related project will be incomplete without the contribution of a quantity surveyor's expertise in financial planning and estimating.

1.2.3 Why is continuous management and administration by a quantity surveyor important?

Evaluating the immense value and contribution of a quantity surveyor in the construction stage, where the management, administration and monitoring of the construction contracts and processes are of critical importance, and the facilitation of the practical completion thereof is given effect to and secured by the quantity surveyor.

1.2.3.1 Hypothesis

Continuous management and proper administration of a construction related project or development, are the threads that hold the blanket of development together. The application of the professional team in such a project, is intertwined with the application of proper management by a quantity surveyor of the costs incurred by these professionals. Administrative aspects of a development project ultimately form an important part of the development project and contributes to the sustainable success of a project.

1.2.4 Why is the reconciliation of accounts in the final stages of a project important?

Evaluating the benefits of professional assistance in the closing stage of the building, where accounts are reconciled and evaluations are done in respect of the completed work, valuation certificates are issued and final accounts are drafted.

1.2.4.1 Hypothesis

Reconciliation of accounts in the closing stages of a development project is of critical importance, however reconciliation of accounts occur on a smaller scale, on a monthly basis. The quantity surveyor attends to such reconciliations and reports back to the client pertaining thereto. This ensures that all financial matters in respect of the project are settled. Any developer requires this type of assistance and contribution when it comes to paying the relevant parties their accounts and ensuring that all accounts are reconciled.

1.3 Delimitations

The information used to solve the problem in question has been limited by the following:

The range of services as offered by quantity surveyors and as discussed hereinafter in the dissertation, should not be construed to apply universally, and is limited to construction related projects in the Republic of South Africa.

1.4 Definition of terms

The following definitions and terms are used:

Bills of quantities – The document drawn up in accordance with the measuring system as stated in the contract data. The contractor shall have priced the document to reflect the contract sum

Variation orders - Approved change in a specification or project.

Final account – The document, prepared by the principal agent, which reflect the contract value of the works at final completion or termination

Principal agent – The party named in the contract data and/or appointed by the employer with full authority and obligation to act in terms of the agreement

Contractor – The party contracting with the employer for the execution of the works as named in the contract data

1.5 Assumptions

When reference is made to 'development projects', such development shall be deemed to refer to developments relating to residential and commercial property.

1.6 Importance of the study

The importance of this study is founded in the fact that it examines and explores the various services performed by a quantity surveyor, and how the application of such services contributes to the success of a development project. It reiterates the value and contribution of the quantity surveyor as part of the professional team.

1.7 Research method

In investigating the abovementioned topic, various sources will be considered which will include, but not be limited to the following:

1. Text books
2. Journals
3. Articles
4. Electronic Media

Chapter 2 – What services does a quantity surveyor offer?

2.0 Introduction

A quantity surveyor is a financial consultant in the construction industry who advises clients on contractual and cost issues (<http://www.bingela.com> Access: 2 May). The benefits of employing the services of a quantity surveyor will become evident, as the spectrum of services offered by a quantity surveyor, is discussed and analyzed. Quantity surveyors offer a variety of services which are divided into six stages, which stages will be discussed later in this chapter. Highlighted herein are some of the services enshrined in the six stages which will be discussed hereinafter. (Board Notice 140 of 2008 *Government Gazette*, publication number 31657, 6 December 2008) These services are not exhaustive of the range of services offered by a quantity surveyor.

2.1 Services of a quantity surveyor

2.1.1 Preliminary cost estimates at sketch design stage

When the architect provides the client with the designs for a project, the quantity surveyor analyzes the sketch designs supplied by the architect to calculate the financial implications and viability of the different options enshrined on the sketch, pertaining to the designs, and the possible materials utilized to give effect to such a design.

An initial cost estimate is provided by the quantity surveyor based on the sketch designs, for a projection of potential costs which will be incurred, when the sketch design is considered.

2.1.2 Providing, securing and administering the relevant documentation

The administration of a project, is overlooked by a quantity surveyor, and involves an extensive amount of paperwork and documentation.

Bills of quantities are prepared by the quantity surveyor based on rates and costs.

Design costs and materials are considered, agreements are concluded with subcontractors and comparisons of prizes are evaluated by the quantity surveyor.

The quantity surveyor will consider tenders submitted by contractors and attend to the consequent procurement of agreements with the relevant contractors' whose tenders are accepted.

There will be ongoing administration of the project and the consideration of estimates and budgets, by the quantity surveyor, and a broad spectrum of documentation will be evaluated to secure the client's requirements are given effect to.

2.1.3 Contract administration

Once agreements and contracts have been concluded with contractors, subcontractors, suppliers etc, a quantity surveyor sees to it that the provisions of the agreements are complied with, and as queries arise between the relevant contract parties, the quantity surveyor will attempt to resolve such issues to the best of his ability.

The quantity surveyor attends to the preparation and execution of the project and evaluates the project as it develops and ensures that the stages of the project are procured timeously. (Hauptflesh and Sigle:2002)

2.1.4 Attending to the final account stage

When a project is completed the quantity surveyor analyzes and evaluates the work done and executed by the contractors and subcontractors, the materials supplied and services rendered.

A final account is prepared in accordance with the work conducted and services rendered and the quantity surveyor will negotiate final payment with the contractors and subcontractors for the settling of the final building costs.

2.1.5 General services rendered by a quantity surveyor

Over and above the cost advice provided by a quantity surveyor, a quantity surveyor also attends to:

- the monitoring and evaluation of designs as same are submitted, to ensure compliance with the requirements of the client;
- the investigation and consideration of submitted tenders;
- reporting to the client with regards to tenders submitted;
- cost management and reporting in respect thereof;
- cash flow predictions and advising client in respect thereof;
- advising client on contractual arrangements and the preparation of procurement documents;
- preparation of preliminary cost studies, and providing cost estimates for the client;
- comparison and consideration of materials to be utilized in respect of project;
- evaluation of operating requirements, and costs, maintenance costs and calculation of depreciation costs etc.

2.1.6 Providing estimate and cost advice

When a quantity surveyor is approached for assistance by a client, the most important issue the client wishes to be addressed, is the issue of costs of the project.

A quantity surveyor will advise a client as to what the preliminary costs can be estimated at, prior to the commencement of a project, as well as the running costs of a project, which will provide the client with an idea of what the initial budget for the projected project will be, and enable him to establish the financial viability of proceeding with such a project in accordance with the viability studies the quantity surveyor conducts prior to the detailed design stage of the project. (Hauptflesh and Sigle:2002)

The estimate provided by the quantity surveyor at this stage, is nothing more than an “estimate”, and is subject and almost guaranteed to change, as unexpected costs may arise during the running of the project, but the quantity surveyor will simultaneously be able to advise the client of same by considering construction economics and his experience throughout the project.

A cost analysis will be made once the provisional sketch drawings have been completed and submitted, and the quantity surveyor will utilize the provisional sketch drawings to prepare interim estimates for the client.

