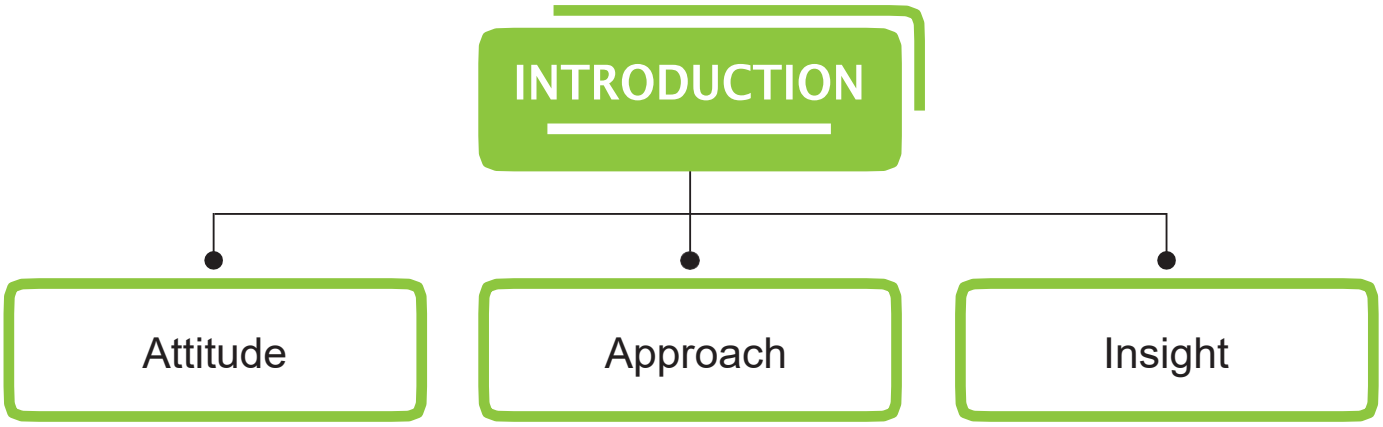
South African Council
for the Architectural Profession

PROFESSIONALPRACTICEEXAMINATION

GUIDELINE 2026

TABLE OFCONTENTS

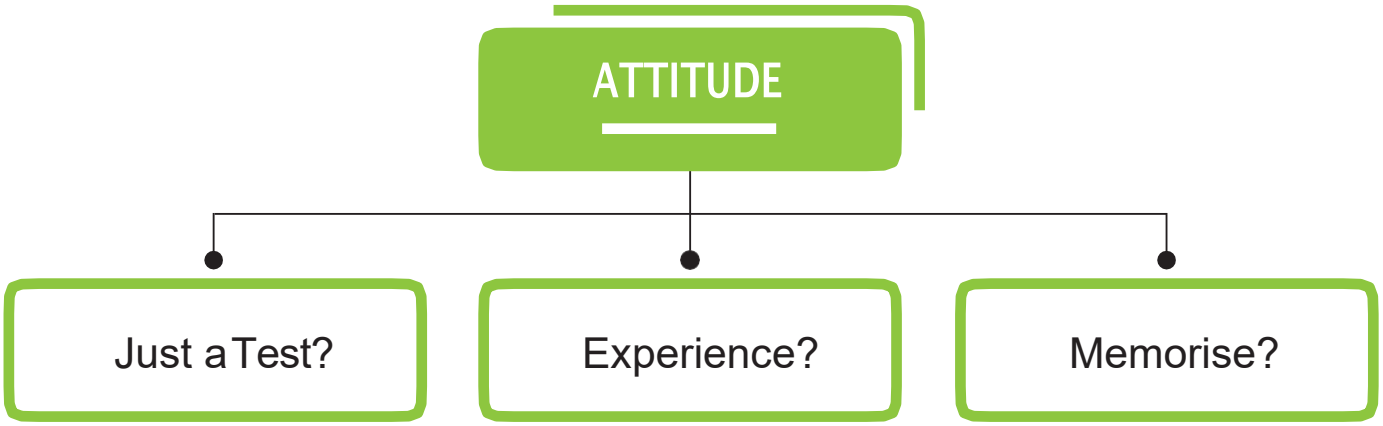
APPROACH&ATTITUDEOFTHISGUIDELINE



In any challenge, academic or professional, the right mindset is paramount to a successful outcome. Therefore, there is no difference in approach when it comes to the PPE examinations. Although the PPE is a significant milestone in a candidate's career, it should be seen as ultimately only a test - not of their competence or worthiness as a professional, but **a test on a specific set of legal rules which govern the profession**. This viewpoint allows candidates to overcome the anxiety of failure, the pressure of the working environment and the external factors which contribute to an uneasy mindset whilst preparing to write the examination.

Whilst definitely beneficial, the experience of a candidate is not necessary to ensure that one passes the exam. Instead, if one gives thought to best practices and has made the most of the time during one's working experience, it will naturally allow for a **first principles-based thinking** as opposed to feeling you should know every answer. This is a more helpful mindset and can instill a sense of **confidence** in the candidate.

A question often asked by candidates is if they should **memorise content for Paper 1 and 2. For Paper 1**, there is an expectation that through a **constant engagement and a broad understanding of how legislation works within our profession**, a professional is able to **recall from memory** Although the paper is **open book**, it is recommended that **one memorises the principles for navigation as opposed to the verbatim learning of contracts**. Memorization should not be a vein practice, but should be used instead as a coping mechanism to deal with the consequences of stress which leads to a blank out during the exam.



This guide assumes the candidate knows nothing in this paper. However, as every candidate becoming a professional knows that due diligence is a key factor, the candidate should do their best to prepare from a variety of sources in addition to this guide. So whilst this guide aims to be comprehensive, **knowledge can be found from external sources as well**, which can be found in the form of links and videos in this book. As opposed to rote learning, our approach in the book is based on **first principles thinking**. It intends to **derive the scenario and express mechanisms and techniques of thinking to best find the answer**. This will allow the candidate, as expressed earlier, to become self-reliant through knowing how to **navigate source material as opposed to verbatim memorization of the answers**.

Although first principles allow a candidate to derive the answer for themselves to build confidence, **an additional way to achieve this confidence is through the practice of past papers**. This method allows candidates to gain a feel of the questioning style which is often based on the triangulation of knowledge (various ways to ask questions on the same content) and allows candidates to see how marks are awarded for the answers they provide.

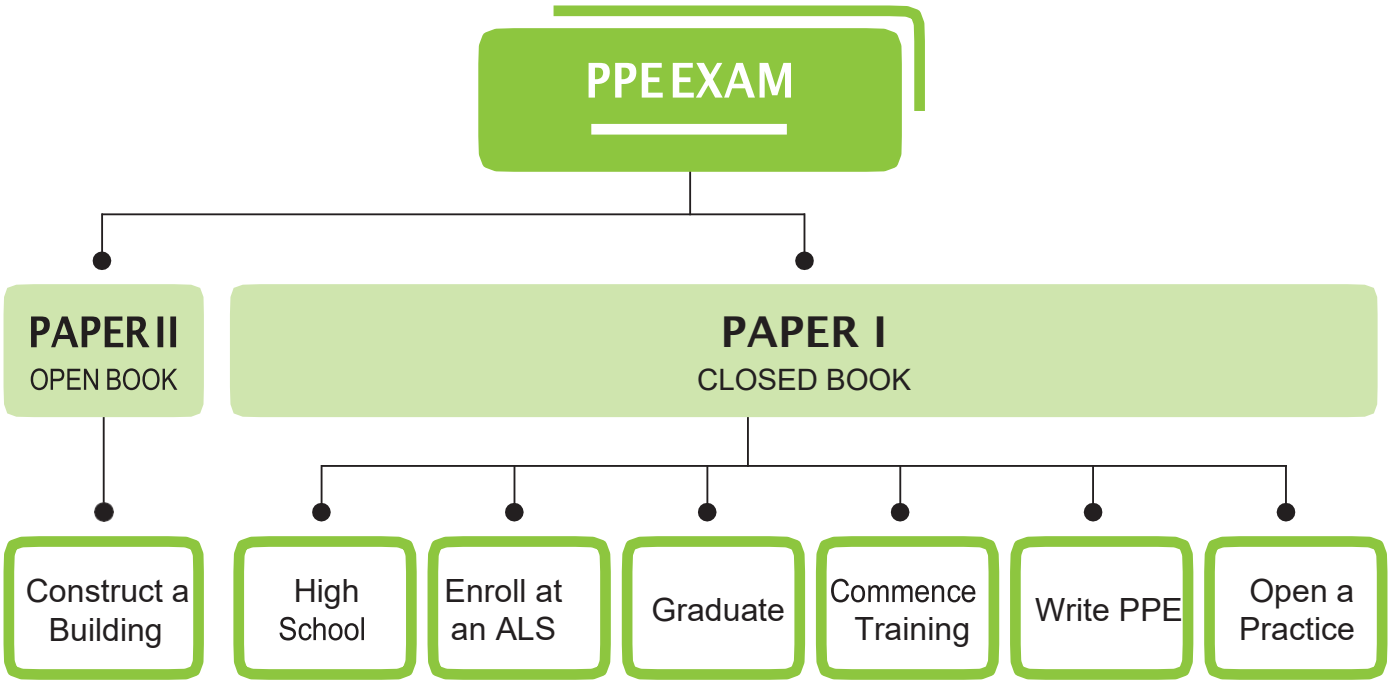
Finally, it is **always important for candidates to stay aware and updated on the relevant happenings locally and globally**. From earthquakes to artificial intelligence, always remain alert on how these events can and will impact the construction industry. Apply your knowledge of the content learnt in preparation for these examinations and discuss them in professional circles to verify, validate or correct your understanding. **Follow the Voluntary Associations and monitor SACAP's emails as well as their social media feeds**. It is very likely that some of the topics discussed will be coming out in the year's examinations.

PROFESSIONAL PRACTICE EXAMINATION

PAPER 1

Return to Contents

OVERVIEW OF EXAM STRUCTURE



SOURCE: Lizelle Jackson, SAYAP Day Sessions in partnership with SAIBD

After years of completing your Monthly Training Records (MTRs) and applying for the professional practice exam - you just received word that you have qualified to write the upcoming examination! Now what?

It's time to begin the process of familiarising yourself with the terminology, procedures and context necessary to write the exam. But where do you start?

Fortunately, there is a framework from which the contents of your examination are extracted.

Based on the diagram above, we can see the entire process which comprehensively spans the professional and academic career path of an architectural designer. This framework with its corresponding topics allows one to navigate the content to be covered during the professional exam.

Disclaimer

Some of the events described in the logic showcased below are fictitious. Their purpose is to convey a narrative which will enable candidates to better understand the structure and context of the paper, as well as understand where each section of the paper fits into the grand scheme of the examination.

Check out this short which gives you an overview of the Professional Practice Examination Papers:

CLICK THIS LINK

DERIVING APROFESSION

A first principles derivation of our profession.

In order to prepare for **Paper 1, we are going to focus on topics that mainly sit within steps 1 - 6**. This entails everything prior to passing the Professional Practice Examination and a general overview of the legislation and contractual understanding which govern the practice of the **architectural design process.** In specific, we will be looking at legislation and regulation governing educational pathways, training, preparation for the Professional Practice Exam and what professionalism entails.

TOPICS IN EXAMINATION

HOW FAR ALONG ARE YOU?

Accredited Learning Site | South African Council for the Architectural Profession (SACAP) | Validated Programme

Draughtsperson | Technologist \ Senior Technologist | Architect | Identification of Works Policy (IDOW) | Mentorship

The Provision of Architectural Services | Monthly Training Records | Competencies | Partial Services | Additional Services | Ethics in the Provision of Architectural Services | Limited Dispensation

Voluntary Associations | Continuous Professional Development (CPD) | Categories of CPD Points | Associated Legislation | Registered as a Professional | Privy Seal

The Architectural Professional as Practitioner | The Architectural Professional and their Office | Establishing a Practice | Personnel | Financial Management | Risk Management | Quality management Systems | Project Planning, Delivery and Controls

Property Law | Law of Delict | The Concept of Lien | Latin Phrases | Law of Agency | Dispute Resolution | Construction Procurement and Contracting | Clerk of Works | The Context of Principal Agency and Principal Consultancy | Joint Ventures and Consortiums | The Professional Team | Construction Pricing Strategies

1. **HIGH SCHOOL**
   Apply to Study
2. **ENROL AT AN ALS**
   Private & Public Institutes
   Shadow a Mentor
3. **GRADUATE**
   Registration as a Candidate
4. **COMMENCE TRAINING**
   In-training & Candidacy
5. **WRITE PPE**
   Relevance through Life-long Learning
6. **OPEN A PRACTICE**
   Acquire Work
   Employ Staff
7. **CONSTRUCT BUILDING**
   Contracts

SOURCE: SAYAP 2023 e-Booklet

THE PATH TO BECOME COMPETENT

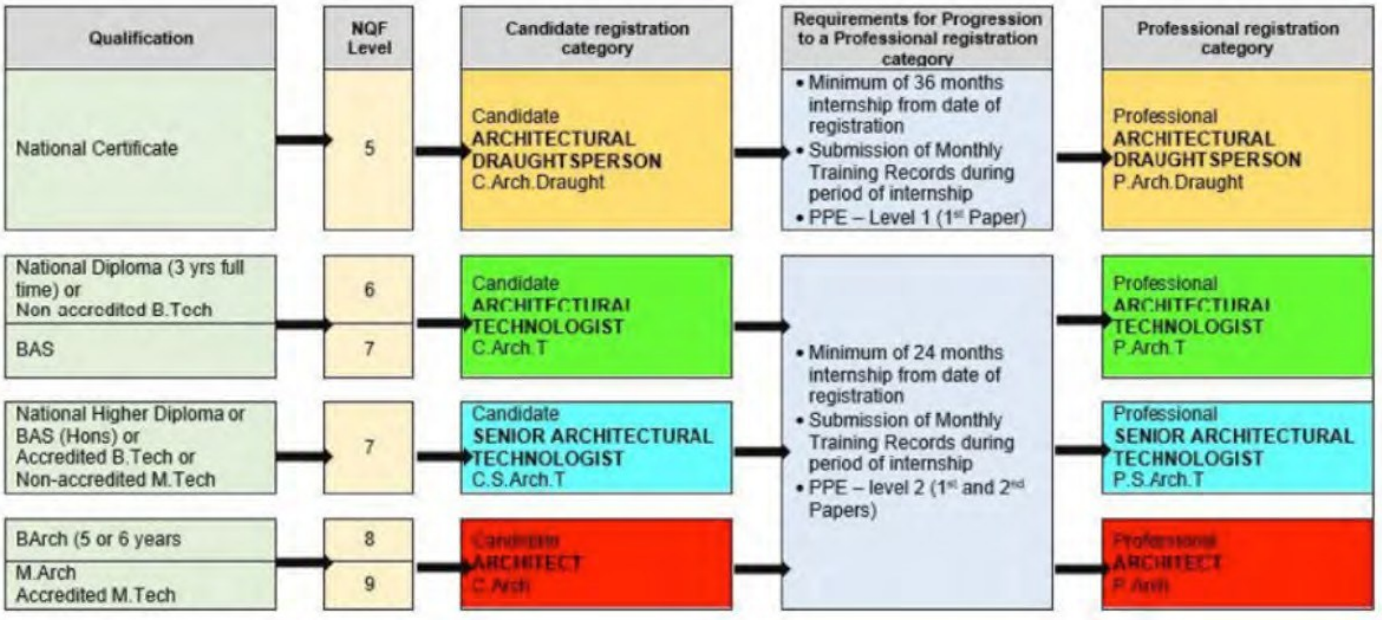
A logical process to become a practitioner in the field.

From looking at the above, we now need to shift our focus to simulate the consequence of the above process. If we have:

1. High school students who choose an institute of learning
2. Then enroll at institute and complete their studies at this site
3. Then graduate and progress to find work
4. Train for a prescribed number of years
5. And qualify to write the professional exam

6. And finally pass the exam to possibly open their own practice,

How would we ensure that the competence, integrity and conduct of such individuals remain consistent? And how would we hold them accountable for their professional actions? This is where the concept of regulation comes in.



SOURCE: SACAP Official Page

Check out SACAP's website for Accredited Architectural Learning Sites:

CLICK THIS LINK

THE NEED FOR REGULATION & ESTABLISHMENT OF LEGISLATION

Legal frameworks to support the integrity and consequences of action of the professional.

Regulation, as the word suggests, means to make something 'regular'. Implying a ruling of some nature, regulation guides us as individuals to act in a specific manner based on what is usually deemed as best practice for society.