2.1.7 Attending to cost planning, control and evaluation

Providing an estimate of interim provisional costs at the initial sketch design stage of a project, is only the first step in financial planning, and continuous cost planning is of extreme importance to ensure the financial success of a project.

A project consists of numerous elements and aspects, and each element and aspect has an aesthetic and performance value to it. (Hauptflesh and Sigle:2002). Cost planning is the evaluation and comparison of the costs of the element and/or aspect, to the performance value thereof, to ascertain whether the cost of the element or aspect, justifies the working or practical value thereof in the project itself.

By establishing the abovementioned costs and value of elements, enables the quantity surveyor to provide the client with alternatives and options, each of the options with its own costs and degrees of practicality.

2.1.8 Providing assistance in the tender procedure

A quantity surveyor plays a very important role when it comes to the tender stage, as a quantity surveyor will advise the client on what procedures need to be followed when tenders are invited, submitted and accepted.

The client will be advised by the quantity surveyor as to the type of contractors that will be considered after tenders have been submitted in accordance with the suitability of their skills for the project. Contractors are provided with the plans and designs for a project and allowed the opportunity to submit tenders in respect thereof to inter alia the quantity surveyor, who act as an agent on behalf of the client.

The quantity surveyor will consider the tenders submitted and analyze the abilities of the contractors who submitted tenders as well as their field of expertise and qualifications, in accordance with the requirements of the client and the client's project.

After consideration and a calculation of the financial viability of accepting the tenders that have been offered, the quantity surveyor will accept the tender on behalf of his client, and convey such an acceptance to the contractor that tendered, in accordance with the manner that the contractor required his offer to be accepted.(Finsen:2005)

2.1.9 Identifying the types of contracts

When a project commences, the contract form that will be utilized is of extreme importance, as the intentions of the parties to the contract, are enshrined in the contract, in writing. The contract is a reflection of the intentions of the parties, that has been reduced to writing.

In the construction business, there are numerous forms of contracts that can be used between parties, but to ensure that both parties to the contract's rights are protected, and that the parties are provided with remedies in the event of such rights being infringed upon in the event of breach of the contract, the

quantity surveyor will ensure that a standard form of contract is used when the contract is concluded and this standard form will contain provisions that protect the contracting parties. (Finsen:2005)

The contract will also set out the duties and obligations of the contracting parties, and when the correct form of contract is used, it will prevent possible disputes in future arising as to the liabilities of parties and what is expected of each party in terms of the contract.

2.1.10 Preparing tender documents

Tender documents usually take the form of a bill of quantities. Bills of quantities are documents prepared by a quantity surveyor in accordance with standard methods of measurement that is used by quantity surveyors throughout South Africa. (Hauptflesh and Sigle:2002). These methods are endorsed by quantity surveying firms and used on a daily basis in the conducting of work and rendering of services.

A quantity surveyor conducts an analyzes on all the work done, drawings and designs submitted and utilized, services rendered, expertise enforced and the costs thereof and submits all of the information in a document generally referred to as a bill of quantities. A bill of quantities is in other words a summary of the details of a project and it constitutes a reflection of the progress made and goals achieved in terms of the relevant project.

A bill of quantities is a good indication of costs and expenditure in respect of a project, and assists contractors and subcontractors in the process of tendering, as it serves as a framework of the cost margins of their competitors. (Hauptflesh and Sigle:2002)

The bill of quantities as prepared by a quantity surveyor by utilizing his knowledge, and experience and reducing same to writing in the form of a document, provides the client with a method of exercising financial control over his project.

2.1.11 Evaluation of work in process

Throughout the project, the quantity surveyor evaluates the progress of the work done in respect of the project. The quantity surveyor will evaluate the project at the commencement, duration, and completion thereof, but to assist the quantity surveyor in reporting to the client, as to the effectiveness and cost implications of work done, the quantity surveyor will analyze the project and work completed in respect thereof, on a monthly basis, which is also when most of the contractors and subcontractors involved in the project, requires payment.

The quantity surveyor will evaluate the work completed on, and progress made in respect of every division of the project, and if he is satisfied that the requisite requirements as enshrined in the agreements have been fulfilled and obligations complied with, then the quantity surveyor will make a recommendation to the principal agent.

These recommendations might include a variation of costs in accordance with new specifications or different materials that are utilized than was initially estimated for, or merely that he is satisfied with the progress that has been made so far, and that payment should be made to the contractors for the services rendered or materials supplied. (Hauptflesh and Sigle:2002)

The principal agent will certify the amount due and owing to the relevant contractors and advise the client that payment has to be made.

2.1.12 Preparing cost reports

As previously stated, the quantity surveyor provides the client with an estimate at the commencement of the project. This estimate provides for projected costs the quantity surveyor expects will be incurred in respect of the project. As the project progresses, costs may vary, for various reasons. The client might change his specifications, or the material the quantity surveyor utilized in submitting his estimate is no longer sufficient for implementation in the project, or other materials are required than were initially estimated for.

The abovementioned change in materials or estimated plans for the project, will result in the quantity surveyor having to review his initial estimate and submitting an amended cost report, incorporating the amendments or new recommendations.

These changes will be reflected in financial statements submitted to the client at regular intervals, and will assist in ultimately evaluating the expenditure of the project, and simultaneously provide the client with the opportunity to review the deviation, if any, from the initial cost estimate.

2.1.13 Drafting of the final account

After completion of the project, the quantity surveyor attends to his final evaluation of the progress of the project, the desires of the client, and the expenditure in respect of the project. This information is submitted to the client in the form of a final account, which will reflect the amounts still due and owing to contractors for work done in respect of the completion of the project

In the final account, adjustments of the contract amount will be reflected and simultaneously justified. The initial estimate will be compared to the actual costs incurred, and valuations of work done, will be set out.

A comparison will be done between the provisional sums estimated for, and the actual contract prices incurred, as well as the contract prices catered for in terms of the contracts concluded with contractors and subcontractors.

This will take on the form of a final account, which will be submitted to client for consideration and approval.

2.2 Division of services into six stages

According to the South African Council for the Quantity Surveying Profession, the services rendered by a quantity surveyor, are divided into six stages. The purpose of the division of the wide variety of services, is to ascertain the fees payable to the quantity surveyor in accordance with the services rendered by the quantity surveyor, within the scope of the prescribed stages. (Board Notice

140 of 2008 *Government Gazette*, publication number 31657, 6 December 2008). The six stages referred to, is used as a guideline to determine what fees are due to the quantity surveyor, and a brief discussion of the six stages follows hereinafter:

Stage 1, deals with the inception stage, where the quantity surveyor is tasked with establishing the client's preferences, requirements and aspirations relating to the development project. This stage includes appointing the requisite professionals that will form part of the professional team, establishing a timeline for the completion of the development project, and basically planning the project ahead. (*Government Gazette* 6 December 2008)

Stage 2, deals with the concept and viability stage of the development project, where the planning of the project that was given effect to in stage 1, continues by recording same onto paper, in the form of drawings, applying scales, considering and reviewing design concepts, analyzing designs, transforming data into a concept brief and simultaneously calculating the preliminary estimate costs of the construction, to name a few. (*Government Gazette* 6 December 2008)

Stage 3, refers to the design development stage, where focus is placed on drawing up a program for the project that includes the approved design concept, sets out the cost plan, evaluates and analyzes the outline specifications, considers the area schedule, and calculating inter alia, the financial viability of the project. (*Government Gazette* 6 December 2008)

Stage 4, deals with the documentation and procurement stage, where the quantity surveyor drafts and prepares the construction and procurement documentation whilst considering the procurement strategies and attending to the implementation of such strategies. The quantity surveyor has to ensure that deadlines are met and that all resources related to the development project are procured within a reasonable time. The review of drawings,

assisting with financial evaluation of tenders and preparation of contract documentation, are a few of the tasks of the quantity surveyor within this stage.

(Government Gazette 6 December 2008)

Stage 5, deals with the construction of the development project, and the quantity surveyors skills insofar as it relates to continuous management and administration, is of importance at this stage. The quantity surveyor will ensure that effect is given to the practical completion of contract works, facilitate the preparation of documentation required for the completion of the works and assist in all other tasks and procedures relating thereto, whilst continuously managing the development project and recording the progress made.

(Government Gazette 6 December 2008)

Stage 6, refers to the close-out stage, where all the procedures relating to the finalization and completion of the project are considered by the quantity surveyor. The procedures that form part of the close-out stage include inter alia attendance to regular site meetings, assisting in the adjudication of contractual claims, assisting with problem solving, drafting the final account whilst considering the record of changes and amendments made to the initial estimated budget, preparing valuations for payment certificates and considering estimates for proposed variations. *(Government Gazette 6 December 2008)*

All of the services offered and rendered by a quantity surveyor are enshrined in the abovementioned six stages, and although many of the services are intertwined and are present in more than one stage, each stage constitutes a unique phase of the development project, with services associated therewith.

2.3 Fees of a quantity surveyor

The fees of a quantity surveyor are set out in a fee schedule that is printed and made available to any member of public in a Government Gazette, and prepared by the South African Council for the Quantity Surveying Profession. Attached hereto as annexure "A", is a printout of the tariffs of the quantity

surveying professions fee schedule as published in the Government Gazette on 5 December 2008. The fee schedule consists of diagrams reflecting the basic fee charged by a quantity surveyor, the appropriate percentages for building works, and further how the fees are apportioned between the six stages combining the services. (Board Notice 140 of 2008 *Government Gazette*, publication number 31657, 6 December 2008)

2.4 Summary

The abovementioned is a short summary of services rendered by a quantity surveyor, and reflects the extensive involvement of a quantity surveyor in the construction process. The abovementioned services discussed are not exhaustive of the services rendered by a quantity surveyor, but it illustrates the assistance that can be lent to a client in the facilitation of a project and giving effect to the desires of the client by the implementation thereof into the project.

2.5 Conclusion

Construction projects require the expertise of numerous roleplayers such as architects, engineers, builders etc. Quantity surveyors are experts in providing cost advice, and ensuring financial viability as well as calculating in some instances, profitability. It is therefore important that a client employs the services of quantity surveyor to assist him in the project by continuously evaluating the project and the progress made, and making suggestions to the client in respect thereof.

2.6 Testing the hypothesis

A spectrum of services offered by a quantity surveyor are very broad. This chapter breaks down some of the services offered by a quantity surveyor and ultimately shows that all the services offered by a quantity surveyor are aspects that require attention. These services include estimating and cost advice, documentation and procurement of contracts, general contract administration, and the final account stage, to name a few. Successful construction or any construction based development, requires these

professional services and each service caters for a different aspect or division of the development project.

This chapter has shown that the quantity surveyor offers assistance not only in the commencement stages of the project, but throughout the project, and in the final stages of the project, not only in cost advise, but in general administration, contract procurement etc. The hypothesis accordingly shows that the services a quantity surveyor offers are extremely valuable to the client, and will not only assist the client in projecting the costs and expenditure of the project, but ultimately enable him to save costs in respect of the project and ensure financial viability.

Chapter 3 – How will a quantity surveyor promote the financial viability of the project, and assist in saving costs?

3.1 Introduction

This chapter will evaluate the benefits of the advice and assistance offered by a quantity surveyor to a client and/or investor, when entering the design phase of the building project and/or embarking on a project for property development. The duties of a quantity surveyor are very broad, however considering and calculating the financial viability of the proposed designs and technical drawings of a property development project, in accordance with the requirements of the client and/or investor, forms an integral part of the quantity surveyor's duties, and the importance of conducting such an investigation will be elaborated upon in this chapter.

3.2 Feasibility and Financial Viability

Property development projects, be it a corporate development or an individual's private luxury home, are expensive investments, and a proper investigation and study into the costs that will be incurred in giving effect to such a project have to be considered by the investor or client paying for same.

Due to the costly nature of property development and the building industry in general, it is advisable for an investor and/or client to employ the services of a quantity surveyor that will be able to calculate the financial risks of a property development project.

Such a calculation is done by conducting a feasibility study. Feasibility is a broad term that can be defined in many ways and elaborated upon in lengthy debates, however the basic concept of feasibility and related studies that focus on feasibility, revolves around the investigation of whether the intended plans a client has for a project, can fall within a reasonable predetermined budget when those plans are given effect to, and to establish what the financial risks are in embarking on such a project. Notwithstanding the fact that the financial

risks have to be calculated, the project should also comply with the client's specifications and desires for the project by incorporating the client's designs, whilst simultaneously making financial sense, which will ultimately constitute an investment for the client. (Cloete 2006:5)

A feasibility study in respect of a project for property development, be it an individual's luxury home or a large corporate development, will enable the quantity surveyor to inform and advise the client of the costs related in giving effect to such a project, whilst considering alternative options that will in certain instances save the client costs, and in other instances potentially result in more expenses at a later stage, but will secure a better financial return at the completion of the project or in future for investment purposes.

It is difficult to ascertain the financial viability of a project when incorporating the client's requests and demands in respect of a project, without conducting a feasibility study, as a feasibility study distinguishes between anticipating the potential financial risk of embarking on a project, and knowing what the estimated financial risk imposed on a client, will be.

By conducting a feasibility study, a quantity surveyor minimizes the financial risks imposed on a client in respect of a project, in that a client is better informed of the options that should be considered in respect of project, be it location, materials, contractors, design, costs etc. Clients should be informed of financial risks before embarking on a project because property development involves the risk of sacrificing a known present value in respect of invested funds, in return for a potential increased future value. (<http://www.shf.org.za> Access: 2 May).

Financial viability, which is inherently determined or confirmed by a feasibility study, is not a rigid term that suggests limited expenditure, but it is a term that suggests the consideration of costs incurred on a project in comparison to the potential financial return and investment of such a project.