Who makes these regulations? In a democracy, regulations are usually conceived by a group of members elected by citizens to decide on what is best for society. Such groups of people can be governments, councils or **bodies known as juristic persons**. Taking this approach, in order to ensure that these juristic persons are able to provide the guidance necessary for individuals to follow, legislation is required to be established.

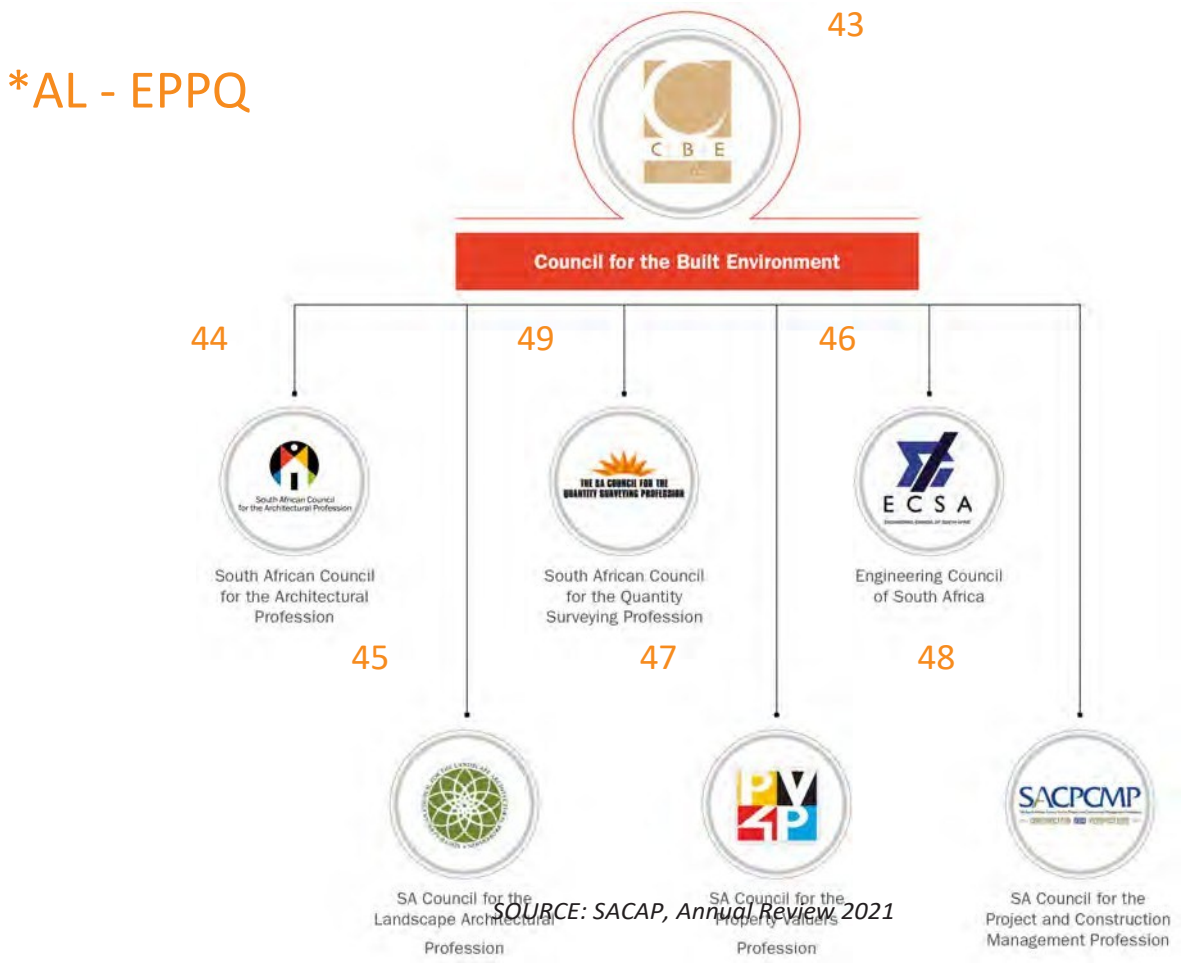
In a post-Apartheid South Africa, the Constitutional Act No, 108 of 1996 is the initiating point of such legislation.

Check out this short which discusses an overview of legislation:

CLICK THIS LINK

THE ACTS AND PROFESSIONAL BODIES

A natural progression from having a large body of practitioners who have a responsibility toward the public.



SOURCE: SACAP, Annual Review 2021

Regulatory Bodies enforce regulation. Consequent to the Constitutional Act, several Acts have been established to ensure that regulation is enforced for the benefit and safety of the public across various industries.

The example relevant to our industry is the **Construction Industry Development Board Act, No. 38 of 2000**. This Act in summary establishes the CIDB and sets out its objectives, powers, and functions to promote the construction industry's growth and development.

The next significant Act after the CIBD, is the Council for the Built Environment Act, No. 43 of 2000. This act establishes the CBE and outlines its role in coordinating the various professional councils in the built environment, advising the government, and promoting the public interest in the built environment sector.

There are several acts which follow this, however the one this guide will be focusing on is the Architectural Profession Act, No. 44 of 2000. And this is where we as architectural practitioners fit in.

The Architectural Profession Act 44 of 2000 in South Africa was designed to provide for the establishment, powers, and functions of the **South African Council for the Architectural Profession (SACAP)**. This act also sets standards for registering architecture professionals and firms, ensuring high standards of professionalism in the architecture sector. The purpose of SACAP is to protect the public, and hence its contents adjust the responsibilities of architectural practitioners accordingly.

For the sake of simplicity and ease of reference, here's a general overview of the structure of the Act:

1. DEFINITIONS AND INTERPRETATIONS

For the Definitions section, key terms used throughout the act are defined here; and in the Interpretations section, clarification of terms and phrases for legal clarity are made evident. All Acts commence with these to orientate readers.

2. ESTABLISHMENT AND FUNCTIONS OF THE COUNCIL

This section details the Functions and Powers of the Council. It describes the duties and powers of the council, including registering professionals, setting standards for education and professional conduct and enforcing compliance. This can neatly be related to the previous section on the need for regulation and establishing regulations.

3. REGISTRATION AND PRACTICE

As discussed in the last study guide, the Identification of Works Policy details more on categories of registration and level of complexity of projects. However, in summary this section discusses different categories for professionals, like architects, senior architectural technologists, architectural technologists, and architectural draftspersons.

Important to note are 2 additional categories of registration which have more recently been added: the Building Inspector and Apprenticeship category respectively.

Further discussed are the criteria for being registered in various categories, certificates of registration with their issuance and renewal processes and the Professional Conduct and Practice with their standards for professional behavior and practice.

4. EDUCATION AND TRAINING

This section outlines procedures and standards for accrediting educational programs in architecture, such as SACAP's 10 Competencies. It also stipulates requirements and guidelines for Continuing Professional Development (CPD) to promote ongoing learning and professional growth within the field.

5. LEGAL AND DISCIPLINARY MATTERS

In this section, the Act details processes for handling professional misconduct under its Disciplinary Procedures and provides mechanisms for appealing decisions of the council through its Appeals and Reviews sections. These frameworks ensure accountability and fairness in the regulation of architectural professionals.

6. GENERAL PROVISIONS

The Act specifies the financial management of the council, including fee structures for registration and services, under its Financial Matters and Fees section. It also mandates annual reporting and accountability to the government, as outlined in the Reporting and Accountability section, ensuring transparency and oversight.

7. TRANSITIONAL PROVISIONS

Prior to this Act, the Architects Act of 1970 was the only one which governed the profession. As a result, the Act includes guidelines for transitioning from old regulations to the new framework it establishes, ensuring a smooth and systematic shift in regulatory practices for the architectural profession.

8. MISCELLANEOUS PROVISIONS

The Act grants authority to make additional regulations and by-laws for effective management of the architectural profession. This is crucial for ensuring that professionals meet the necessary standards of education and ethical conduct, thereby safeguarding the public and maintaining the integrity of the built environment in South Africa.

PROFESSIONALS AND GOVERNING CONDUCT

Rules to produce a code of conduct.

Once an Act which specifically governs a profession has been established, such as the case with the Architectural Profession Act, we now need to provide guidelines on how to conduct themselves. A comprehensive code of conduct is established by the South African Council for the Architectural Profession (SACAP). This code outlines ethical and professional standards to ensure that architects act with integrity and responsibility, crucial for maintaining public trust and upholding the profession's reputation. There are 8 rules and can be traced to basic principles of integrity. They are:

- Rule 1 – Integrity
- Rule 2 – Competency
- Rule 3 – Honest promotion of services
- Rule 4 – Administrative functions
- Rule 5 – Establishment of architectural practice
- Rule 6 – Public interest and environmental protection
- Rule 7 – Regulation of foreign architectural professionals
- Rule 8 - Disciplinary procedures

CATEGORIES OF REGISTRATION

A framework to discuss how various professionals should take responsibility and accountability.

Further to the Code of Conduct, SACAP defines various categories of registration for architectural professionals in South Africa. These categories clarify the qualifications and responsibilities of each tier, ensuring that professionals are appropriately accredited for the level of work they undertake, from draughtspersons to fully qualified architects.

The current categories of registration are prior to passing the exam:

- Candidate Draughtsperson
- Candidate Technologist
- Candidate Senior Technologist
- Candidate Architect

Then once you have passed the exam, under any of the above categories:

- Professional Draughtsperson
- Professional Technologist
- Professional Senior Technologist
- Professional Architect

There are finally 2 additional categories which have been added more recently:

- Building Control Officer
- Apprentice

Check out this short on the IDOW:

CLICK THIS LINK

GUIDELINES FORFEES

A guideline to help professionals estimate fees.

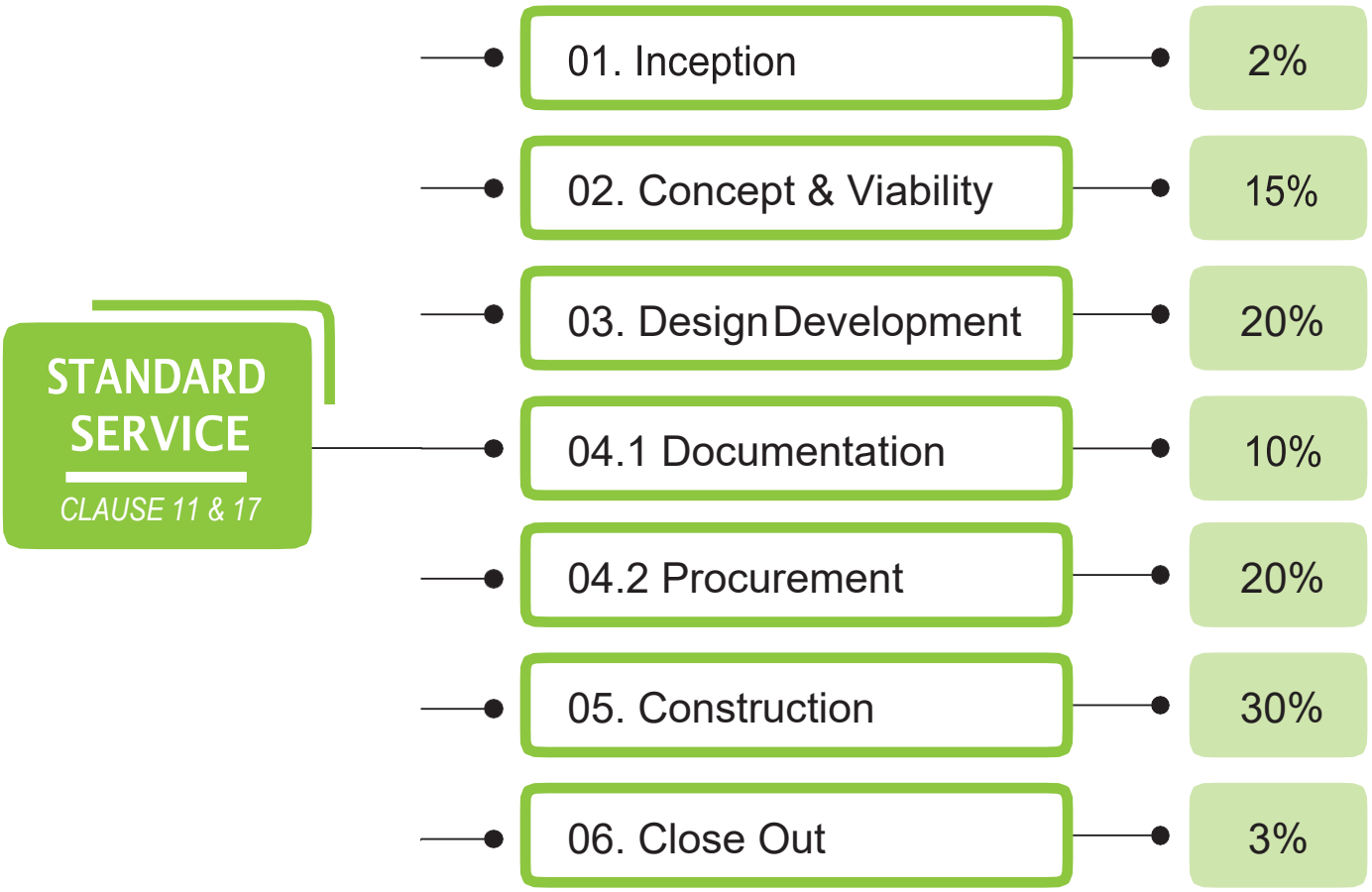
Architectural professionals in South Africa are guided by fee structures that help in estimating the costs of services. These guidelines consider the complexity and scope of projects, aiding architects in setting fair and transparent fees that align with the professional standards and expectations of the sector. In the next segment of this study, you can see this portion in more detail.

For, have a look at the fees guideline to familiarise yourself with the guideline, especially the portions discussing complexity:

CLICK THIS LINK

OFFERING SERVICES

Stages for which professionals can offer services for remuneration.



SOURCE: Lizelle Jackson, SAYAP Day Sessions in partnership with SAIBD

Once familiar with fee structures, professionals can expect to receive their payments in stages. This is common-place across the world in the practice of architecture. The stages at which architectural professionals can offer their services for remuneration are well-defined in South Africa. This clarity helps in managing client expectations and ensures that architects are compensated for their expertise at each phase of a project, from initial design to project completion.

You can find it here:

CLICK THIS LINK

Additionally, when looking at the competence of an architectural practitioner, this requires a professional to be knowledgeable on a number of regulations: National Building Regulations and the South African National Standards.

We will look at this in the follow up sections.

STARTING YOUR OWN PRACTICE

The legislation around starting your own practice and finding an office space.

	PROFIT COMPANIES				NON PROFIT COMPANIES
DESCRIPTION	**PUBLIC COMPANIES "LTD"**	**PRIVATE COMPANIES "PTY LTD"**	**PERSONAL LIABILITY COMPANIES " INC"**	**STATE OWNED "SOC LTD"**	**NPC**
Definition	This is a company that operates for profit. It is allowed to offer its shares to the public. All listed companies must be public companies but not all public companies are listed on a stock exchange.	A private company trades for profit. It may not offer its shares to the public and the transferability of its securities is restricted.	This is a private company operating for profit. Its MOI must state that it is a personal liability company. Directors and past directors are jointly and severally liable for the debts of the company.	A company that is owned by the South African government and listed in the PFMA, or owned by a municipality and is of a similar kind to a government owned company.	A not for profit business (previously known as a Section 21(b)company). It must have a public benefit as its object or an object relating to cultural, social, communal or group interest. Income and property may not be distributed to its members, directors, incorporators and officers.
Incorporation	It may be incorporated by one or more persons.	It may be incorporated by one or more persons.	It may be incorporated by one or more persons. Type of company used mainly by professional associations	It may be incorporated by one or more persons or an organ of state.	It may be incorporated by three or more persons.
Registration	Notice of Incorporation(CoR 14.1) Memorandum of Incorporation (MOI) (CoR 15.1 A-E)	Notice of Incorporation (CoR 14.1) Memorandum of Incorporation (MOI) (CoR 15.1 A-E)	Notice of Incorporation (CoR 14.1) Memorandum of Incorporation (MOI) (CoR 15.1 A-E)	Notice of Incorporation (CoR 14.1) Memorandum of Incorporation (MOI) (CoR 15.1 A-E)	Notice of Incorporation (CoR 14.1) Memorandum of Incorporation (MOI) (CoR 15.1 A-E)

SOURCE: Adv. Tina Rabilall - CIPC

Starting an architectural practice in South Africa involves complying with several legal requirements, including those set out in the Companies Act and Labour Act. Prospective practice owners must navigate these regulations to establish a legally sound business, secure office space, and ensure compliance with employment laws.

Check out the links here:

CLICK THIS LINK

USING CONTRACTS

The use of contracts to assist in better relations between parties.

Contracts usually cover instances which regulation and legislation do not cover explicitly. As will be discussed later in the document under Paper 2, contracts are seen as a form of serious agreements.

For Paper 1, The use of standardized contracts, such as those provided by PROCSA (Professional Consultants Services Agreement) and CAA (Client/Architect Agreement), is encouraged to manage relationships between architectural professionals and their clients in South Africa. These contracts are primarily used in the design stage help in setting clear terms and conditions, reducing conflicts and ensuring smooth project execution.

It is thus important to know the scope and the contents of these documents to effectively manage expectations and deliverables in the early design stages of projects.

Check out this short on Contracts:

CLICK THIS LINK

EXAMPLE QUESTIONS:

1. **What does the term "actively practice" refer to in the Act?**
   'actively practice' - means to practice on an ongoing basis in one of the categories contemplated in section 18, and includes a person qualified in the architectural profession who is employed by any sphere of government or an educational institution.

2. **What does the term "prescribe" refer to in the Act?**
   ''prescribe'' means prescribed by a rule made by the council under section 36, and ''prescribed'' has a corresponding meaning.

3. **Name eight (8) powers of the Council as per the Architectural Profession Act 44 of 2000 regarding fees and charges.**
   Any 2 of the below:
   The council may, with regard to fees and charges, which are payable to the council, determine—
   (a) application fees;
   (b) registration fees;
   (c) annual fees, or portion thereof, in respect of a part of a year;
   (d) the date on which any fee or charge is payable;
   (e) the fees, or portion thereof, payable in respect of any examination referred to in section 19; conducted by or on behalf of the council;
   (f) any charge payable for the purposes of the education fund referred to in section 15(5);
   (g) fees payable for a service referred to in section 14(c);
   (h) the fees payable for an appeal in terms of section 24(1); or
   (i) any other fee or charge it considers necessary.

4. **Define a 'Medium Complexity' building according to the Professional Fees Guideline:**
   "Medium complexity projects" means buildings or groups of buildings in a relatively uncomplicated grouping with a medium impact on its environs: These are structures with medium performance requirements. The structures are of average character and design or detail. The structures require non-complex structural and civil works and an average level of mechanical or electrical equipment as could normally be handled by design- supply specialist contractors.

5. **After how many days should one register an architectural practice in terms of Rule 5.1 of the Code of Conduct?**
   Registration of the architectural practice in terms of Rule 5.1 of the Code of Conduct should occur within 30 (thirty) days of the establishment.

6. **You have discovered a new Artificial Intelligence (AI) application which is capable of producing working drawings and completing council submission drawings. You would like to utilise it in your office to help reduce workload.**
   The latest insights from the mainstream is that Artificial Intelligence should be likened to an intern in the working environment. Taking this into account, would it be permissible to allow an AI 'intern' to:
   a) submit plans to council in its own name and
   b) draw plans in an office without supervision?

   No, it would not in both cases.

   In the case of a), only registered persons under the category of professional can submit plans in their own name. This according to the Code of Conduct, Rule 2, 2.3. Which states: a registered person shall

only undertake architectural work which is identified for the category of registration in which they are registered in terms of section 18 of the Act and in accordance with the registration categories in force.

And in the case of b), all candidates (or in this case an AI who is junior) require supervision under a registered professional. This is according to the Code of Conduct, Rule 2, 2.6. Which states that: a registered candidate must perform work under the direction, control and/or continual supervision of a registered professional entitled to perform such work and who must assume responsibility for any such work performed by the candidate.

7. **What are the advantages of using the PROCSA agreement?**

According to PROCSA's website:

- a consensus Agreement composed, accepted and recommended by all of the Constituents
- provides for the services and deliverables broadly required across the six stages of works
- drafted locally for local and international use
- the same terms and conditions and the same document format, are used for all disciplines for ease of understanding
- sets clear limits to responsibility and liability of all parties
- enables changes during what are typically long-term projects
- professional indemnity insurance is declared and defined
- allows for effective dispute resolution
- provides for an integrated Matrix of services across all the disciplines
- defines the role and functions of the Client/Development Manager for all the work stages including stage 0.

8. **When would one use the PROCSA agreement over the JBCC Principal Building Agreement?**

The choice between using the PROCSA (Professional Consultants Services Agreement) suite of agreements and the JBCC (Joint Building Contracts Committee) contracts depends on the nature of the services required and the role of the parties involved in a construction project.

When to Choose One Over the Other:

- Choose PROCSA when your project primarily involves professional advisory or management services without direct involvement in the actual construction tasks.
- Choose JBCC when your primary requirement is to manage the construction process itself, including handling issues like material procurement, labor management, and compliance with building standards.

9. **Name two (2) responsibilities of a client in terms of the Client–Professional/Client Architect Project Agreement?**

Any 2 of the below:

- Clearly and timeously provide the architectural professional with the requirements of the project, including the accommodation schedule, desired level of quality, and financial and time constraints.
- Provide the architectural professional with copies of the title deeds, diagrams, lease conditions, and details of all related constraints concerning the project.
- Appoint a land surveyor to provide the architectural professional with a survey drawing and any certificates related to that. The survey drawing will establish site boundaries, beacons, datum levels, and such other features as may be relevant.
- Provide the architectural professional with all available and pertinent data relating to existing building(s).
- Allow the architectural professional reasonable time within which to execute their services.

IDENTIFICATIONOFWORK(IDoW)GUIDELINE

Note the latest version of the Identification of work for the architectural profession, Board notice 27 of 2021 as published in the Staatskoerant, 30 April 2021 will be used as the reference document for this section of the guideline document.

SACAP IDENTIFICATION OF WORK (IDoW)

TIP: Double check that you are making use of the latest IDoW document:
Click this Link

NB: Note that this document does not cover all the information contained in the IDoW, it is therefore vital that you still review the original document.

PROCESS OF DETERMINING THE IDOW

The Council for the Built Environment (CBE) has in terms of Section 20 of the CBE Act determined the identification of work (IDoW) for the different categories of registered persons and identified the scope of work for every category of registered persons in the architectural profession.

In terms of Section 26 (2) of the Architectural Profession Act, SACAP may consult and submit recommendation to the CBE on the scope of work for every category of registered persons in the architectural profession.

After receiving the recommendations from SACAP, the CBE must first consult with any person, body or industry that may be affected by the IDoW.

The CBE must then consult with the Competition Commission, before identifying the scope of work for every category of registered persons in consultation with SACAP.

NB: IDoW is determined by The Council for the Built Environment (CBE) in consultation with SACAP and the Competition Commission

Once the IDoW is determined by the CBE, SACAP gazettes and publish a detailed IDoW.

The IDoW will come into effect 12 months after publication on the National Government Gazette.

EXAMPLE QUESTIONS:

1.1) Provide the name of the juristic person in South Africa that published a broad outline of the Identification of Work (IDoW) for every category of registered person within the architectural profession in 2021.

IDOW POLICY GOALS AND OBJECTIVES (SECTION 3 OF IDOW)

a) Comply with section 26 (1), (2) of the **Architectural Profession Act** read with Section 20 (1), (2) of the **CBE Act**.
b) **Protect the public** by identifying the type of architectural work that each registration category in the architectural profession can undertake.
c) **Protect the built environment**.
d) **Provide a policy** for the IDoW between categories of registration in the architectural profession.
e) Provide effective and efficient **mechanism for addressing and recognizing overlaps and duplication** between work identified by different built environment professions.
f) Ensure that where work is to be carried out by different categories of professional registration, there are clear and transparent **ways of determining the category of professional to carry out the work**.
g) Facilitate **the most economically, socially, and technically efficient** use of the built environment professions and their categories of registration with a view to attaining maximum benefit for the public; and
h) Ensure that the IDoW is **inclusive and promotes adequate competition** for the benefit both the consumers and registered persons.
i) Ensure a unified alignment for **determination of professional competence**.

EXAMPLE QUESTIONS:

12) In your own words, provide three (3) reasons for the "Identification of work for the Architectural Profession" policy (3 marks each – 9 marks total)

EXAMPLE QUESTIONS:

13) SACAP provides three options for professionals to gain the ability to conduct architectural work outside of their current registration category. Identify these THREE (3) options and describe each one in your own words (1 mark option, 3 marks for explanation – 12 marks total).

IDOW: HOW IS IDOW COMPLEXITIES DETERMINED?

The following factors are considered when determining what level of professional registration has the competencies and skills required to perform the relevant architectural work:

1) Educational Qualifications
2) Practical Experience
3) SACAP Professional Competencies
4) Project Complexity Factors
5) Complexity Ratings of Building Types

These factors are used to determine the work type for the appropriate level of category of registration as determined in the IDoW.

RISKINVOLVEDINWORKDONEBYOTHERCATEGORIESOFREGISTRATION

The IDoW demonstrates the risk an architectural professional is exposed to and their clients when they undertake architectural work beyond their education and training. At a general level the competencies of the different categories are based on education and training and can be broadly defined under protection of title.

NB: Refer to IDoW Schedule 3 for a breakdown of Building Complexity with professional competence that outlines the risk involved by other categories of registered professionals that are not educated and trained at the respective levels.

Note the four categories of registration as per the Architectural Profession Act. Note the four titles can only be used in practice by registered professionals who has had the education, training, skills, competencies, and experience needed to perform architectural work.

TIP: The Architectural Profession Act No. 44 of 2000 is available on the SACAP website and forms part of your prescribed study materials

EXAMPLE QUESTIONS:

14) Provide the four (4) professional categories and their titles as prescribed by the SACAP IDoW (8 marks total).

IDOW: DETERMININGFACTORS

1) IDOW – EDUCATIONALQUALIFICATION?

Note the different qualifications required as per the IDoW for each of the Professional Registration categories. The National Qualifications Framework (NQF) levels are used as a frame of reference for these educational qualifications.
Qualifications and NQF levels requirements for each of the 10 SACAP professional competencies are provided in the IDoW document.
NB: Ensure that you have a look at the original IDoW document – section 11.

EXAMPLE QUESTIONS:

15) Provide Four (4) work types that Professional Architectural Draughtsperson are allowed to do based on the IDoW (8 marks total).

2) IDOW – PRACTICALEXPERIENCE?

For each category of professional registration SACAP has a minimum requirement for practical experience (in office training) before you are allowed to register to write the PPE exams.

EXAMPLE QUESTIONS:

16) How many years of practical training and monthly training records is required from an Architectural Draughtsperson for them to register to write the SACAP Professional Practice Exam? (2 marks).

3) IDOW – ARCHITECTURAL PROFESSIONAL COMPETENCIES

The SACAP requisite **competencies** for all architectural professionals:

1) Architectural design
2) Environmental relationships
3) Construction technology
4) The structure of buildings
5) Contextual & urban relationships
6) Arc history, theory & precedent
7) Building services & related technologies
8) Contract documentation and administration
9) Computer applications
10) Office practice, legal aspects, and ethics

Note the IDoW applied a rating of A, B or C (A highest and C lowest) to the requisite competence to correlate to the complexity factors for each professional registration:

A = High Complexity
B = Medium Complexity
C = Low Complexity

4) IDOW – COMPLEXITY FACTORS

A registered architectural professional is responsible for, among others, the design, documentation and detailing of buildings or installations and holistic coordination between all the complex factors that form part of these projects. The architectural professional also sets out the parameters for all other built environment consultants that are involved in the project.

We as architectural professionals are therefore accountable for the project complexity factors as identified below.
Complexity Factors:

1) Utility
2) Structure
3) Building technologies
4) Building services
5) Urban context
6) Occupational Health and safety
7) Existing buildings

NB: Have a look at IDoW that gives a breakdown of each of these complexity factors base on the programme of a building and the number of users etc. (IDoW section 20)

EXAMPLE QUESTIONS:

17) In your own words explain to your client why the calculation is done based on the Medium and not Low complexity fee scale as per the following complexity factors Identification of work for the Architectural Profession - Board Notice 27 of 2021 (3 marks each – 9 marks total):
(a) Structure
(b) Urban context
(c) Building Services

See snippet from the IDoW showing the required **NQF level** (level of educational qualification) for Professional Architectural Technologists as well as a breakdown of the **Complexity Factors** according to the relevant **Professional Competences** with ratings (A-C) below:

Table 4: Professional competency and project complexity factors as determined for a Professional Architectural Technologist

Professional Registration Category	**NQF Level of the relevant professional qualification**	**Requisite rating (A, B or C) correlated to complexity factors according to the relevant professional competence**						
	(These are the qualifications according to the new HEQSF)	**Complexity factors**						
		1 - 6	**5**	**3**	**2**	**5**	**5**	**4**
		1. Architectural design	2. Environmental Relationships	3. Construction Technology	4. Construction Technology	5. Context and urban relationships	6. Architectural history, theory and precedent	7. Building services and related technologies
Architectural Technologist	Diploma NQF 8 Degree NQF 7	B	B	B	B	C	C	B

5) IDOW – COMPLEXITY RATINGS OF BUILDING TYPES

The IDoW provides a whole table with a complexity rating applied to various building types. An example would be Residential Student housing that is rated as High Complexity, where Single Dwelling Units has a Medium Complexity rating.

NB: Have a look at IDoW Schedule 1 for Complexity Ratings of Building Types.

It is important to note that the complexity rating serves two purposes, namely, to determine the level of professional registration required. The SACAP fee guidelines are also based on the complexity scale of the project, as more complex projects would justify higher fees, as the architectural professionals needs to put in more work, and usually takes on more risk.

TIP: Note this complexity rating will also be applied to the fee calculations

COMPLEXITY RATING OF BUILDING TYPES

LOW COMPLEXITY PROJECTS

Means simple buildings or groups of buildings in an uncomplicated grouping with low impact on its environment: These are structures with low performance requirements, of simple utilitarian character, design and detail and constructed utilizing standard low technology building methods. They require a minimum of mechanical and electrical services or equipment, and basic civil works infrastructure.

MEDIUM COMPLEXITY PROJECTS

Means buildings or groups of buildings in a relatively uncomplicated grouping with a medium impact on its environs: These are structures with medium performance requirements, of average character and design or detail, which require non-complex structural and civil works and an average level of mechanical or electrical equipment as could normally be handled by design- supply specialist contractors.

HIGH COMPLEXITY PROJECTS

Means a building or buildings in a large or complicated grouping with a significant impact on its environs: These are structures with high performance requirements and demanding a sophisticated level of design and detail content to respond to specialized requirements. Complex buildings will usually incorporate comparatively large or specialised mechanical, electrical and other specialist installations, or be of complex structural or civil design.

EXAMPLE QUESTIONS

18) In your own words, provide THREE (3) explanations of why various types of buildings are classified according to different levels of complexity (2 mark per explanation – 6 marks total).

EXAMPLE QUESTIONS:

19) Identify the level of complexity of the following types of buildings according to the SACAP Guideline Professional Fees / IDoW:
(a) Medical clinic
(b) Single dwelling unit
(c) Nursery school

PROFESSIONAL FEES GUIDELINE

Note the latest version of the Guideline for Professional Fees in terms of Section 34 (2) of the Architectural Profession Act, 2000 Act 44 of 2000 ("the Act"), as published in the Staatskoerant, 15 July 2022 will be used as the reference document for this section of the guideline document.

NB: All professional fees should be agreed in writing!

SACAP PROFESSIONAL FEES GUIDELINE

TIP: Double check that you are making use of the latest guideline for professional fees document:
Click this Link

NB: Note that this document does not cover all the information contained in the Professional Fee guideline, it is therefore vital that you still review the original document.

The Guideline for Professional Fees describe two methods of fee calculation namely:
- Project cost-based fees.
- Time based fees

NB: both project cost based and time-based fees make use of the definition of complexity of the project type as derived from the SACAP Identification of Work (IDoW).

HOW WAS THE GUIDELINE FOR PROFESSIONAL FEES DETERMINED?

The guideline for professional fees is based on cost of works as per fee survey undertaken by SACAP and Voluntary Associations in May 2021.

NB: the guideline for professional fees takes into consideration:

- Reasonable rate of return on investment
- Intellectual capital
- Effort
- Risk

NOTE THE GUIDELINE FOR PROFESSIONAL FEES IS ONLY A GUIDELINE!

The guideline is based on full services by a hypothetical average size architectural practice, practicing in a responsible and sustainable manner. This means it is not a one size fits all! Each project is different so the fees should be considered for the specific project.

COMPLEXITY RATING OF BUILDING TYPES

LOW COMPLEXITY PROJECTS

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MEDIUM COMPLEXITY PROJECTS

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HIGH COMPLEXITY PROJECTS

Means a building or buildings in a large or complicated grouping with a significant impact on its environs: These are structures with high performance requirements and demanding a sophisticated level of design and detail content to respond to specialized requirements. Complex buildings will usually incorporate comparatively large or specialised mechanical, electrical, and other specialist installations, or be of complex structural or civil design.