A feasibility study will determine or confirm the financial viability of a property development project and will ultimately benefit the client financially when conducted properly, in that a feasibility study constitutes the study or examination of the framework and detail enshrined in a project, and determining whether same can be successfully executed within a budget. (Downs 1966:82).

3.3 When to conduct a feasibility study or investigation

By investigating the possible risks prior to embarking on a project, a client will be able to decide whether it falls within his financial abilities and means to proceed with such a project and whether such a project will ultimately be financially viable.

It is of critical importance to conduct a feasibility study prior to embarking on a project, as a feasibility study provides the client with knowledge of the risks involved in respect of the project which knowledge can be utilized as tools to guide the investment and development decisions that have to be made. Once detailed designs and technical documentation have been prepared, it is simply too costly to change or vary those plans and therefore a client will be limited in his options for variation after the project has started. Proper planning, research and due diligence studies will ensure that the best results are reached within a reasonable financial framework. (<http://www.shf.org.za> Access: 2 May)

A quantity surveyor will consider the surplus of project income or profit, and the return periods for such profit. The projected expenses in respect of such a project as well as the loans, grants and equities in respect of the project developments costs will be investigated and the cash flow projections will be considered. These factors will serve as an indication of the financial viability of the project and will surface as the stages of the feasibility study progresses.

3.4 Stages of a feasibility study

3.4.1 Socio-Economic feasibility

The purpose for the socio-economic feasibility study, is to investigate the demographic and the location aspects of the project and determine whether the site and area are suitable for the project. The socio-economic profile of an area influences the project and therefore the location and a proper investigation into the surrounding population has to be investigated. If the client is a developer or investor, and the project involves the erection of housing units or a shopping centre, then the demographic, the location, and the surrounding population are factors that will determine and influence the investment potential of the project. (<http://www.shf.org.za> Access: 2 May)

In the event of a client and/or investor wishing to embark on a property development for residential purposes, they first have to establish whether there is a demand for such a development and what the public's interest therein will be. Should the development entail the erection of any other type of project, be it a shopping centre, an entertainment area, a community centre etc, the public's interest and opinion is similarly of importance and consideration will be given to same before embarking on the project.

3.4.2 Marketing feasibility

A property development project is created from an idea to invest or embark on a project and therefore it is important to establish whether the public will contribute to the success or profitability of such an investment. In terms of this investigation, the target market will be analyzed to determine the actual demand for the project idea and whether a demand or interest exists, with reference to occupancy and rental requirements in the event of the project idea being a big development scheme. (Cloete 2006:60) The objective of this study is inter alia to establish what the effective demand for a product is or will be.

3.4.3 Legal feasibility

Developing property, entails complying with numerous statutory provisions and regulations, which involve securing that the property the client and/or quantity surveyor wishes to develop, has been proclaimed for development purposes. A

pre-develop investigation has to be conducted to establish whether the property is encumbered with registered servitudes, mortgage bonds, long term leases and title deed servitudes. Depending on the location of the site, an environmental impact assessment has to be conducted as in accordance with the National Environmental Management Act and all the requisite statutory obligations have to be complied with and given effect to. (Cloete 2006:60)

When a quantity surveyor conducts the legal aspect of the feasibility investigation and becomes aware of legal encumbrances, irrespective of its nature, he will be able to advise the client as to the complications, if any, such a legal encumbrance causes for purposes of development, and the time frames that should be considered in attending to the removal of such encumbrances, or taking the necessary steps to comply with the obligations that such encumbrances propose. The costs of attending to same should also be considered, and therefore the legal aspect of the feasibility study is of critical importance.

3.4.4 Physical feasibility

The site on which the property will be developed has to be prepared for the erection of buildings. The physical features of the site will determine whether the construction can commence immediately or whether blasting is necessary in the event of slopes or rocky outcrops. If there are trees, consideration has to be given to whether the trees will be removed or conserved, water and flood lines have to be taken into consideration and geotechnical investigations are conducted. Access to and from the site has to be taken into consideration as well as the construction of roads if there is no direct access. All of these factors contribute to the expenses that will ultimately be incurred by the investor and/or client, and once the physical aspect of the feasibility investigation has been conducted, the quantity surveyor will be able to advise the client and/or investor of the costs related to preparing the site for construction. (Cloete 2006:61)

In the event of a quantity surveyor conducting his investigation and finding that a site has physical encumbrances that will be very costly to remove with blasting, he will advise the client accordingly by comparing the costs incurred in respect of preparing the site for construction, to the final completed project and the possible profit that such a project will generate.

If the client and/or investor merely wishes to have a house built for personal use, then the same principal will apply with the quantity surveyor advising the client of the costs of removing such physical encumbrances whilst simultaneously incorporating his knowledge and expertise in respect of obtaining reasonable quotes, to enable the client and/or investor to have the physical encumbrances removed at the least expense.

3.4.5 Financial feasibility and/or viability

All of the abovementioned aspects of the feasibility investigation contributes to the conclusion the quantity surveyor will make in respect of financial viability before advising the client. The quantity surveyor will combine the knowledge and information he has acquired and obtained in respect of the other aspects of the feasibility study to provide the client with a cost benefit solution that complies with the client's requirements and budget specifications and limits. Graaskamp defined feasibility by saying: *"a real estate project is feasible when the real estate analyst determines that there is a reasonable likelihood, of satisfying explicit objectives when a selected course of action is tested for fit to a context of specific constraints and limited resources"* (Graaskamp 1970:4) (Cloete 2006:4).

The quantity surveyor will consider the capital budget required, the sources, the operating budgets and revenue sources, the direct cash profit expectations, the indirect benefits, and returns to mention a few, in accordance with the client and/or investor's objectives which will dictate the nature, intensity and course of the investigation. (Cloete 2006:7)

The quantity surveyor will approach the financial viability study by determining the financial objectives of the project in consultation with the client and/or investor to ascertain what the client's requirements and expectations are in respect of the rate of return on the investment, the capital pay back and cost limitations. The quantity surveyor's experience with regards to the projected building cost escalation rates, loan interest rates, rentals and inflation rates will be incorporated into calculating the costs, the expected time frames and the risks.

All of these factors will be considered before a breakdown is provided to the client and/or investor, to enable the client and/or investor to make an informed decision, based on the financial advice he has been provided with by the quantity surveyor in respect of the project.

3.5 Summary

It is evident from the abovementioned brief discussion of the feasibility study that numerous investigations are conducted before a quantity surveyor finds himself in an informed position from which he can advise the client as to the financial viability of the project the client wishes to embark on. Due to the complexity of these studies and the importance thereof, as well as the knowledge it provides a client with, it is imperative that such an investigation is conducted to minimize the client's risks in respect of a project, and there is no better person qualified to inform the client of these risks than a quantity surveyor.