METHOD 1: PROJECT COST BASED FEES

The project cost-based fee in Table 1 – 3 is based on the full scope of standard services provided.

WHEN TO USE THE PROJECT COST BASED FEE?

Project cost-based fee is the standard basis for determining professional fees and represents the accepted basis by the Built Environment Professions for renumeration of professional services.

TIP: Even if you make use of alternative fee calculations in your office it is still important to be able to calculate the SACAP cost-based fee for the following reasons:

1) To use as a baseline to compare your fees against (to show the client what discount you are offering)
2) To be aware of the proposed guideline fee for a similar project. If you are charging a lot less you should ask yourself if you can offer the full services at a reduced fee, or if you will have to cut the services you offer to align with your discounted fee.
3) Your PI insurance can refuse to payout a claim if your fees were set below the standard guideline fees.

EXAMPLE QUESTIONS:

1.1) Describe THREE (3) circumstances in which a claim against an architectural professional's Professional Indemnity insurance may be refused (3 marks each).

PROJECT COST-BASED FEE IS APPROPRIATE WHEN:

- There is a well-defined scope of services for the architectural professional.
- The client can give an indication of their proposed budget.

IMPORTANT TO NOTE WHEN MAKING USE OF THE PROJECT COST-BASED FEE METHOD:

- Your final fee will be updated according to the final cost of works.
- It is important to explain the concept of the final fee aligning with the final cost of the project to the client upfront.
- The IDoW scales of complexity informs the % and primary fee that is used in the fee calculations. See the table for Low, Medium, and High complexity buildings in the latest IDoW document.
- If there are major changes to a design, sections of the project could potentially be charged at a time-based fee.
- Project-cost based fees is for standard services only. Special services or additional services should be charged in addition to the standard services.

Table 1: Low Complexity

LOW COMPLEXITY					
Cost bracket	Value of works		Primary Fee	Plus (+), secondary fee	
	From	To		Add%	On balance over
	A	B	C	D	E
1.	R1,00	R200 000,00	R10 230,18	15,81%	R1,00
2.	R200 001,00	R650 000,00	R41 846,10	15,20%	R200 001,00
3.	R650 001,00	R2 000 000,00	R110 217,17	11,21%	R650 001,00
4.	R2 000 001,00	R4 000 000,00	R261 510,57	9,77%	R2 000 001,00
5.	R4 000 001,00	R6 500 000,00	R456 909,51	9,52%	R4 000 001,00
6.	R6 500 001,00	R13 000 000,00	R694 755,35	8,26%	R6 500 001,00
7.	R13 000 001,00	R40 000 000,00	R1 231 500,08	7,99%	R13 000 001,00
8.	R40 000 001,00	R130 000 000,00	R3 387 334,84	7,98%	R40 000 001,00
9.	R130 000 001,00	R260 000 000,00	R10 568 956,99	7,47%	R130 000 001,00
10.	R260 000 001,00	R520 000 000,00	R20 272 787,12	7,29%	R260 000 001,00
11.	R520 000 001,00	R1 040 000 000,00	R39 237 652,49	7,11%	R520 000 001,00
12.	R1 040 000 001,00	-	R76 203 068,03	6,57%	R1 040 000 001,00

Table 2: Medium Complexity

MEDIUM COMPLEXITY					
Cost bracket	Value of works		Primary Fee	Plus (+), secondary fee	
	From	To		Add%	On balance over
	A	B	C	D	E
1.	R1,00	R200 000,00	R12 240,00	18,91%	R1,00
2.	R200 001,00	R650 000,00	R50 067,17	18,18%	R200 001,00
3.	R650 001,00	R2 000 000,00	R131 870,39	13,41%	R650 001,00
4.	R2 000 001,00	R4 000 000,00	R312 886,84	11,69%	R2 000 001,00
5.	R4 000 001,00	R6 500 000,00	R546 673,78	11,38%	R4 000 001,00
6.	R6 500 001,00	R13 000 000,00	R831 246,74	9,88%	R6 500 001,00
7.	R13 000 001,00	R40 000 000,00	R1 473 440,14	9,56%	R13 000 001,00
8.	R40 000 001,00	R130 000 000,00	R4 052 809,42	9,55%	R40 000 001,00
9.	R130 000 001,00	R260 000 000,00	R12 645 330,47	8,94%	R130 000 001,00
10.	R260 000 001,00	R520 000 000,00	R24 255 571,57	8,73%	R260 000 001,00
11.	R520 000 001,00	R1 040 000 000,00	R46 946 267,55	8,51%	R520 000 001,00
12.	R1 040 000 001,00	-	R91 173 895,32	7,86%	R1 040 000 001,00

Table 3: High Complexity

HIGH COMPLEXITY					
Cost bracket	Value of works		Primary Fee	Plus (+), secondary fee	
	From	To		Add%	On balance over
	A	B	C	D	E
1.	R1,00	R200 000,00	R14 249,82	22,02%	R1,00
2.	R200 001,00	R650 000,00	R58 288,24	21,17%	R200 001,00
3.	R650 001,00	R2 000 000,00	R153 523,63	15,61%	R650 001,00
4.	R2 000 001,00	R4 000 000,00	R364 263,10	13,61%	R2 000 001,00
5.	R4 000 001,00	R6 500 000,00	R636 438,07	13,25%	R4 000 001,00
6.	R6 500 001,00	R13 000 000,00	R967 738,07	11,51%	R6 500 001,00
7.	R13 000 001,00	R40 000 000,00	R1 715 380,21	11,12%	R13 000 001,00
8.	R40 000 001,00	R130 000 000,00	R4 718 284,00	11,12%	R40 000 001,00
9.	R130 000 001,00	R260 000 000,00	R14 721 703,95	10,39%	R130 000 001,00
10.	R260 000 001,00	R520 000 000,00	R28 238 356,02	10,16%	R260 000 001,00
11.	R520 000 001,00	R1 040 000 000,00	R54 654 882,62	9,90%	R520 000 001,00
12.	R1 040 000 001,00	-	R106 144 722,59	9,16%	R1 040 000 001,00

Table 4: Fees per Stage

Stages	Work stages 1 to 6	Proportion of Fee	Cumulative total
1	Inception	2%	2%
2	Concept & Viability (Concept Design)	15%	17%
3	Design Development	20%	37%
4.1	Documentation and Procurement (Local authority)	10%	47%
4.2	Procurement and Procurement (Tender)	20%	67%
5	Construction	30%	97%
6	Close-out	3%	100%

TIP: It is vital to understand the 6 standard service work stages. have a look at the fee guideline document point 11.

METHOD OF CALCULATION:

- **Primary Fee (C)** for the applicable Cost Bracket of Value of Works
- **Secondary Fee (D)** for the applicable Cost Bracket of Value of Works
- Calculated as (**Applicable Value of Works** minus **Column E**) x **% in terms of Column D**

[1] STANDARD SERVICES (STAGES 1 – 6)

SCENARIO 1 – LOW COMPLEXITY

1.1) You have been approached by Mrs Appelgrein to quote on the design of a new barn on her farm. You have been approached for stages 1 – 6.

The total construction budget for the barn is R500 000.00 excluding VAT and professional services. In this scenario only work out the total fee inclusive of VAT and the VAT, not the fee allocation per stage.

SCENARIO 1.1	
Step 1:	Determine the building complexity Answer: Barn = Low Complexity
Step 2:	Identify Cost Bracket, Primary fee and % from the relevant complexity table (Table 1: Low Complexity in this case)
Step 3:	Identify cost bracket based on the construction cost: Cost Bracket 2.
Step 4:	Determine Primary Fee (Column C): R41 846.10
Step 5:	Calculate Secondary Fee: Secondary Fee = (Value of Works – Column E) x % in terms of Column D Secondary Fee = (R500 000.00 – R200 001.00) x 15.20% Secondary Fee = R45 599.85

SCENARIO 1.1	
Step 6:	Calculate Total fee = Primary Fee + Secondary Fee Total fee = R41 846.10 + R45 599.85 Total fee = R87 445.95
Step 7:	Calculate total fee including VAT (note current South African VAT is 15%): Total fee including VAT = R87 445.95 x 1.15 Total fee including VAT = R100 562.84
Step 8:	Calculate VAT: VAT = Total fee including VAT x 0.15 VAT = R13 116.89

TIP: VAT – Note that the current vat in SA is 15% if this changes the calculation will also change (E.G., 14% = x 1.14)

Method 1 to calculate VAT inclusive amount: (Total fee including VAT) = (Total fee excluding VAT) x 1.15

Method 2 to calculate VAT inclusive amount: (Total fee including VAT) = ((Total fee excluding VAT) x 0.15) + (Total Fee excluding VAT)

SCENARIO 2 – MEDIUM COMPLEXITY

2.1) You have been approached by Mr Berns to quote on the design his new house. The construction budget is R3 000 000.00 excluding VAT and professional fees. You have been approached for stages 1 – 6.

2.2) Show the total fee and VAT for each of the standard six stages. (Split stages 4.1 and 4.2)

Note this is for standard full architectural services.

SCENARIO 2.1	
Step 1:	Determine the building complexity Answer: Residential Single Dwelling Unit = Medium Complexity
Step 2:	Identify Cost Bracket, Primary fee and % from the relevant complexity table (Table 2: Medium Complexity in this case)
Step 3:	Identify cost bracket based on the construction cost: Cost Bracket 4.
Step 4:	Determine Primary Fee (Column C): R312 886.84
Step 5:	Calculate Secondary Fee: Secondary Fee = (Value of Works – Column E) x % in terms of Column D Secondary Fee = (R3 000 000.00 – R2 000 001.00) x 11.69% Secondary Fee = R116 899.88
Step 6:	Calculate Total fee = Primary Fee + Secondary Fee Total fee = R312 886.84 + R116 899.88 Total fee = R429 786.72

SCENARIO 2.1	
Step 7:	Calculate total fee including VAT (note current South African VAT is 15%): Total fee including VAT = R429 786.72 x 1.15 Total fee including VAT = R494 254.73
Step 8:	Calculate VAT: VAT = Total fee including VAT x 0.15 VAT = R64 468.01

SCENARIO 2.2	
Step 9:	Calculate the fees for each of the six stages (Note stages 4.1 and 4.2): Stage 1: R429 786.72 x 2% = R8 595.73 Stage 2: R429 786.72 x 15% = R64 468.01 Stage 3: R429 786.72 x 20% = R85 957.34 Stage 4.1: R429 786.72 x 10% = R42 978.67 Stage 4.2: R429 786.72 x 20% = R85 957.34 Stage 5: R429 786.72 x 30% = R128 936.02 Stage 6: R429 786.72 x 3% = R12 893.60
Step 10:	Calculate VAT for each of the six stages (Note stages 4.1 and 4.2): Stage 1: R8 595.73 x 1.15 = R9 885.09 Stage 2: R64 468.01 x 1.15 = R74 138.21 Stage 3: R85 957.34 x 1.15 = R98 850.95 Stage 4.1: R42 978.67 x 1.15 = R49 425.47 Stage 4.2: R85 957.34 x 1.15 = R98 850.95 Stage 5: R128 936.02 x 1.15 = R148 276.42 Stage 6: R12 893.60 x 1.15 = R14 827.64

TIP: Percentage

To calculate the percentage (%) if you are not using a scientific calculator:

e.g. stage 1 that is 2% of total fee

(stage 1 fee) = (Total fee ÷ 100) x 2

SCENARIO 3 – HIGH COMPLEXITY

3.1) You have been approached by Mr Clarke to quote on the design of a new Health Centre for full professional fees. You have been approached for stages 1 – 6.

The construction budget is R345 000 000.00 including VAT but excluding professional fees.

3.2) Show the total fee and VAT for each of the standard six stages. (Show the fees for stages 4.1 and 4.2)

Note this is for standard full architectural services.

TIP: The SACAP fee guidelines are based on the project/construction cost excluding VAT

SCENARIO 3.1	
Step 1:	Determine what the construction cost would be excluding VAT: Construction cost excluding VAT = R345 000 000.00 ÷ 1.15 Construction cost excluding VAT = R300 000 000.00
Step 2:	Determine the building complexity Answer: Health Care = High Complexity
Step 3:	Identify Cost Bracket, Primary fee and % from the relevant complexity table: (Table 2: High Complexity in this case)
Step 4:	Identify cost bracket based on the construction cost: Cost Bracket 10.
Step 5:	Determine Primary Fee (Column C): R28 238 356.02
Step 6:	Calculate Secondary Fee: Secondary Fee = (Value of Works – Column E) x % in terms of Column D Secondary Fee = (R300 000 000.00 – R260 000 001.00) x 10.16% Secondary Fee = R4 063 999.90
Step 7:	Calculate Total fee = Primary Fee + Secondary Fee Total fee = R28 238 356.02 + R4 063 999.90 Total fee = R32 302 355.92
Step 8:	Calculate total fee including VAT (note current South African VAT is 15%): Total fee including VAT = R32 302 355.92 x 1.15 Total fee including VAT = R37 147 709.31
Step 9:	Calculate VAT: VAT = Total fee including VAT x 0.15 VAT = R4 845 353.39

SCENARIO 3.2	
Step 10:	Calculate the fees for each of the six stages (Note stages 4.1 and 4.2): Stage 1: R32 302 355.92 x 2% = R646 047.12 Stage 2: R32 302 355.92 x 15% = R4 845 353.39 Stage 3: R32 302 355.92 x 20% = R6 460 471.18 Stage 4.1: R32 302 355.92 x 10% = R3 230 235.59 Stage 4.2: R32 302 355.92 x 20% = R6 460 471.18 Stage 5: R32 302 355.92 x 30% = R9 690 709.78 Stage 6: R32 302 355.92 x 3% = R969 070.68
Step 11:	Calculate VAT for each of the six stages (Note stages 4.1 and 4.2): Stage 1: R646 047.12 x 1.15 = R742 954.19 Stage 2: R4 845 353.39 x 1.15 = R5 572 156.40 Stage 3: R6 460 471.18 x 1.15 = R7 429 541.86 Stage 4.1: R3 230 235.59 x 1.15 = R3 714 770.93 Stage 4.2: R6 460 471.18 x 1.15 = R7 429 541.86 Stage 5: R9 690 709.78 x 1.15 = R11 144 312.79 Stage 6: R969 070.68 x 1.15 = R1 114 431.28

[2] PARTIAL SERVICES

The Act provides for the appointment of various architectural professionals for fulfilling each or any stage of a standard service or parts thereof.

Partial and additional services may be agreed on, and the options most regularly utilised are the following:

1) Appointment as an architectural professional and principal consultant (not as principal agent)
2) Appointment as a design architectural professional (design only)
3) Appointment as architectural professional of record (design by others, can be principal agent)
4) Appointment as principal agent only
5) Appointment to perform additional services.
6) Any combination of the above appointment may also be agreed.

TIP: Note for partial services the percentage of the fee for each complete work stage to be performed should be calculated.

Where the work stage is only partially completed, the percentage of the fee shall be agreed between the parties.

SCENARIO 4 – PARTIAL SERVICES

4.1) You have been approached by Mr Davidson. He is currently planning a new Primary School and has approached you to complete the concept design so that he can present it to the school board.

The current proposed construction budget is R25 000 000 excluding VAT and excluding professional fees.

4.2) Show the total fee and VAT for each of the relevant stages.

4.3) Show your total fee including VAT partial service as requested by Mr Davidson.

SCENARIO 4.1	
Step 1:	Determine the building complexity Answer: Educational, Primary School = Medium Complexity
Step 2:	Identify Cost Bracket, Primary fee and % from the relevant complexity table: (Table 2: Medium Complexity in this case)
Step 3:	Identify cost bracket based on the construction cost: Cost Bracket 7.
Step 4:	Determine Primary Fee (Column C): R1 473 440.14
Step 5:	Calculate Secondary Fee: Secondary Fee = (Value of Works – Column E) x % in terms of Column D Secondary Fee = (R25 000 000 – R13 000 001) x 9.56% Secondary Fee = R1 147 199.90
Step 6:	Calculate Total fee = Primary Fee + Secondary Fee Total fee = R1 473 440.14 + R1 147 199.90 Total fee = R2 620 640.04
Stage 7:	Determine which stages is included in the client brief: The client requested services up to Concept design Relevant stages: Stage 1 + Stage 2

SCENARIO 4.2	
Step 8:	Calculate the fees for the relevant stages: Stage 1: R2 620 640.04 x 2% = R52 412.80 Stage 2: R2 620 640.04 x 15% = R393 096.01
Step 9:	Calculate VAT for each of the relevant stages: Stage 1: R52 412.80 x 1.15 = R60 274.72 Stage 2: R393 096.01 x 1.15 = R452 060.41

SCENARIO 4.3	
Step 10:	Final Fee excluding VAT R512 335.13 VAT = R76 850.27 Final Fee including VAT = R589 185.40

[3] & [4] REDUCED SERVICE

[3] Where the architectural professional is not the principal agent, a reduction of the fee for the work not exceeding 10% of the fee for stages 5 & 6 may be considered.

[4] Where the architectural professional is not the principal consultant, a reduction of the fee for the work not exceeding 10% of the fee for stages 1 to 4 may be considered.

SCENARIO 5 – REDUCED SERVICES

5.1) You have been approached by Mrs Erickson to design a Concert Hall in Polokwane. He has already appointed PRN incorporated as Principal Agents but has asked for a quote for architectural and principal consultant services.

The current proposed construction budget is R350 000 000 excluding VAT and excluding professional fees.

5.2) Show the total fee and VAT for each of the relevant stages.

5.3) Show your total fee including VAT partial service as requested by Mr Ericson.

NOT Principal Agent (PA): -10% for stages 5 & 6

SCENARIO 5.1	
Step 1:	Determine the building complexity Answer: Concert Hall: High Complexity
Step 2:	Identify Cost Bracket, Primary fee and % from the relevant complexity table: (Table 2: High Complexity in this case)
Step 3:	Identify cost bracket based on the construction cost: Cost Bracket 10.
Step 4:	Determine Primary Fee (Column C): R28 238 356.02

SCENARIO 5.1	
Step 5:	Calculate Secondary Fee: Secondary Fee = (Value of Works – Column E) x % in terms of Column D Secondary Fee = (R350 000 000 – R260 000 001) x 10.16% Secondary Fee = R9 143 999.90
Step 6:	Calculate Total fee = Primary Fee + Secondary Fee Total fee = R28 238 356.02 + R9 143 999.90 Total fee = R37 382 355.92

SCENARIO 5.2	
Step 8:	Calculate the fees for the relevant stages & apply discount to relevant stages: Stage 1: R37 382 355.92 x 2% = R747 647.12 Stage 2: R37 382 355.92 x 15% = R5 607 353.39 Stage 3: R37 382 355.92 x 20% = R7 476 471.18 Stage 4.1: R37 382 355.92 x 10% = R3 738 235.59 Stage 4.2: R37 382 355.92 x 20% = R7 476 471.18 **NB:** Stage 5: R37 382 355.92 x 30% = R11 214 706.78 ? Not PA - 10% = R10 093 236.10 **NB:** Stage 6: R37 382 355.92 x 3% = R1 121 470.68 ? Not PA – 10% = R1 009 323.61
Step 9:	Calculate VAT for each of the relevant stages: Stage 1: R747 647.12 x 1.15 = R859 794.19 Stage 2: R5 607 353.39 x 1.15 = R6 448 456.40 Stage 3: R7 476 471.18 x 1.15 = R8 597 941.86 Stage 4.1: R3 738 235.59 x 1.15 = R4 298 970.93 Stage 4.2: R7 476 471.18 x 1.15 = R8 597 941.86 Reduced (-10%) Stage 5: R10 093 236.10 x 1.15 = R11 607 221.51 Reduced (-10%) Stage 6: R1 009 323.61 x 1.15 = R1 160 722.15
Step 10:	Final Fee excluding VAT = R36 148 738.17 VAT = R5 422 310.73 Final Fee including VAT = R41 571 048.90

SCENARIO 6 – REDUCED SERVICES

6.1) After you send through your fee proposal, Mrs Ericson asks you to also remove the fees for principal consultant services as the engineer he has appointed on the project will be acting as the principal consultant.

6.2) Show the fee breakdown for stages 1 to 6 with the relevant fee reductions.

6.3) Show the VAT for stages 1 to 6.

6.4) Show your updated professional fees, including VAT, if you were not to be appointed as principal agent and principal consultant.

NOT Principal Consultant (PC): -10% for stages 1 to 4

SCENARIO 6.1	
Step 1 – Step 6	See scenario 5

SCENARIO 6.2	
Step 8:	Calculate the fees for the relevant stages & apply discount to relevant stages: **NB:** Stage 1: R37 382 355.92 x 2% = R747 647.12 Not PC - 10% = R672 882.41 **NB:** Stage 2: R37 382 355.92 x 15% = R5 607 353.39 Not PC - 10% = R5 046 618.05 **NB:** Stage 3: R37 382 355.92 x 20% = R7 476 471.18 Not PC - 10% = R6 728 824.07 **NB:** Stage 4.1: R37 382 355.92 x 10% = R3 738 235.59 Not PC - 10% = R3 364 412.03 **NB:** Stage 4.2: R37 382 355.92 x 20% = R7 476 471.18 Not PC - 10% = R6 728 824.07 **NB:** Stage 5: R37 382 355.92 x 30% = R11 214 706.78 Not PA - 10% = R10 093 236.07 **NB:** Stage 6: R37 382 355.92 x 3% = R1 121 470.68 Not PA – 10% = R1 009 323.61

SCENARIO 6.3	
Step 9:	Calculate VAT for each of the relevant stages: Reduced (-10%) Stage 1: R672 882.41 x 1.15 = R773 814.77 Reduced (-10%) Stage 2: R5 046 618.05 x 1.15 = R5 803 610.76 Reduced (-10%) Stage 3: R6 728 824.07 x 1.15 = R7 738 147.68 Reduced (-10%) Stage 4.1: R3 364 412.03 x 1.15 = R3 869 073.84 Reduced (-10%) Stage 4.2: R6 728 824.07 x 1.15 = R7 738 147.68 Reduced (-10%) Stage 5: R10 093 236.10 x 1.15 = R11 607 221.51 Reduced (-10%) Stage 6: R1 009 323.61 x 1.15 = R1 160 772.15

SCENARIO 6.4	
Step 10:	Final Fee excluding VAT: R33 644 120.33 VAT: R5 046 618.05 Final Fee including VAT: R38 680 738.38

[5] & [6] ADDITIONS AND ALTERATIONS

[5] GUIDELINE FOR PROFESSIONAL FEES FOR ALTERATIONS:

The fee for work that includes alterations is based on the total project cost and increased for that portion of the work compromising or affected by alterations by 30% (130% of the fee).

[6] GUIDELINE FOR PROFESSIONAL FEES FOR ADDITIONS:

The fee for work associated with an addition to an existing building may not attract additional fees, except for the portion of work associated with the parts of the addition interfacing with the existing building. The fee for this latter work is increased by 30% (130% of the fee).

TIP: the 30% fee increase will only apply to the addition/alteration, all new work will be charges at the standard fees

SCENARIO 7 – ADDITION & ALTERATION

7.1) You have been approached by Mr Fernandez he owns a 150-bedroom hotel just outside the Kruger National Park and plans to add a further 25 bedrooms with en-suite bathrooms toe the existing hotel. His budget is R25 000 000 for this addition.

7.2) Prepare a fee proposal indicating the fee breakdown for the standard six stages indicating the VAT exclusive fee per stage as well as the VAT inclusive fee per stage.

7.3) Provide the total fee inclusive of VAT as well as the VAT amount for this addition.

TIP: see additional explanations for calculations above, simplified for the rest of the scenarios

SCENARIO 7.1	
Step 1:	Complexity: Residential, Hotel: High Complexity
Step 2:	Cost bracket: 7
Step 3:	Primary Fee = R1 715 380.21
Step 4:	Secondary Fee = (R25 000 000 – R13 000 001) x 11.12% = R1 334 339.89
Step 5:	Total fee = R1 715 380.21 + R1 334 339.89 = R3 049 780.10
Step 6:	For additions add 30% to your professional fees: Additions +30% = R3 964 714.13
Step 7:	VAT = R594 707.12 Total (incl. VAT) = R4 559 421.25

SCENARIO 7.2	
Step 8:	Calculate the fees for the relevant stages & apply discount to relevant stages:
Stage 1:	R3 964 714.13 x 2% = R79 294,28
Stage 2:	R3 964 714.13 x 15% = R594 707,12
Stage 3:	R3 964 714.13 x 20% = R792 942,83
Stage 4.1:	R3 964 714.13 x 10% = R396 471,41
Stage 4.2:	R3 964 714.13 x 20% = R792 942,83
Stage 5:	R3 964 714.13 x 30% = R1 189 414,24
Stage 6:	R3 964 714.13 x 3% = R118 941,42
Step 9:	Show the relevant stages including VAT
Stage 1:	R79 294,28 + 15% = R91 188,42
Stage 2:	R594 707,12 + 15% = R683 913,19
Stage 3:	R792 942,83 + 15% = R911 884,25
Stage 4.1:	R396 471,41 + 15% = R455 942,12
Stage 4.2:	R792 942,83 + 15% = R911 884,25
Stage 5:	R1 189 414,24 + 15% = R1 367 826,37
Stage 6:	R118 941,42 + 15% = R136 782,64

SCENARIO 8 – ADDITION & ALTERATION

You have been approached by Mr Goldberg to quote on work he plans to do at his house.
His brief includes the following:

a) He plans to add a loose standing garage (budget R63 000)
b) He also plans to add a new bedroom, bathroom, and study to his current house (budget R180 000)
c) He is planning to alter the current covered patio to extend the lounge area (budget R57 000)

SCENARIO 8.1	
Step 1:	Complexity: Residential, Single Dwelling Unit: Medium Complexity
Step 2:	Calculate total Construction cost: Construction cost = R70 000 + R180 000 + R50 000 = R300 000
Step 3:	Calculate the % of the fee that must be increased for alterations & additions New work (Garage) = (100 ÷ R300 000) x R63 000 = 21% Addition percentage = (Construction cost ÷ 100) x Addition budget Add (Bed+Bath+Study) = (100 ÷ R300 000) x R180 000 = 60% Alteration percentage = (Construction cost ÷ 100) x Alteration budget Alterations (Patio) = (100 ÷ R300 000) x R57 000 = 19%
Step 3:	Cost bracket: 2
Step 4:	Primary Fee = R50 067.17
Step 5:	Secondary Fee = (R300 000 – R200 001) x 18.18% = R68 246.99
Step 6:	Total fee = R50 067.17 + R18 179.82 = R68 246.99
Step 7:	For additions add 30% to the relevant portion of your professional fees: Addition fees = R68 246.99 x 60% = R40 948.19 Add 30% to Add fees = R53 232.65 Alteration fees = R68 246.99 x 19% = R12966.93 Add 30% to Add fees = R16 857.01 New built fees = R68 246.99 x 21% = R14 331.87
Step 8:	Total fees including addition & alteration 30% increase Total fees = R53 232.65 + R16 857.01 + R14 331.87 = R84 421.52
Step 9:	VAT = R12 663.23 Total (incl. VAT) = R97 084.75

[7] RESTORATIONS

GUIDELINE FOR PROFESSIONAL FEES FOR RESTORATIONS:

The fee for work that includes restoration of buildings subject to heritage legislation is based on the total project cost and increased for the portion of the work comprising or affected by heritage considerations by 40% (140% of the fee).

TIP: the 40% fee increase will only apply to the section affected by heritage considerations; all new work will be charges at the standard fees

SCENARIO 9 –RESTORATION

9.1) You have been approached by Mrs Harris to provide a fee proposal for the restoration of a religious building located in Mthatha. The proposed budget for the restoration is R450 000 000.

SCENARIO 9.1	
Step 1:	Complexity: Community, Religious: High Complexity
Step 2:	Cost bracket: 10
Step 3:	Primary Fee = R28 238 356.02
Step 4:	Secondary Fee = (R450 000 000 – R260 000 001) x 10.16% = R19 303 999.90
Step 5:	Total fee = R28 238 356.02 + R19 303 999.90 = R47 542 355.92
Step 6:	For renovations add 40% to your professional fees: Renovations +40% = R66 559 298.29
Step 7:	VAT = R9 983 894.74 Total (incl. VAT) = R76 543 193.03

[8] REPEAT BUILDINGS

GUIDELINE FOR PROFESSIONAL FEES FOR A PROJECT THAT INCLUDES REPEAT BUILDINGS:

Requirements for fees to be adjusted on a project with repeat buildings:

1) Repeated buildings erected under a single building contract.
2) Repeated buildings for a single client
3) The architectural professional's services should be retained for a full service.
4) The repeated building should be built on a single site or a series of adjoining sites or closely related sites.
5) The buildings should be either entirely apart from each other or linked by screen walls, common walls, or similar means.
6) Repetitions of one or more prototype designs for units, blocks, or elements
7) Built from the repeated use of one or more sets of drawings and related documentation with nominal or no modification for each re-use.

Disqualification criteria:

1) The repeated elements do not apply to similar floors or divisions in a multi storey building.
1) Note repeat buildings are constructed under separate building contracts, the architectural professional is entitled to be paid the full fees on the original/prototype design. Where agreed, and where the drawings and documents are similar so that it can be re-used for the subsequent contracts, the architectural professional can consider reduced fees.

HOW IS THE FEE CALCULATED IN THE CASE OF REPEATED BUILDINGS?

The standard full fee will apply to the prototype or first building/s. Where this prototype is repeated, the fee reduction will apply.

For the repeated buildings the following fee reduction applies:

- Stages 1 to 4: Reduce by 35%
- Stages 5 to 6: No fee reduction. Full guideline professional fees for these stages shall apply

SCENARIO 10 – REPEATED BUILDINGS

10.1) You have been approached by Developers, Buildings-R-Us to design 50 town houses in Hartebeespoort dam. They would like to appoint you for the full architectural services.

These town houses will all be two-bedroom, two-bathroom units with a kitchen, lounge, and dinging area. Each unit will have one covered and one uncovered parking bay. These town houses will all be built on a brown field site with shared services that has already been installed.

The construction budget for each of these town houses is R750 000.00.

SCENARIO 10.1	
	Firstly, calculate the fees for the prototype building
Step 1:	Complexity: Residential Single Dwelling unit: Medium Complexity
Step 2:	Cost bracket: 3
Step 3:	Primary Fee = R131 870.39
Step 4:	Secondary Fee = (R750 000 – R650 001) x 13.41% = R13 409.87
Step 5:	Total fee = R131 870.39 + R13 409.87 = R145 280.26
Step 7:	VAT = R21 792.04 Total (incl. VAT) = R167 072.29 for the prototype building (full fees)
Step 8:	Calculate the fees for the prototype building:
Stage 1:	R167 972.29 x 2% = R3 341.45
Stage 2:	R167 972.29 x 15% = R25 060.84
Stage 3:	R167 972.29 x 20% = R33 414.49
Stage 4.1:	R167 972.29 x 10% = R16 707.23
Stage 4.2:	R167 972.29 x 20% = R33 414.49
Stage 5:	R167 972.29 x 30% = R50 121.69
Stage 6:	R167 972.29 x 3% = R5 012.17

SCENARIO 10.1	
Step 9:	Show the relevant stages including VAT
Stage 1:	R2 905.61 + 15% = R3 341,45
Stage 2:	R21 792.04 + 15% = R25 060,84
Stage 3:	R29 056.05 + 15% = R33 414,46
Stage 4.1:	R14 528.03 + 15% = R16 707,23
Stage 4.2:	R29 056.05 + 15% = R33 414,46
Stage 5:	R43 584.08 + 15% = R50 121,69
Stage 6:	R4 358.41 + 15% = R5 012,17
	Secondly calculate the reduced fee for the remaining 49 repeat buildings:
Step 10:	Calculate the fees for the repeat building: Use fees calculated per stage above and apply the 35% discount to the relevant stages
Stage 1:	R2 905.61 - 35% = R1 888,64
Stage 2:	R21 792.04 - 35% = R14 164,82
Stage 3:	R29 056.05 - 35% = R18 886,43
Stage 4.1:	R14 528.03 - 35% = R9 443,22
Stage 4.2:	R29 056.05 - 35% = R18 886,43
Stage 5:	= R43 584.08
Stage 6:	= R4 358.41
Step 11:	Show the relevant stages including VAT
Stage 1:	R1 888,64 + 15% = R2 171,94
Stage 2:	R14 164,82 + 15% = R16 289,55
Stage 3:	R18 886,43 + 15% = R21 719,40
Stage 4.1:	R9 443,22 + 15% = R10 859,70
Stage 4.2:	R18 886,43 + 15% = R21 719,40
Stage 5:	R43 584.08 + 15% = R50 121,69
Stage 6:	R4 358.41 + 15% = R5 012,17
Step 12:	Calculate the total fee per repeat building Total fees repeat building = Sum of stage 1 to 6 fees with discounts applied = R1 888.61 + R14 164.82 + R18 886.43 + R9 443.22 + R18 886.43 + R43 584.08 + R4 358.41 = R111 212.04 VAT = R16 681.81 Total fee per repeat (incl.) = R127 893.84
Step 13:	To calculate the total fee, add the prototype fee to the fee for the repeat buildings Total fee = Prototype Fees + (49 x Repeat Fees) = R145 280.28 + (49 x R111 212.04) = R5 594 670.01
Step 14:	VAT = R839 200.50 Total (incl. VAT) = R6 433 870.52 (for all 50 buildings)

[9] TAKING OVER FROM ANOTHER PROFESSIONAL

The stage of completions shall be agreed upon, and an appropriate budget for the works agreed upon, and the fee for the work stages or stage in which the service is commencing may be subject to an increase of 25%.