3.6 Conclusion

The feasibility study will provide the quantity surveyor with knowledge as to the potential financial viability of the project whilst considering the financial risks embarking on such a project will impose on the client, which is inter alia the advice the client seeks when approaching the quantity surveyor for assistance.

The advice a quantity surveyor provides the client with will protect the client from embarking on a project that will ultimately be too expensive for him to

complete, and not provide him with any financial return. The quantity surveyor's services are of immense value and no development project should be approached or effected without a due diligence investigation in the form of a feasibility study.

3.7 Testing the hypothesis

By applying experience and expertise, the quantity surveyor assists the client in establishing whether the financial viability of the project is suited to the client's financial means and makes economical sense. A lack of proper financial planning will result in more costs being expended over a longer period of time. The quantity surveyor secures any doubts the client may have, caters for potential risks, losses and calculates potential profits. A development project or any construction related project will be incomplete without the contribution of a quantity surveyor's expertise in financial planning and estimating.

It is clear that the hypothesis is proved by examining the contents of this chapter. Financial planning and assistance is crucial to a development project. Not only does the quantity surveyor's financial planning and estimate expertise enable the client to anticipate his potential profits, it further places the client in the preferred position of anticipating potential losses and budgeting for same accordingly. A quantity surveyor is a professional who charges a fee for attending to work, however the fee charged is minimal in comparison to the potential losses a client can suffer, when not consulting with professionals pertaining to the costs of a development project.

Chapter 4 – Why is continuous management and administration by a quantity surveyor important?

4.1 Introduction

In this chapter, we will be evaluating the immense value and contribution of a quantity surveyor in respect of the development processes of a project, where the management, administration and monitoring of the construction works and processes are of critical importance, and the facilitation of the practical completion thereof is given effect to and secured by the quantity surveyor.

The contribution a quantity surveyor makes in ensuring that effect is given to all the administrative aspects of the construction process of a project is discussed, with focus placed on the continuous monitoring and diligent attention each phase of the construction project receives in the practical completion thereof, by involving the expertise of a quantity surveyor.

4.2 Where does management and administration fit into construction contracts and/or processes?

Clients wishing to embark on development projects are often misguided and misled in thinking that building projects are admin-free insofar as continuous management and intricate detail is concerned. Paperwork and monotonous administrative aspects are minor details and do not enjoy a sufficient amount of attention, or any attention at all, where the administration and management of a project, is what ultimately ensures its success when it nears completion, and simplifies the project in more ways than one. Continuous management and administration ensures that the project is completed in time, and in accordance with the client's requirements as well as in conjunction with the statutory building standards. The quantity surveyor will evaluate the work that has been completed and the progress made, and be in a position to make

provision for any variation that may occur in respect of the project.(Hauptfleisch and Sigle 2002:49). He will also be able to advise the client of the variations, changes or delays in respect of the project, the reasons or motivations behind it, and possibly even address the issues that gave rise to the delays or changes to ensure that same are taken care of.

A quantity surveyor has to make it his priority to manage the project properly, and attend to the administrative aspects within the scope of his profession relating to such a project, as this will ensure that each and every potential problem that may arise therefrom, or has already occurred, is catered for and managed, to prevent same from causing serious damage to the client, be it financially or merely a delay in time.

As most clients are not full time developers themselves, they require the assistance of a professional to attend to, inter alia, the administration and management of the construction project, and to ensure that strict standards are applied and complied with in the development project. When appointing a quantity surveyor, management and general administration forms part of the duties of the quantity surveyor who will facilitate the successful execution of the requisite steps in the development process.

The quantity surveyor's sole duty is not merely to calculate construction costs, but includes projecting what potential costs might be incurred and what the financial viability of a project is. To project these costs and calculate the potential of profit and risk related to a construction project, the quantity surveyor is required to continuously be aware of developments and progress made on the construction and/or development site, as well as any defects that may cause set backs on the progress of the development project (Government Gazette Dec 2008:18).

This is where continuous management and administration comes into the picture. The quantity surveyor is constantly aware of developments and setbacks in respect of the project, which allows the quantity surveyor to adjust the budget and/or time frame of the project, or to reconsider options,

alternatives or changes in the way forward. Should the quantity surveyor not manage or oversee the development project, the client will not be in a position to make the necessary financial arrangements to cater for any potential problems in respect of the project. (Hauptfleisch and Sigle 2002:49)

4.3 What does management and administration by a quantity surveyor entail?

The quantity surveyor renders services to the client and/or developer. These services have been discussed in chapter 2 of this dissertation, however specific attention will be given in this chapter, to those services enshrined in the terms 'management' and 'administration'.

Management entails the process of overlooking and attending to certain functions in ultimately accomplishing a set goal and/or objective in respect of a project and making decisions in advance in respect of such a project. It comprises of numerous aspects including organizing, directing, leading, procuring contracts, facilitating progress and generally assisting where same is required. (www.wikipedia.org.za Access: 2 May)

Administration involves inter alia the process of identifying the responsibilities that have to be performed by specific divisions in respect of specific phases of the development and/or project and delegating such responsibilities onto the appropriate qualified professionals that forms part of the development team. The quantity surveyor has to follow up the progress made in respect of the responsibilities that were delegated to ensure compliance with the duties enforced onto the relevant professionals. The quantity surveyor then facilitates the practical completion of the development project by preparing the requisite documents and coordinating the concurrent procedures in respect of the project. (Government Gazette Dec 2008:18).

4.4 Duties reflecting continuous management and administration

The tasks attended to by the quantity surveyor with specific regard to management and administration, and giving effect to certain requirements, attending to certain tasks, delegating certain responsibilities and following up the progress thereof, includes the following duties, however is not limited to same:

- Drafting of financial documentation projecting potential predictions pertaining to costs and cash flow which is part of the initial administrative process, but has to be continuously managed, monitored and adjusted accordingly;
- Drawing up financial charts with estimated costs predicted, to enable the quantity surveyor to have a schematic overview of the costs relating to each phase and/or section of the project development. As these phases progress in development, the financial charts will reflect same and the quantity surveyor has to record the progress made and the direct financial implication thereof on the financial charts.
- Calculating the financial leeway allowed in respect of proposed variations and/or potential amendments or suggestions throughout the project stages, with specific relevance to a project. The quantity surveyor will evaluate the options and calculate the most financially viable and cost effective option in respect of a variation to enable him to make a recommendation as to whether a variation makes financial sense or not, and what alternatives should be considered. This is an ongoing administrative process that needs to be updated regularly.
- Establishing a system that will allow the quantity surveyor to exercise financial control over the developments in the project and simultaneously manage the ongoing finance related aspects. This system will be used by the quantity surveyor to monitor developments,

not only in respect of the construction part of the project, but also insofar as it relates to finances.