NOTE: This usually apply where it was not planned for another professional to take over. Where an Architect of Record (AOR) was appointed from the beginning, this does not usually apply.

SCENARIO 11 – TAKING OVER FROM ANOTHER PROFESSIONAL

11.1) You have been approached by Mr Johnson. He originally appointed Bricks and More Designers to design his house. His relationship with Bricks and More Designers has since deteriorated.

11.2) They have already completed stages 1 to 3, but he now needs a different architect to complete the remaining stages.

11.3) The construction budget for his house is R3 7000 000.00 excluding VAT and professional fees.

SCENARIO 11.1	
Step 1:	Complexity: Residential, Single Dwelling Unit: Medium Complexity
Step 2:	Cost bracket: 4
Step 3:	Primary Fee = R312 886.84
Step 4:	Secondary Fee = (R3 7000 000 - R2 000 001) x 11.69% = R198 729.88
Step 5:	Total fee = R312 886.84 + R198 729.88 = R511 616.72

SCENARIO 11.2	
Step 6:	Calculate the fees for the relevant stages Add 25% to the stage that you are taking over from
Stage 4.1:	R511 616.72 x 10% = R51 161,67 +25% = R63 952.09
Stage 4.2:	R511 616.72 x 20% = R102 323,34
Stage 5:	R511 616.72 x 30% = R153 485,02
Stage 6:	R511 616.72 x 3% = R15 348,50
Step 7:	Show the relevant stages including VAT
Stage 4.1:	R63 952,09 + 15% = R73 544,09
Stage 4.2:	R102 323,34 + 15% = R911 884,25
Stage 5:	R153 485,02 + 15% = R1 367 826,37
Stage 6:	R15 348,50 + 15% = R136 782,64
Step 8:	Calculate the total fee by adding the fees for stages 4.1 – 6 REMEMBER TO ADD THE 25% TO STAGE 4.1!!! Total fee = Stage 4.1 + Stage 4.2 + Stage 5 + Stage 6 = R63 952,09 + R102 323,34 + R153 485,02 + R15 348,50 = R335 108,95
Step 9:	VAT = R50 266,34 Total (incl. VAT) = R385 375,30

[10] ADDITIONAL FEES/COSTS

DEPLOYMENT OF EMPLOYEES

Where an employee of the architectural professional is deployed on site for extended inspections or other agreed purposes, the amount of the reimbursements shall be the total cost of employment plus 30%.

NOTE for this instance, calculate the total standard professional fees as per the examples above. The additional fee for deployment will be calculated based on the total cost of employment (see cost of employment calculations below) + an additional 30%.

FAST TRACKING

Where the client requests that a project should be completed in a shorter time period than originally agreed, the architectural professional shall motivate to the client that additional resources will be required to complete the project within the shorter time period. Additional fees should apply in these instances. The additional fees will be based on the cost of the additional resources plus a further 30%.

Additional resources could include additional computers or software or additional man hours which would result in additional salaries that needs to be paid. Additional resources could also be in the form of additional hours that will be spent by the current employees e.g., over time.

EXTENDED INITIAL CONTRACTUAL CONTRACT PERIOD

If the initial agreed contract period is exceeded by more than 10 % through no fault of the architectural professional, the architectural professional shall be renumerated for all additional work resulting from the extension of time at the hourly rates according to the guidelines for professional fees together with related reimbursable expenses. The architectural professional shall inform the client in writing that the agreed allocated time has been exceeded by 10% and therefore additional fees shall be charged.

NOTE: The architectural professional fees shall not be linked to contractor performance or progress!

SCENARIO 12 – EXTEND INITIAL CONTRACTUAL CONTRACT PERIOD

12.1) You have been appointed by Mrs. Klein to for full architectural services on her beach house in Kleinmond. The proposed construction budget for this project is R6 000 000.00. You have already completed stages 1 – 4.2 and is currently busy with stage 5.

12.2) In your contract with the client, you agreed to act as principal agent, principal consultant, and architect for the period of 10 months that the contractor indicated the construction would take.

12.3) Due to various delays, the construction period is now going into month 12.

12.4) Provide the client with the updated fees for the relevant stages.

12.5) Calculate the new total fees, including VAT.

SCENARIO 12.4	
Step 1:	See the current fees for the 6 stages
Stage 1:	R774 273,63 x 2% = R15 485,47
Stage 2:	R774 273,63 x 15% = R116 141,04
Stage 3:	R774 273,63 x 20% = R154 854,73
Stage 4.1:	R774 273,63 x 10% = R77 427,36
Stage 4.2:	R774 273,63 x 20% = R154 854,73
Stage 5:	R774 273,63 x 30% = R232 282,09
Stage 6:	R774 273,63 x 3% = R23 228,21
Step 2:	Add 10% to stage 5 due to the fact that the contract period has been extended by more than 10%
Stage 5:	R232 282,09 +10% = R255 510,30

SCENARIO 12.5	
Step 3:	Calculate the new total fee Total fee = R15 485,47 + R116 141,04 + R154 854,73 + R77 427,36 + R154 854,73 + R255 510,30 + R23 228,21 = R797 501,83
Step 4:	VAT = R119 625, 28 Total (incl. VAT) = R917 127,11

[11] ADJUSTMENT OF PROFESSIONAL FEES/COSTS

ADJUSTMENT OF GUIDELINE FOR PROFESSIONAL FEES AND DISBURSEMENTS

The guidelines for fees and disbursements are based on the following parameters:

1) Scope of services
2) Scope of the project/works
3) Project programme
4) Cost of the works
5) Cost of the project
6) Appointment of other consultants
7) Appointment of contractors.

Should any material variation to these parameters as stated occur, the guideline professional fees and disbursements shall be adjusted.

The fees are initially calculated based on the estimate cost of the project. Once the actual cost is known, the architectural fees should be adjusted to align with the new budget.

SCENARIO 13 – ADJUSTMENT OF PROFESSIONAL FEES

13.1) You were appointed by Mr. George Mahlangu to design the new public Swimming pool and squash court for the Blue Grass Residential Estate. The initial construction budget excluding VAT and professional fees was R1 200 000.00

13.2) You completed the designs and documents up to stage 4.2. Once the tenders were received it became clear that the final construction budget will be higher than originally estimated. The new construction budget is R1 500 000.00

13.3) Show the calculation of the adjusted architectural fees.

13.4) Provide the client with the new total professional fees.

13.5) Show the recon fees for the stages to date.

NOTE: Even though you have already invoiced and received payment for Stages 1 – 4.2, you are still eligible for the additional fees that is due.

SCENARIO 13.1	
Step 1:	See the current fees for the 6 stages
Stage 1:	R205 625,26 x 2% = R4 112,51
Stage 2:	R205 625,26 x 15% = R30 843,79
Stage 3:	R205 625,26 x 20% = R41 125,05
Stage 4.1:	R205 625,26 x 10% = R20 562,53
Stage 4.2:	R205 625,26 x 20% = R41 125,05
Stage 5:	R205 625,26 x 30% = R61 687,58
Stage 6:	R205 625,26 x 3% = R6 168,76 Current total fee = R205 625,26

SCENARIO 13.2	
	Calculate the new fees:
Step 2:	Cost bracket: 3
Step 3:	Primary Fee = R131 870,39
Step 4:	Secondary Fee = (R1 500 000 – R650 001) x 13,41% = R113 984,87

SCENARIO 13.4	
Step 5:	Total fee = R131 870,39 + R113 984,87 = R245 855,26 Show the breakdown for the 6 stages
Stage 1:	R245 855,26 x 2% = R4 917,11
Stage 2:	R245 855,26 x 15% = R36 878,29

SCENARIO 13.4	
Stage 3:	R245 855,26 x 20% = R49 171,05
Stage 4.1:	R245 855,26 x 10% = R24 585,53
Stage 4.2:	R245 855,26 x 20% = R49 171,05
Stage 5:	R245 855,26 x 30% = R73 756,58
Stage 6:	R245 855,26 x 3% = R7 375,66

SCENARIO 13.5	
	Calculate the recon fee for stages 1 – 4.2
Stage 1:	R4 917,11 - R4 112,51 = R804,60
Stage 2:	R36 878,29 - R30 843,79 = R6 034,50
Stage 3:	R49 171,05 - R41 125,05 = R8 046,00
Stage 4.1:	R24 585,53 - R20 562,53 = R4 023,00
Stage 4.2:	R49 171,05 - R41 125,05 = R8 046,00
	Total recon amount owed to date = R26 954,10
	Total amount due including VAT = R30 997,22

[12] FEES FOR TERMINATION BY CLIENT

FEES THAT WILL APPLY IF A CLIENT TERMINATES THE PROJECT

Where the agreement between the client and the architectural professional is terminated, the client shall pay for that portion of the service that has been executed by the architectural professional.

Termination of the project shall attract an additional fee equal to 20% of the remaining fee that would have been payable had the project not been terminated.

NOTE: This will not apply if the initial agreement was only for partial services (e.g., Stages 1 – 3 only).

SCENARIO 14 – FEES FOR TERMINATION BY CLIENT

14.1) You were appointed by Mrs. Nabeelah Narotam for the full architectural services on her house. After receiving the tenders during stage 4.2, she however decides to terminate the project.

14.2) Calculate the additional fee that would be due to you if the project is terminated at stage 4.2

SCENARIO 14.1	
Step 1:	Answer: Residential Single Dwelling Unit = Medium Complexity
Step 4:	Primary Fee (Column C): R312 886.84
Step 5:	Secondary Fee = (R3 000 000.00 – R2 000 001.00) x 11.69% Secondary Fee = R116 899.88

SCENARIO 14.1	
Step 6:	Calculate Total fee = Primary Fee + Secondary Fee Total fee = R312 886.84 + R116 899.88 Total fee = R429 786.72
Step 7:	VAT = R64 468.01 Total fee including VAT = R494 254.73
Step 9:	Current fees for the six stages:
Stage 1:	R429 786.72 x 2% = R8 595.73
Stage 2:	R429 786.72 x 15% = R64 468.01
Stage 3:	R429 786.72 x 20% = R85 957.34
Stage 4.1:	R429 786.72 x 10% = R42 978.67
Stage 4.2:	R429 786.72 x 20% = R85 957.34
Stage 5:	R429 786.72 x 30% = R128 936.02
Stage 6:	R429 786.72 x 3% = R12 893.60

SCENARIO 14.2	
	Additional fees: Stages remaining after termination: Stage 5 & 6 Fees that would have been due if the project continued: R128 936,02 + R12 983,60 Total fees that would have been due = R141 919,62 20% of Total fees that would have been due had the project not been terminated = R28 383,92

METHOD 2: TIME BASED FEES

PROJECT TIME-BASED FEE IS APPROPRIATE WHEN:

- The scope of services is not clearly defined.
- The scope relates to a small-scale project.
- The service is of an unusual or specialised nature.

IMPORTANT TO NOTE WHEN MAKING USE OF THE PROJECT TIME-BASED FEE METHOD:

- Fees for architectural services may be based on an hourly rate as set out in the guidelines for professional fee board notice.
- There are three standard methods used to calculate hourly rates in the guideline for professional fees document:
  - » Method 1) As a percentage of the gross annual renumeration of the person/persons that worked on the project on an hourly basis.
  - » Method 2) Guideline rate calculated by SACAP.
- Method 3) DPSA Hourly rate for consultants based on their salary band level.
- Time-based fee can be applied to additional work undertaken by an architectural professional.
- Time-based fees can be used when an architectural professional is required to redo or alter work that was already completed. Note the additional fee should be agreed before additional work is carried out.

Where a time-based fee calculation is agreed between the client and the architectural professional, an estimate of the number of hours that will be needed to carry out the agreed scope of work must be presented to the client.

The fees can then be calculated based on one of the three methods as indicated in the table provided in the SACAP Fee Guideline Document.

Table 4: Hourly Rate Table (as presented in the SACAP Fee Guideline Document)

Principal / Staff Category	Experience / Work Context	Rate per Hour (excluding VAT)	Rate per Hour (excluding VAT)	Rate per Hour (excluding VAT)
		Method 1 – Gross Annual Renumeration	Method2–Guideline RateCalculatedby SACAP	Method 3 – DPSA Hourly Fee Rates for Consultants
1. Principals; Partners & Equity Holders	Specialist	22.5% per R100.00 or part thereof of total annual cost of employment	R2 695	Commensurate with Level 14, 15 and 16 salary bands
	>10 years' experience	20% per R100.00 or part thereof of total annual cost of employment	R2 166	Commensurate with Level 14 and 15 salary bands
	< 10 years' experience	18.5% per R100.00 or part thereof of total annual cost of employment	R1 620	Commensurate with Level 12, 13, 14 salary bands
2a. Salaried Staff	Associates and managers	17.5% per R100.00 or part thereof of total annual cost of employment	R1 155	Commensurate with Level 11,12,13 salary bands
2b. Salaried Staff	Registered arch professionals performing work of an arch nature & carrying direct responsibilities for activities related to a project	16.5% per R100.00 or part thereof of total annual cost of employment	R781	Commensurate with Level 9,10, 11,12 salary bands
2c. Salaried Staff	Registered arch professionals performing work of an arch nature under direction and control	15% per R100.00 or part thereof of total annual cost of employment	R465	Commensurate with Level 7, 8, 9, 10 salary bands
2d. Salaried Staff	Salaried Staff performing work under direction and control to support architectural work outputs	12.5% per R100.00 or part thereof of total annual cost of employment	R332	Commensurate with Level 6, 7, 8 salary bands

SCENARIO 15 – CALCULATE TIME BASED FEES

15.1) You have been approached by Mr Opperheimer he has purchased a large plot overlooking the beach in Hermanus. He plans to develop a Leisure complex and Hotel that can accommodate 150 people.

15.2) Mr Opperheimer is not yet sure what the budget will be so has decided to appoint you for stages 1 and 2 at a time-based fee, thereafter you will be appointed at a project-cost basis for the remaining stages.

15.3) One of the principals from your office has indicated that four months has been allowed for stages 1 and 2, he has given you the estimated hours for the various personnel that will be involve in the project in the table below:

Person	Position in company		Estimated hours
Mr M Dlamini	Hotel consultant	Specialist	40
Mr A Anderson	Principal	> 10 years' experience	35
Mrs S Brendon	Manager	Associates & Managers	150
Mr K Naidoo	Professional Architect	Registered arch prof carrying direct responsibility for activities related to a project	250
Mr M Smith	Professional Architect	Registered arch prof preforming work under direction & control	645
Mrs N Nash	Architectural technician	Registered arch prof preforming work under direction & control	645
Mrs H Olivier	Admin and office Manager	Staff performing work under direction and control to support architectural	100

[1] METHOD 1

METHOD 1 – GROSS ANNUAL RENUMERATION

For method one a different percentage per R100 or part thereof of each level of employee' total annual cost of employment is used to calculate their hourly rate. Note that his gross annual renumeration is merely for illustrative purposes, it might be relevant to all practices.

Person	Position in company		Annual Cost of Employment
Mr M Dlamini	Hotel consultant	Specialist	R1 140 000.00
Mr A Anderson	Principal	> 10 years' experience	R960 000.00
Mrs S Brendon	Manager	Associates & Managers	R480 000.00
Mr K Naidoo	Professional Architect	Registered arch prof carrying direct responsibility for activities related to a project	R420 000.00
Mr M Smith	Professional Architect	Registered arch prof preforming work under direction & control	R300 000.00
Mrs N Nash	Architectural technician	Registered arch prof preforming work under direction & control	R216 000.00
Mrs H Olivier	Admin and office Manager	Staff performing work under direction and control to support architectural	R240 000.00

Based on the annual renumeration provided in the table above, calculate what the hourly rate would be for each professional/employee.

Note that the SACAP fee guideline table states: "x% per R100.00 or part thereof of total annual cost of employment". For the purpose of this example, we are working on R100.00 and not part thereof, the percentage can however be calculated on a part of the R100 and not the whole as in this example.

Step 1: Annual cost of employment ÷ 100.
Step 2: Determine the applicable percentage of the cost per R100 as indicated in the SACAP guideline table for each level of employment.
Step 3: Annual cost/100 (step 1) x relevant percentage (step 2) = Hourly rate.

Person		Annual Cost of Employment	Step 1 (÷100)	Step 2 (determine %)	Step 3 (Hourly rate)
Mr M Dlamini	Specialist	R1 140 000.00	11 400	22,50%	R2 565,00
Mr A Anderson	> 10 years' experience	R960 000.00	9 600	20,00%	R1 920,00
Mrs S Brendon	Associates & Managers	R480 000.00	4 800	17,50%	R840,00
Mr K Naidoo	Registered arch prof carrying direct responsibility for activities related to a project	R420 000.00	4 200	16,50%	R693,00
Mr M Smith	Registered arch prof preforming work under direction & control	R300 000.00	3 000	15,00%	R450,00
Mrs N Nash	Registered arch prof preforming work under direction & control	R216 000.00	2 160	15,00%	R324,00
Mrs H Olivier	Staff performing work under direction and control to support architectural	R240 000.00	2 400	12,50%	R300,00

The hourly rates that have been calculated can now be used to times by the estimated hours that will be spent on the project by each of the employees as indicated in the scenario.

Step 4: Estimated hours x Rate (calculated in step 3)

Person	Position in company		Estimated hours	Rate (Step 3)	Sub-total = Hours x Rate	Sub-total incl. VAT =
Mr M Dlamini	Hotel consultant	Specialist	40	R2 565,00	R102 600,00	R117 990,00
Mr A Anderson	Principal	> 10 years' experience	35	R1 920,00	R67 200,00	R77 280,00
Mrs S Brendon	Manager	Associates & Managers	150	R840,00	R126 000,00	R144 900,00
Mr K Naidoo	Professional Architect	Registered arch prof carrying direct responsibility for activities related to a project	250	R693,00	R173 250,00	R199 237,50
Mr M Smith	Professional Architect	Registered arch prof preforming work under direction & control	645	R450,00	R290 250,00	R333 787,50
Mrs N Nash	Architectural technician	Registered arch prof preforming work under direction & control	645	R324,00	R208 980,00	R240 327,00
Mrs H Olivier	Admin and office Manager	Staff performing work under direction and control to support architectural	100	R300,00	R30 000,00	R34 500,00
				Total (excl. VAT)	R998 280.00	
				VAT	R149 742.00	
				Total (Incl. VAT)	R1 148 022.00	

[2] METHOD 2

METHOD 2 – GUIDELINE RATE CALCULATED BY SACAP

For method two, SACAP provides a guideline rate for each level of employment.

For this calculation, times the relevant guideline rate with the estimated hours. (Remember to calculate the VAT)

Person	Position in company		Estimated hours	Guideline Rate	Sub-total = Hours x Guideline	Sub-total incl. VAT =
Mr M Dlamini	Hotel consultant	Specialist	40	R2 695.00	R107 800.00	R123 970.00
Mr A Anderson	Principal	> 10 years' experience	35	R2 166.00	R75 810.00	R87 181.50
Mrs S Brendon	Manager	Associates & Managers	150	R1 155.00	R173 250.00	R199 237.50
Mr K Naidoo	Professional Architect	Registered arch prof carrying direct responsibility for activities related to a project	250	R781.00	R195 250.00	R244 537.50
Mr M Smith	Professional Architect	Registered arch prof preforming work under direction & control	645	R465.00	R299 925.00	R344 913.75
Mrs N Nash	Architectural technician	Registered arch prof preforming work under direction & control	645	R465.00	R299 925.00	R344 913.75
Mrs H Olivier	Admin and office Manager	Staff performing work under direction and control to support architectural	100	R332.00	R33 200.00	R38 180.00
				Total (excl. VAT)	R1 185 160.00	
				VAT	R177 774.00	
				Total (Incl. VAT)	R1 362 934.00	

[3] METHOD 3

METHOD 3 – DPSA HOURLY FEE RATES FOR CONSULTANTS

See below an extract from the current DPSA Hourly Fee Rates for Consultants – as effective from 1 July 2020:

the dpsa
Department:
Public Service and Administration
REPUBLIC OF SOUTH AFRICA

Hourly Fee Rates for Consultants – with effect from 1 July 2020

In view of fiscal constraints, and after consultation with the Office of the Chief Procurement Officer, the Director General: Public Service and Administration approved that the 2019 rates will apply in 2020

Salary Band	Average Total Package	Model A Short Term				Model B Long Term			
		Option A 1 All Overheads		Option A 2 Partial Overheads		Option B 1 All Overheads		Option B 2 Partial Overheads	
		A 1.1 Mark-up	A 1.2 No Mark-up	A 2.1 Mark-up	A 2.2 No Mark-up	B 1.1 Mark-up	B 1.2 No Mark-up	B 2.1 Mark-up	B 2.2 No Mark-up
16	1 997 628	3 995	3 076	3 436	2 637	None	None	None	None
15/16	1 766 953	3 534	2 721	3 039	2 332	2 915	2 244	2 509	1 926
16	1 536 278	3 073	2 366	2 642	2 028	2 535	1 951	2 182	1 675
14/15	1 398 142	2 796	2 153	2 405	1 846	2 307	1 776	1 985	1 525
14	1 302 509	2 605	2 006	2 240	1 719	2 149	1654	1 850	1 420
13/14	1 201 602	2 403	1 850	2 067	1 586	1 983	1 526	1 706	1 310
13	1 092 286	2 185	1 682	1 879	1 442	1 802	1 387	1 551	1 191
12/13	995 007	1 642	1 264	1 413	1 085	1 473	1 134	1 264	965
12	897 728	1 481	1 140	1 275	979	1 329	1 023	1 140	871
11/12	827 611	1 366	1 051	1 175	902	1 225	943	1 051	803
11	757 494	1 250	962	1 076	826	1 121	864	962	735
10/11	707 501	1 167	899	1 005	771	1 047	807	899	686
10	657 508	973	750	835	638	921	710	789	611
9/10	598 985	886	683	761	581	839	647	719	557
6 to 8	395 779	586	451	503	384	554	427	475	368

How to determine the appropriate fee rate

1. Determine the consultancy option/model by applying the following criteria:
   "Short Term" means less than 60 consulting days
   "Long Term" means more than 60 consulting days
   "All Overheads" means consultant provides all overheads e.g., office, parking, telephone
   "Partial Overheads" means department provides some overheads e.g., office, parking, telephone
   "Mark-up" provides for company profit margin – service normally provided by consulting company
   "No Mark-up" service normally provided by individuals or NGOs
2. Determine the appropriate salary band based on the level of work that is required e.g., use job evaluation to determine the level of work – salary band 13 represents the level of a Director in the public service, 14 a Chief Director, 15 a DDG and 16 a DG.
3. The hourly fee rate should be read where the consultancy option/model intersects with the salary band.
4. Fee rates exclude operation/project expenditure e.g., travelling, hotel accommodation, parking, travel, and subsistence allowance.
5. Value Added Tax is excluded from calculating hourly fee rates.

Note – The guide on hourly fee rates for consultants and the latest fee rates are available at the following link: http://www.dpsa.gov.za/dpsa2g/consultant_fees.asp

Using the table provided above, the estimated hourly rate fees can be calculated. Note the following:

For this example, the architectural firm will be responsible for all overhead expenses. This would include for example, office rental, computers and software, internet, and telephone costs etc. This does not include disbursements e.g., travel.

As the project will span for longer than 60 hours, it is seen as al "Long Term" project for the purpose of the calculation. As the architectural firm is not an NGO, mark-up should be added to the architectural fees.

The hourly rates do not include VAT; VAT must therefore be added to the final calculation.

Based on these parameters, find the relevant column in the table above:

- Longer than 60 days = Model B Long Term
- All over heads = Option B1
- Include Mark-up = B1.1

Person	Position in company		Salary band Level	Estimated hours	Guideline Rate	Sub-total = Hours x Guideline	Sub-total incl. VAT =
Mr M Dlamini	Hotel consultant	Specialist	15	40	R2 535,00	R101 400,00	R116 610,00
Mr A Anderson	Principal	> 10 years' experience	14	35	R2 149,00	R75 215,00	R86 497,25
Mrs S Brendon	Manager	Associates & Managers	12	150	R1 329,00	R199 350,00	R229 252,50
Mr K Naidoo	Professional Architect	Registered arch prof carrying direct responsibility	11	250	R1 121,00	R280 250,00	R322 287,50
Mr M Smith	Professional Architect	Registered arch prof preforming work under direction & control	9	645	R839,00	R541 155,00	R622 328,25
Mrs N Nash	Architectural technician	Registered arch prof preforming work under direction & control	8	645	R554,00	R357 330,00	R410 929,50
Mrs H Olivier	Admin and office Manager	Staff performing work to support architectural	7	100	R554,00	R55 400,00	R63 710,00
					Total (excl. VAT)	R1 610 100.00	
					VAT	R241 515.00	
					Total (Incl. VAT)	R1 851 615.00	

DISBURSEMENTS

NOTE in addition to the professional fees, architectural professionals will also be able to claim for disbursements they covered during the project. Disbursements could include specialised professional services, e.g., model building. It would also include payments made on behalf of clients for fees, submission fees for local authority and other statutory approvals as well as other charges for specialised professionals and other services. It can also include expenses e.g., travel, parking, accommodation, printing etc.

TIP: See the list of disbursements, with applicable rates that can be claimed as provided by SACAP in the guideline fee document.

ATTENDANCE

COST-BASED FEES

Note that a minimum of 10% of the cost of the disbursement may also be claimed for attendance where a project cost-based fee applies.

TIME-BASED FEES

Note that a minimum of 10% of the cost of the disbursement may also be claimed where there is no time-based reimbursement for attendance.

TRAVEL

COST-BASED

In addition to the cost of travel (by train/car/plane) you could also be eligible to claim for travelling time. Where the fee is a project cost-based fee, time charges shall apply at 100% of hourly rate for travel greater than 1 hour and 50km per trip (2 hours and 100km return trip) as agreed with the client.

TIME-BASED

Where the fee is on a time basis, time charges shall apply to full round trip regardless of distance.

DEFERRED RENUMERATION

Note that Deferred Renumeration is a better alternative to doing work at risk, where you enter into an agreement with the client to do a section of the work for payment at a later date.

According to the Code of Conduct of the SACAP, you are obliged to enter into a formal agreement before commencing with architectural work, which is usually not the case with risk work.

The purpose of this form of agreement is to provides the option if a client requires drawings to secure funding to delay payment until these funds becomes available, while protecting the architectural professional.

Note that it is important to clearly define all of the limitations (e.g., number of changes you are willing to make without being paid at this time). Clearly define what services will be offered in the agreement, and for what period of time you are willing to spend in it.

It is also important to stipulate who will be responsible for covering the cost of disbursements (preferably the client)
If you are doing the first part of the work to help the client secure funding, it is also important to ensure that if the project goes ahead that you will actually be appointed for the rest of the project (which is usually why you would undertake these kind of projects), and if the project does not go ahead, you have an agreement in place to get paid at least in part for the effort you have put in.

This agreement is also to ensure that you are protected and that your liabilities are limited, as a client can lodge a claim against you even if you were not involved with the whole project or did the work for free. For example, if the project only goes ahead year later and they use your plans without involving you, you will still be liable if something goes wrong even if you did the original plans on risk.

PRO BONOWORK

Pro Bono services are professional services for which architects receive no payments other than in some instances reimbursement of disbursements made for the project.

Note that if you undertake work without payment, you are at risk of your PI insurance refusing to pay out claims in relation to this project or potentially even other projects.

Pro Bono work is extremely risky as you would still be liable even if you were not paid for your services. You will also be using your resources and overhead as well as your time to effectively "sponsor" your client as you are carrying all the costs from your side.

Even if it is for a good cause, make sure you think twice before undertaking Pro Bono work, as it can end up costing you a lot.

SOUTH AFRICAN NATIONAL STANDARDS (SANS 10400)

The South African National Standards (SANS) 10400 refers to the set of standards regulating building construction in South Africa, ensuring safety, efficiency, and compliance with the law. The standards are part of the National Building Regulations and cover various aspects of construction and building design. SANS 10400 is broken down into several parts, each focusing on specific areas of building regulations.

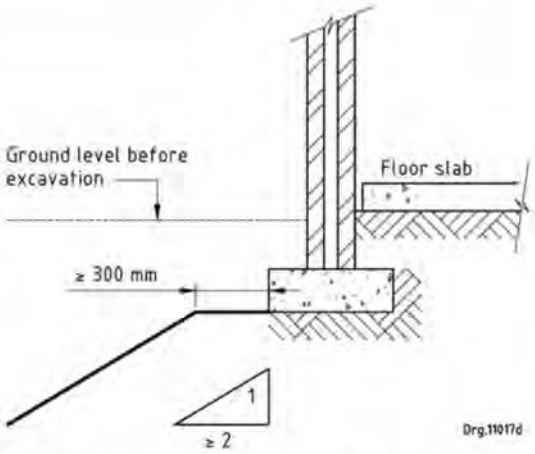
Part A: General Principles and Requirements,
Part B: Structural Design,
Part C: Dimensions,
Part D: Public Safety,
Part E: Demolition Work,
Part F: Site Operations,
Part G: Excavations,
Part H: Foundations,
Part J: Floors,
Part K: Walls,
Part L: Roofs,
Part M: Stairways,
Part N: Glazing,
Part O: Lighting and Ventilation,
Part P: Drainage,
Part Q: Non-water-borne Sanitary Disposal,
Part R: Stormwater Disposal,
Part S: Facilities for Disabled Persons,
Part T: Fire Protection,
Part U: Refuse Disposal,
Part V: Space Heating,
Part W: Fire Installation,
Parts X & XA: Energy Usage.

For this examination guide, we will be focusing on **Part G, H, K, O, S and T**. It is imperative that candidates commence with a broad overview at first, then proceed to the specificities of each part.

Disclaimer:
Although specific images are featured in the below content, there are several images which are displayed throughout the SANS 10400 documents. Candidates should thus have a general understanding of each of the above Parts and demonstrate a practical knowledge of each.

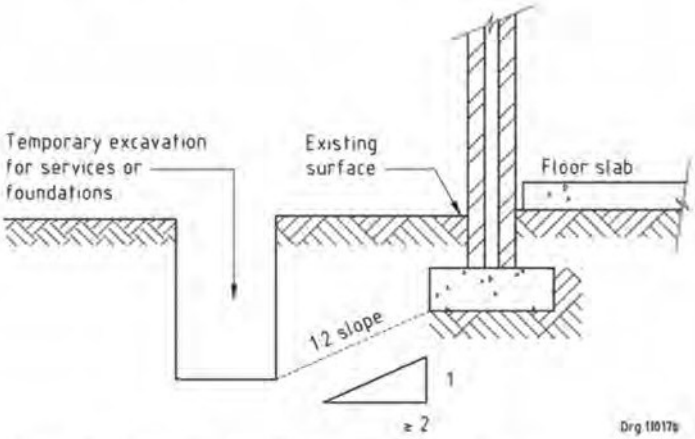
PART G: EXCAVATIONS -

SANS 10400-G provides guidelines for safe excavation practices to ensure stability and prevent the collapse of excavated areas or damage to adjacent structures. It covers aspects such as the assessment of soil conditions, protection of excavation edges, and measures for water control.



Surface water shall be diverted away and prevented from running down the cut and causing erosion.

a) Temporary excavation exposing existing foundations

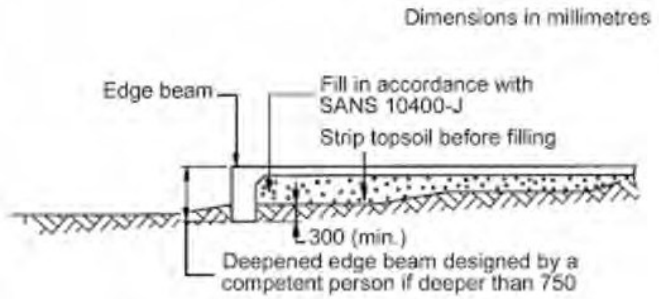


The sides of the excavation shall comply with the requirements of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

b) Temporary excavation in close proximity to building

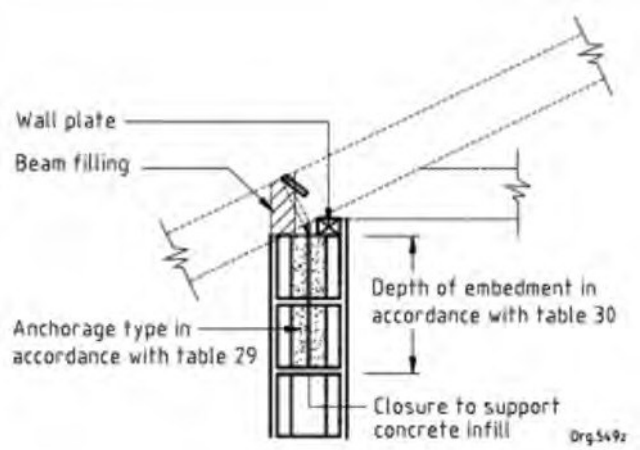
PART H: FOUNDATIONS -

SANS 10400-H outlines requirements for the design and construction of building foundations. It emphasizes the need for proper assessment of soil bearing capacity, depth of foundations, and the use of appropriate materials to ensure structural stability and support.