- Facilitating the resolution of any disputes that may arise relating to financial claims of contractors of the project, in attempting to satisfy the demands of all parties to the project, including the client, the contractors etc. Should any disputes arise or be referred to an independent third party for adjudication, the quantity surveyor is involved in the referrals and attempts to manage the project in such a way to avoid disputes and resolve any disputes that may arise.
- Assisting contractors or employees with the process of submitting their claims for payment by the client. In the event of additional costs being incurred and consequent claims arising therefrom, the quantity surveyor will submit such a claim to the relevant party for consideration, being either the principal agent or the client, who will ultimately provide approval of such claim. (Cruywagen 2004:3).
- General attendances to meetings on the project site, with the team involved in the project, the client, and with the contractors themselves. All of these parties will not necessarily be present at all the site meetings and neither will the quantity surveyor. The quantity surveyor will however be provided with a record of the minutes of the meetings held in respect of the project, whereafter the quantity surveyor can conduct site inspections on the project site, to ensure that the issues addressed on the minutes of the meeting are attended to, obligations are complied with, commitments made by parties at such a meeting are given effect to, and any cost variations are brought to the attention of the Principal agent who will convey same to the client. (Cruywagen 2004:2)

- Handing over of the site where the quantity surveyor, the client, the contractor and certain members of the professional team will convene a meeting and initiate their professional relationship in respect of the project. The handover forms part of an administrative process and is in inherent form of managing the project.

- Overseeing development progress and corresponding with the relevant parties to procure the quickest, cost effective and simultaneously client satisfying solution to any problem that may arise, be it by way of directly assisting, or merely ensuring that the relevant parties make contact and solve the problem.

4.5 Summary

As is illustrated in this chapter, the relevance of management and administration of a project cannot be underestimated. These two aspects are not limited to two individual services or duties of the quantity surveyor, but they form part of the duties of a quantity surveyor and is reflected by the actions of the quantity surveyor. Management of a project allows the quantity surveyor control over the project and assists the quantity surveyor in successfully directing and overlooking the project progress. When any unforeseen problems arise, the quantity surveyor will be aware of same through diligent management and attend to the requisite administrative requirements that have to be adjusted accordingly.

4.6 Conclusion

A construction project or development consists of various aspects and divisions, each requiring attention, diligence and expertise. Although the quantity surveyor assists the client and/or developer in numerous functions and facilitates certain phases of the project, procures contracts and calculates

financial implications of the project, the development of the project still transpires and needs management on a continuous basis. The expertise of a quantity surveyor is not only required when initiating the development project or when approaching the final stages thereof, but continuous administration and intense management of the project throughout the whole of the development is of crucial importance.

4.7 Testing the hypothesis

Continuous management and proper administration of a construction related project or development, are the threads that hold the blanket of development together. The application of the professional team in such a project, is intertwined with the application of proper management by a quantity surveyor of the costs incurred by these professionals or the conduct of the professionals. Administrative aspects and continuous management of a development project ultimately forms an important part of the development project and contributes to the sustainable success of a project.

When testing this hypothesis, it is evident that the continuous administration of a project and the active application of administrative aspects are required throughout the development. The strictest standards of quality are applied in respect of every phase of the project development by exercising continuous management. Should the project not be managed and administrative aspects not be attended to on a regular basis as is required, such a lack of management will cause problems that will surface at a later stage of the project, making it vulnerable to failure or loss.

The hypothesis is correct and confirmed as demonstrated in the abovementioned paragraphs.

Chapter 5 – Why is the reconciliation of accounts in the final stages of a project important?

5.1 Introduction

Evaluating the benefits of professional assistance in the closing stage of the building, where accounts are reconciled and evaluations are done in respect of the completed work, valuation certificates are issued and final accounts are drafted.

5.2 What does reconciliation of accounts constitute in the quantity surveying industry?

A quantity surveyor projects the potential costs that will be incurred in respect of a development or a project, and in the event of the development being constructed to ultimately accrue profit in respect thereof, the quantity surveyor will apply a financial viability test to ascertain the profitability thereof. When the quantity surveyor provides the client with these projected figures, it merely serves as provisional figures and the budget is not rigid, it is subject to escalation and change.

The overall budget is broken down into different elements, and every element of the development or project is attached to a certain figure that has been projected for the costs that will be incurred in respect of that element. These elements are for example the costs of preliminaries, earthworks, concrete formwork and reinforcement, masonry, carpentry and joinery, ceilings and partitions, floor coverings, ironmongery, metalwork, plastering, tiling, plumbing, paintwork, site works etc, the costs of the professionals involved in the design of the project for example the architects, the engineers, etc, and the costs involved in the physical construction of the project for example the contractors, the subcontractors, etc.

As the construction of the development or project progresses, these initial provisional budgets that were projected in respect of each element change, in accordance with the developments on the construction site. The construction is for example delayed by the weather, and the time period that the builders, contractors and subcontractors are required to be on the construction site, is extended, directly influencing the initial projected budget for fees. There are endless occurrences that can cause a variation in respect of an initial budget and therefore the budget a quantity surveyor calculates for a client, is provisional and not fixed.

The logical inference to be drawn from these constant variations and budget changes, is that a reconciliation of the initial overall budget, as well as the individual budgets in respect of each division of the project, has to be done on a regular basis to ascertain the variation in figures, from what was initially projected, to the actual costs eventually incurred. These reconciliations occur on a monthly basis, and it enables the quantity surveyor to be able to report to the client, and show the client how his money has been distributed to settle the accounts of different elements.

5.2.1 Financial Reports

The reconciliation of accounts entails the quantity surveyor drafting a financial report, which report reflects inter alia the different elements of the project and the variation of costs incurred in respect of such an element, from the initial projected amount to the actual amount incurred. This allows the quantity surveyor an overview of what costs have been budgeted for, what costs have been incurred, which of the incurred costs have been paid, and which costs are still outstanding in respect of such elements.:

Financial reports are drafted under the following headings:

- Bills of quantities
- Direct Contracts
- Variation Orders

- Professional Fees
- Summary of Elements

These financial reports are all similar in that each report constitutes a summary and overview of the variation in costs pertaining to a certain group of elements. A discussion of the contents of the financial reports follows hereinafter, with a brief summary of the entries listed in such a report. Each report contains the following entries, which differentiates the reports from another.

5.2.1.1 Elements

Each financial report is drafted to reflect the costs of a specific group of elements. These elements will differentiate with every project and some elements may be added onto the report, and some left out. Depending on the type of development/project and the construction thereof, the elements that will be listed on the financial report will vary. The elements are divided into different categories, each group of elements being set out on a financial report, which financial reports combined, ultimately constitute the overall financial report. The groups of elements as set out on different forms of financial reports are set out hereunder, however the elements are not limited to the groups listed hereunder.

5.2.1.1.1 Bills of quantities.

This group of elements relate specifically to the construction and the construction materials; the preliminaries, earthworks, concrete formwork and reinforcement, masonry, carpentry and joinery, ceilings and partitions, floor coverings, ironmongery, metalwork, plastering, tiling, plumbing, paintwork and site works. The bills of quantities in general, is a document that contains the rates related to the construction of the project. These bills of quantities are utilized in the financial management of the project and will be used as the groundwork for calculations when initiating the final account process.
(Cruywagen :2004)

5.2.1.1.2 Direct Contracts

This group of elements relate to the costs incurred through and by the direct contractors as employed and appointed by the client directly.

5.2.1.1.3 Variation Orders

This group of elements focuses on the variations that have been made in respect of certain materials in the construction process, for example changes made to the floor covering or the ironmongery, or additional tiling that is required, or a substantial saving that has been made on the paintwork of the project. All the variations to the initial financial report, is set out on this report. It is important to note that when a variation is made, such a variation has to be approved by the client, whereafter the principal agent issues a notice confirming the approval of the variation order. Copies of all variation orders have to be kept for record purposes as same will be utilized when drafting the final account. In some instances, a variation is made at no cost. (Cruywagen :2004).

5.2.1.1.4 Professional fees

This group of elements consists of the fees of the different professionals involved in the development or project, including for example the architect, the quantity surveyor, the civil engineer, the electrical engineer and the project manager, to name a few.

5.2.1.1.5 Summary of Elements

This financial report contains a summary of all the previous groups of elements listed on other financial reports and serves as a comparison of the groups of elements and the costs incurred in respect of same. The following groups of elements make up the summary of elements, the bills of quantities, the direct contract, the variation orders, and the professional fees.

5.3 Where does the process of final accounts fit into the reconciliation procedure

The final account stage occurs when the contract or development nears completion. The quantity surveyor will draft a document on which all the costs of the contract are set out. All the variations and changes that occurred during the contract process will be reflected on this document and provide the client with an overview of the expenditure of the project or development. (Cruywagen :2004) The final account is however compiled of information and calculations that were made throughout the contract process, and therefore the importance of a quantity surveyor continuously recording all financial variations of a contract, are reiterated in this discussion of the final account stage.

5.3.1 Detail enshrined in a final account

A final account contains a variation of entries, each entry representative of a part of the administration in respect of the construction. These entries include, inter alia:

- All the supporting documentation in respect of completed work, attended to by either contractors or subcontractors, in the form of invoices, and/or statements of account, and/or receipts etc;
- A summary of rates as negotiated and agreed upon between the quantity surveyor and the relevant third party. A differentiation is made between schedule and non-schedule rates. (Cruywagen :2004)
- An overview of the re-measurements as conducted in respect of a variation of items is set out in this section. Re-measurement is an exercise in terms of which measurements that have been made in respect of foundations, water supplies, ground works, plumbing etc, (hereinafter referred to as “the items”) are amended as re-measurements are conducted on a continuous basis. When a quantity surveyor initially receives the relevant

measurements in respect of the items as mentioned before, costs are calculated and provisional budgets are set in accordance with such measurements. As the development and construction progresses, these initial measurements change, and the costs projected for such items, have to be amended accordingly. (Cruywagen :2004)

- A summary of the relevant variations at cost, and the variations at no cost, that have been allowed.
- Contract price adjustments and calculations concurrent with such adjustments will be set out in the final account.

A final account is drafted by the quantity surveyor with consideration of all the costs incurred, variations etc. This final account is issued by the quantity surveyor and then referred to the contractor and the client for their signatures in approval of the final account.

5.4 Summary

The reconciliation of accounts during a project or development, creates an on overview of the costs incurred in respect of such a project, and enables the quantity surveyor to 'track' the overall expenditure. Although the final reconciliation is done nearing the end of the project, the quantity surveyor conducts monthly reconciliations in respect of the monthly expenses incurred, throughout the project or development, and consequentially the reconciliation of accounts are done on a continuous basis.

5.5 Conclusion

Any development project, be it an individual's residential property, or the development of a shopping centre or hotel, requires funding. Money is the material that allows an idea, dream or vision, to be constructed and become a reality. Construction, be it a singular residential property or a big commercial property, is a very expensive exercise and therefore caution has to be

exercised in the spending of such funds. Clients require a breakdown of the costs incurred and money owing to third parties involved in the project, and therefore the quantity surveyor conducts a reconciliation of accounts, on a monthly basis, and at the end of the development and/or project, to be able to report to the client regarding costs, and further to confidently justify the expenditure. The reconciliation of accounts forms as much a part of the project and/or development, as the actual construction of the project on the building site, the reconciliation is merely the financial leg of the project.

5.6 Testing the hypothesis

Reconciliation of accounts in the closing stages of a development project is of critical importance, however reconciliation of accounts occur on a smaller scale, on a monthly basis. The quantity surveyor attends to such reconciliations and reports back to the client pertaining thereto. This ensures that all financial matters in respect of the project are settled. Any developer requires this type of assistance and contribution when it comes to paying the relevant parties their accounts and ensuring that all accounts are reconciled.

When testing the hypothesis, the critical role that the recording of all financial related issues play becomes visible, and the relevance and the value of financial reporting is reiterated. Financial reporting is a continuous process, and through diligent recording, financial reporting is a reflection of the viability and expenses of a project. It is accordingly found when testing the initial hypothesis, that financial reporting is important and of immense value in a development project.

Chapter 6 – Conclusion

6.1 Introduction

To determine whether the initial problem as set out in chapter 1 has been addressed and to ascertain the conclusion thereto, a summary of the issues addressed throughout the previous chapters will be briefly set out herein in order to draw an accurate conclusion.

6.2 The Main Problem

The problem in question is, “What are the benefits of utilizing a quantity surveyor?”

6.3 Summary enshrined in previous chapters

- **Chapter 2: What services does a quantity surveyor offer?**

Construction projects require the expertise of numerous roleplayers, architects, engineers, builders etc. Quantity surveyors are experts in providing cost advice, and ensuring financial viability as well as calculating in some instances, profitability. It is therefore important that a client employs the services of quantity surveyor to assist him in the project by continuously evaluating the project and the progress made, and making suggestions to the client in respect thereof.

- **Chapter 3: How will a quantity surveyor promote the financial viability of the project, and assist in saving costs?**

The feasibility study will provide the quantity surveyor with knowledge as to the potential financial viability of the project whilst considering the financial risks embarking on such a project will impose on the client, which is inter alia the advice the client seeks when approaching the quantity surveyor for assistance.

The advice a quantity surveyor provides the client with will protect the client from embarking on a project that will ultimately be too expensive for him to complete, and not provide him with any financial return. The quantity surveyor's services are of immense value and no development project should be approached or effected without a due diligence investigation in the form of a feasibility study.

- **Chapter 4: Why is continuous management and administration by a quantity surveyor important?**

A construction project or development consists of various aspects and divisions, each requiring attention, diligence and expertise. Although the quantity surveyor assists the client and/or developer in numerous functions and facilitates certain phases of the project, procures contracts and calculates financial implications of the project, the development of the project still transpires and needs management on a continuous basis. The expertise of a quantity surveyor is not only required when initiating the development project or when approaching the final stages thereof, but continuous administration and intense management of the project throughout the whole of the development is of crucial importance.

- **Chapter 5: Why is the reconciliation of accounts in the final stages of a project important?**

Any development project, be it an individual's residential property, or the development of a shopping centre or hotel, requires funding. Money is the material that allows an idea, dream or vision, to be constructed and become a reality. Construction, be it a singular residential property or a big commercial property, is a very expensive exercise and therefore caution has to be exercised in the spending of such funds. Clients require a breakdown of the costs incurred and money owing to third parties involved in the project, and therefore the quantity surveyor conducts a reconciliation of accounts, on a monthly basis, and at the end of the development and/or project, to be able to

report to the client regarding costs, and further to confidently justify the expenditure. The reconciliation of accounts forms as much a part of the project and/or development, as the actual construction of the project on the building site, the reconciliation is merely the financial leg of the project.

6.4 Final Conclusion

All the conclusions reached as in terms of the previously discussed chapters, contribute to the final conclusion with regards to the question raised in the statement of the main problem. A variation of aspects of the quantity surveying profession, the duties enshrined therein, and the value and contribution a quantity surveyor can lend to any development or construction project, is discussed and summarized in the previous conclusions and is hereinafter reiterated.

Construction, be it of a big commercial development project, or merely an individual's luxury residential project, a shopping mall, or a school, a parking garage or a golf course, any type of development is dependant on finance and costs money. To ascertain the potential costs that will be incurred, and project figures associated with such developments, professional assistance and guidance is required, and such services are offered by a quantity surveyor. Quantity surveyors not only advise clients and potential developers of the potential costs that may be associated with developments and provide them with estimates and projected budgets, but also of the potential profits that may be accrued in respect of a project when considering the project's financial viability.

The overall guidance provided by a quantity surveyor is of immense value, not only in respect of the financial advice given, but further of the continuous management and administration a quantity surveyor attends to, the ongoing recordings of improvements and changes made in respect of the project, the facilitation of relationships between parties involved in the development and/or project, and also the facilitation of the conclusion of the requisite agreements between the parties involved in the development or project. A quantity surveyor

provides stability when it comes to considering the risks involved in approaching a project, and minimizes the financial risks clients have to take by providing the client and/or developer with estimates, figures, and facts. The quantity surveyor informs the client of the potential risks and the extent of the expenditure associated with such a project, to empower the client and/or developer to make an informed decision when approaching a project or development.

The final conclusion reached is that a quantity surveyor offers numerous benefits that are of immense value to any client and/or developer, and this conclusion is based on the fact that a quantity surveyor places the client in a position where some of his risks, especially insofar as such risks have financial implications, are calculated, and that is invaluable.

The critical importance of having a quantity surveyor on board as a professional adviser when initiating the process of developments or construction related projects is reiterated and simultaneously the answer to the main problem is confirmed.

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Annexure A

Basic fee

Value for fee purposes		Basic fee	
		Primary charge	Marginal rate
1		2	3
Up to R 1 000 000		R 11 000	6,40 % on balance over R 0
R 1 000 000 – R 2 000 000		R 75 000	6,10 % on balance over R 1 000 000
R 2 000 000 – R 4 000 000		R 136 000	6,00 % on balance over R 2 000 000
R 4 000 000 – R 8 000 000		R 256 000	5,40 % on balance over R 4 000 000
R 8 000 000 – R 16 000 000		R 472 000	5,06 % on balance over R 8 000 000
R 16 000 000 – R 32 000 000		R 876 800	4,47 % on balance over R 16 000 000
R 32 000 000 – R 64 000 000		R 1 592 000	4,00 % on balance over R 32 000 000
R 64 000 000 – R 128 000 000		R 2 872 000	3,90 % on balance over R 64 000 000
R 128 000 000 – R 256 000 000		R 5 368 000	3,10 % on balance over R 128 000 000
R 256 000 000 – R 500 000 000		R 9 336 000	3,00 % on balance over R 256 000 000
R 500 000 000 – R 1 500 000 000		R 16 656 000	2,65 % on balance over R 500 000 000
R 1 500 000 000 – R 3 000 000 000		R 43 156 000	2,35 % on balance over R 1 500 000 000
R 3 000 000 000 and over		R 78 406 000	1,85 % on balance over R 3 000 000 000

Appropriate percentage

Category	Appropriate percentage					
	*Contracts with bills of quantities	*Contracts with simplified bills of quantities	Contracts without bills of quantities	Builder's quantities	Payment valuations	Cost-plus contracts
1	2	3	4	5	6	7
Alteration works	125	100	75	25	15	70
Building works	100	75	75	20	15	70
Redecoration works	160	150	75	50	15	70
Replication:						
Prototypes and other non-replication works ...	Apply applicable appropriate percentage					n/a
Replication(s) of prototype	60% of applicable appropriate percentage					n/a
Multiple procurement contracts:						
Principal contractor appointed	Increase the fee by 10%				n/a	n/a
No principal contractor appointed	Increase the fee by 20%				n/a	n/a

Percentage of fee

Category	Percentage of fee						
	Stage 1 Inception	Stage 2 Concept and viability	Stage 3 Design development	Stage 4 Documentation and procurement	Stage 5 Construction	Stage 6 Close-out	
1	2	3	4	5	6	7	
Bills of quantities and engineering bills of quantities contracts:							
Bills of provisional quantities	2,5	5	7,5	17,5	62,5	5	
.....							
Bills of quantities	2,5	5	7,5	35	45	5	
.....							
Schedule of rates	2,5	5	7,5	12,5	67,5	5	
.....							
Builder's quantities	n/a	n/a	n/a	100	n/a	n/a	
.....							
Contracts without bills of quantities	2,5	7,5	10	20	52,5	7,5	
....							
Cost norms	15	15	15	20	25	10	
.....							
Cost-plus contracts	2,5	7,5	10	15	57,5	7,5	
.....							
Payment valuations	n/a	n/a	n/a	n/a	92,5	7,5	
.....							
Principal agency	n/a	n/a	n/a	15	70	15	
.....							
Principal consultancy	15	15	10	15	30	15	
.....							
Project monitoring	2,5	2,5	5	15	60	15	
.....							
Quality inspection	n/a	n/a	n/a	n/a	85	15	
.....							
Replication of prototype	2,5	5	5	17,5	62,5	7,5	
.....							
Schedule of materials	n/a	n/a	n/a	100	n/a	n/a	
.....							
Simplified bills of quantities contracts:							
Bills of provisional quantities	2,5	7,5	10	17,5	55	7,5	
.....							
Bills of quantities	2,5	7,5	10	35	37,5	7,5	
.....							
Schedule of rates	2,5	7,5	10	12,5	60	7,5	
.....							
Targeted procurement	n/a	n/a	n/a	20	60	20	
.....							
Multiple procurement contracts (overrides all other category apportionments)	2,5	5	7,5	15 During Stage 4	20 During Stage 5	45	5