PART K: WALLS -

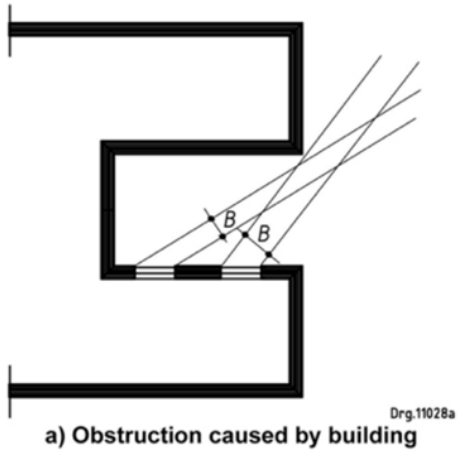
SANS 10400-K focuses on the requirements for wall construction, including criteria for different types of walls (load-bearing, non-load-bearing, and retaining walls). It addresses aspects like material selection, thickness, insulation, and moisture-proofing to ensure durability and safety.



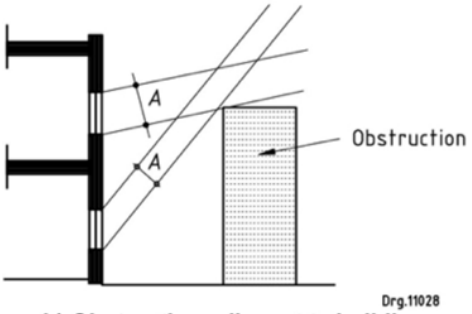
a) Single-leaf wall

PART O: LIGHTING AND VENTILATION -

SANS 10400-O ensures that buildings have adequate natural and artificial lighting and proper ventilation. This part promotes energy efficiency, environmental comfort, and air quality inside buildings, detailing requirements for window sizes, room orientation, and mechanical ventilation systems.



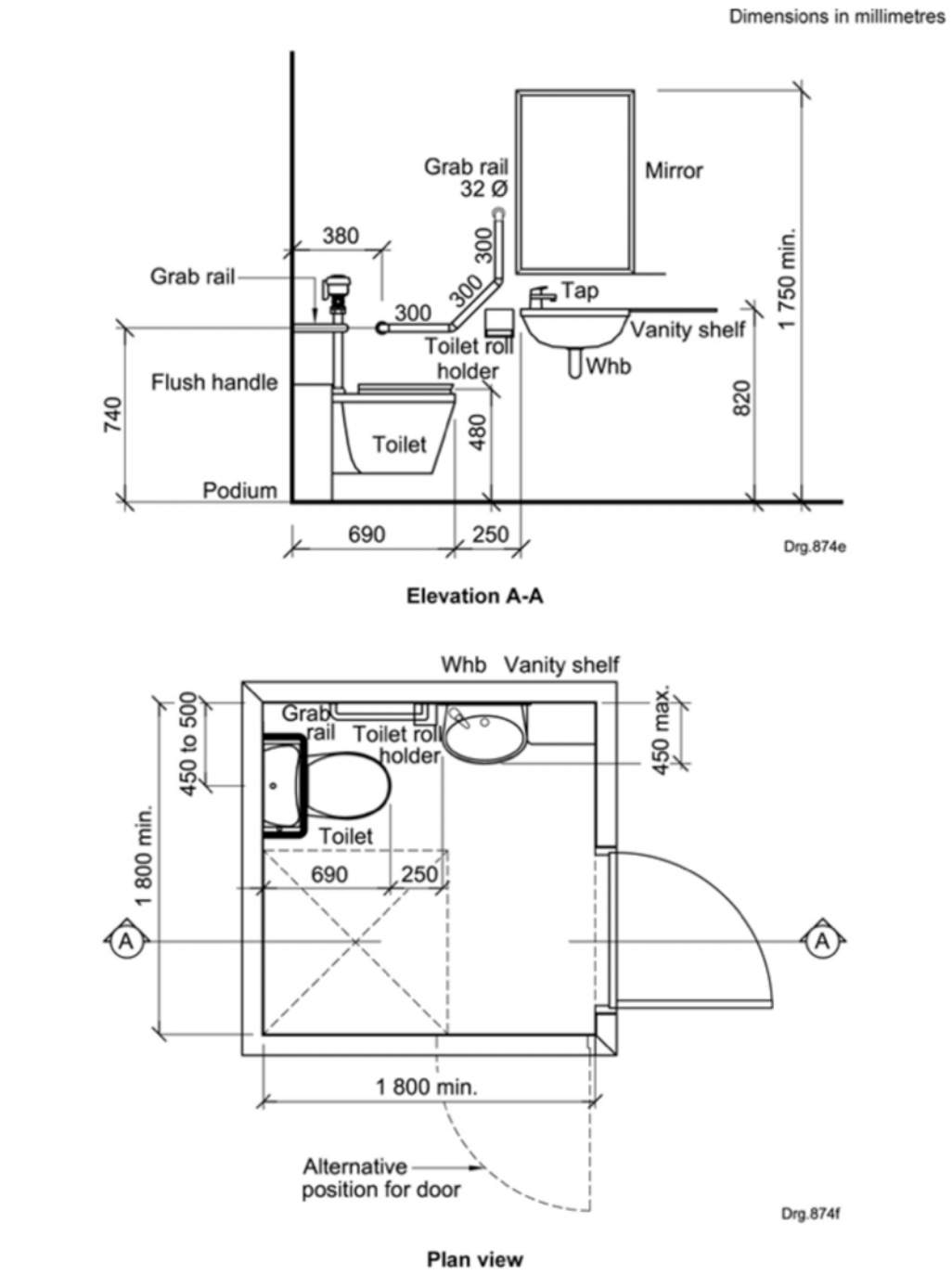
a) Obstruction caused by building



b) Obstruction adjacent to building

PART S: FACILITIES FOR PERSONS WITH DISABILITIES -

SANS 10400-S mandates accessibility features in buildings to accommodate people with disabilities. It includes specifications for ramps, lifts, bathrooms, and other facilities to ensure accessibility and usability by all individuals, promoting inclusivity in building design.



Whb = wash hand basin

PART T: FIRE PROTECTION -

SANS 10400-T provides guidelines for fire safety measures in buildings, including requirements for fire-resistantmaterials, fire alarms, emergency exits, and smoke control systems. It aims to minimize the risk of fire and ensure safe evacuation in case of an emergency.

QUESTIONS:

The examination intends not to test the candidate's ability to commit the entire SANS or NBR documents to memory, but instead seeks ensure that candidates are aware of the regulations are putting them to practice in their daily operations.

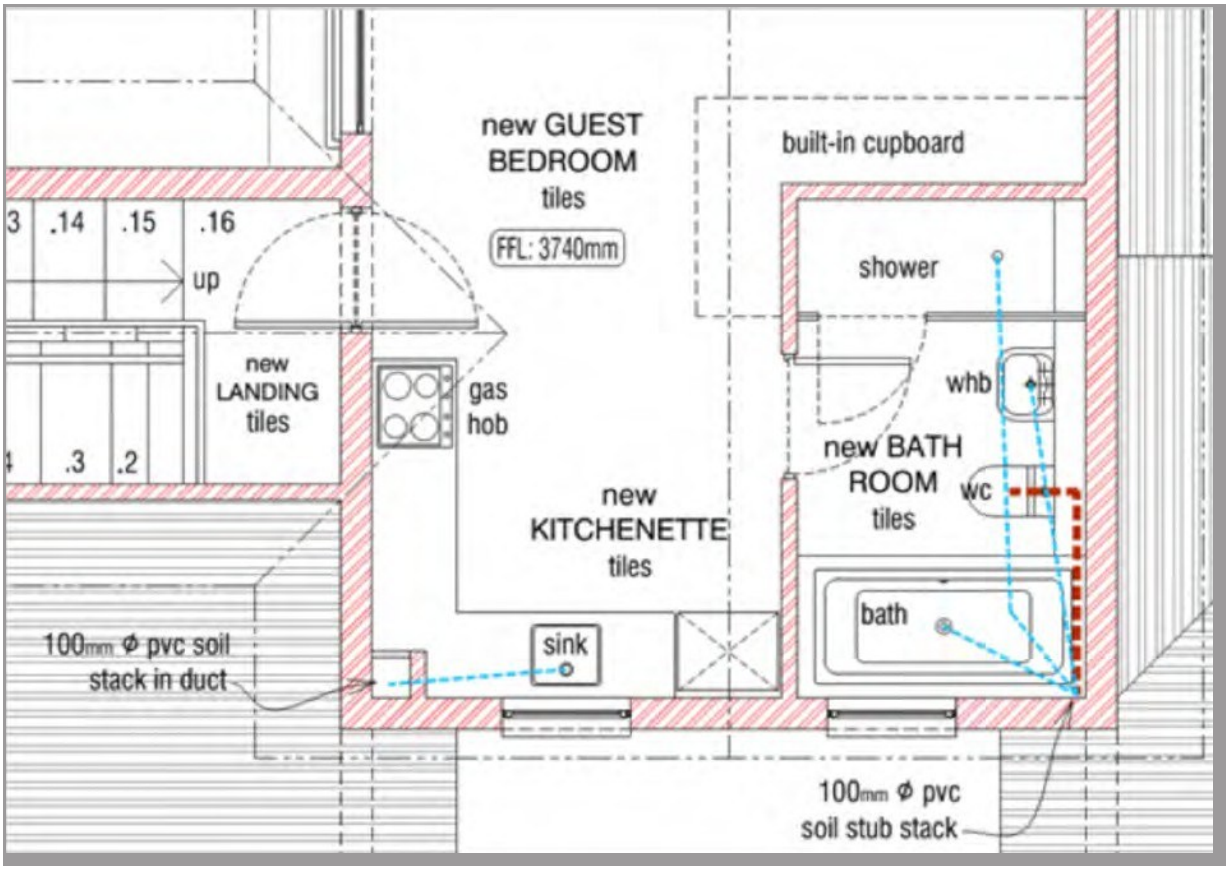
Hence the questioning style for this section varies and candidates should have a practical knowledge of the above stated sections.

EXAMPLE QUESTIONS

Question 1

1.	**Refer to Drawing 1. Extract from FIRST Floor Plan below:**		
	Describe the reasons why the following is in contravention of the South African National Standards (SANS) 10400:		
	1.	Swing of the door from the landing.	(2)
	2.	Gas hob.	(2)
	3.	Plumbing from the sink, shower, wash hand basin (whb) and bath.	(2)

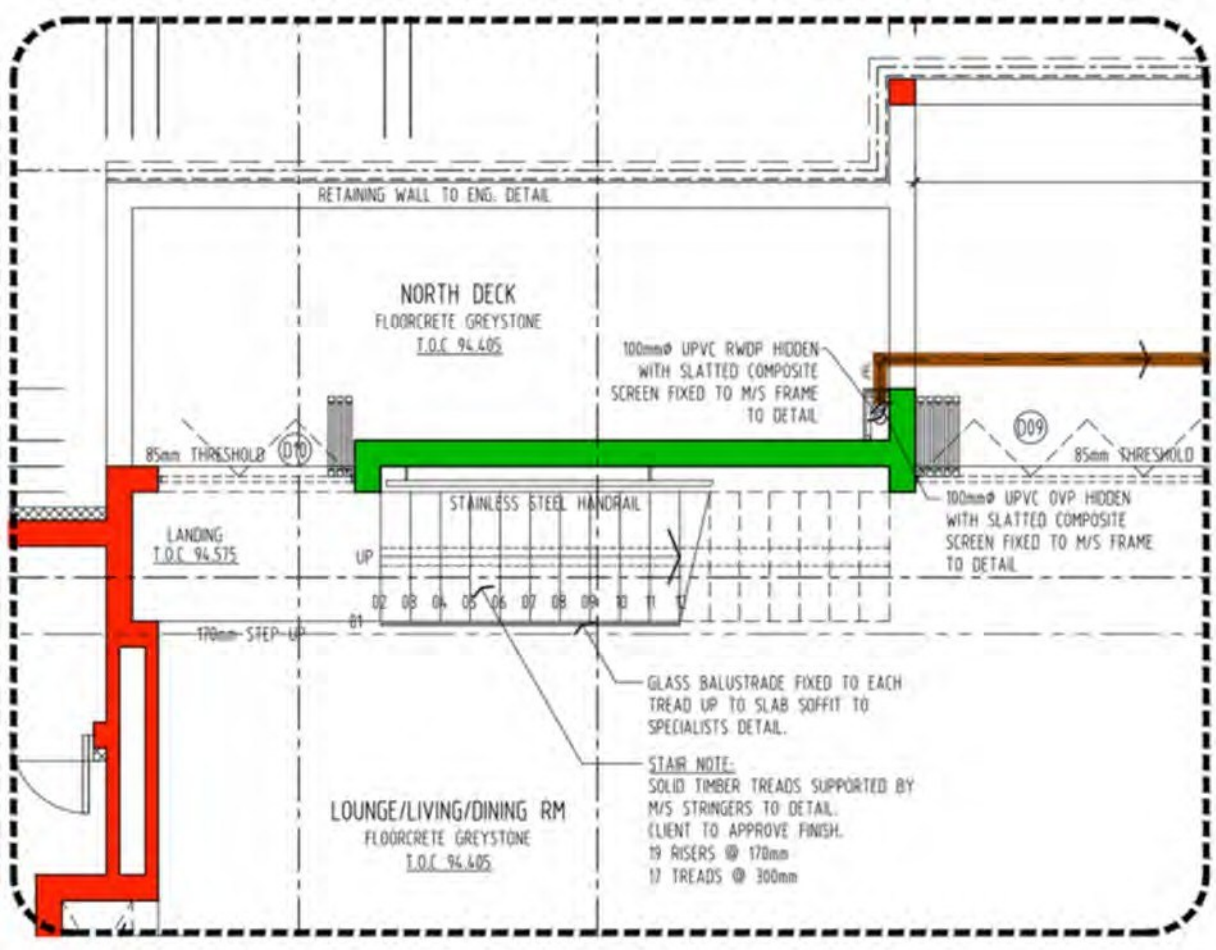
Drawing 1



Question 2

With reference to Drawing 2: Extract from a Council Submission Drawing for Approval

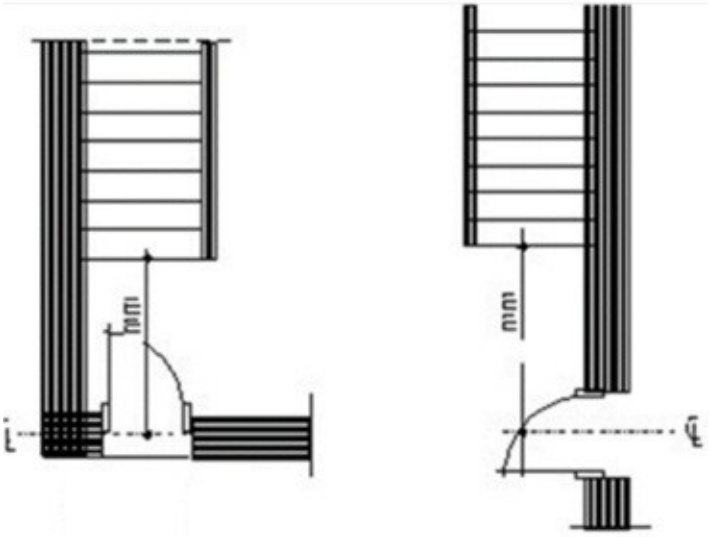
Drawing 2



2	**Refer to Drawing 2.**
	2.1 According to the NBR, there is a problem with the staircase. Identify the issue why is this against the NBR, and what would be required to correct this?

2	**Refer to Drawing 2.**
	2.2 The drawing might not be approved due to two problematic issues with drainage as currently indicated and annotated. Identify what they are (2marks), why are the two issues problematic according to the NBR (2 marks), and how they can be rectified?

Question 3

3.	**Choose the correct answer pertaining to each of the diagrams or sketches below:**		
	Drawing 3 		
	The distance between any change in floor level and the centre line of a doorway in an emergency route or between two changes of floor level in such route shall be not less than ……. metres (see figure 1 below).		
	Select ONE (1) from the following list (2 marks)		
	A	900 mm	
	B	850 mm	
	C	1500 mm	
	D	3000 mm	
	E	1000 mm	
	SANS 10400-T:2011 EDITION 3		

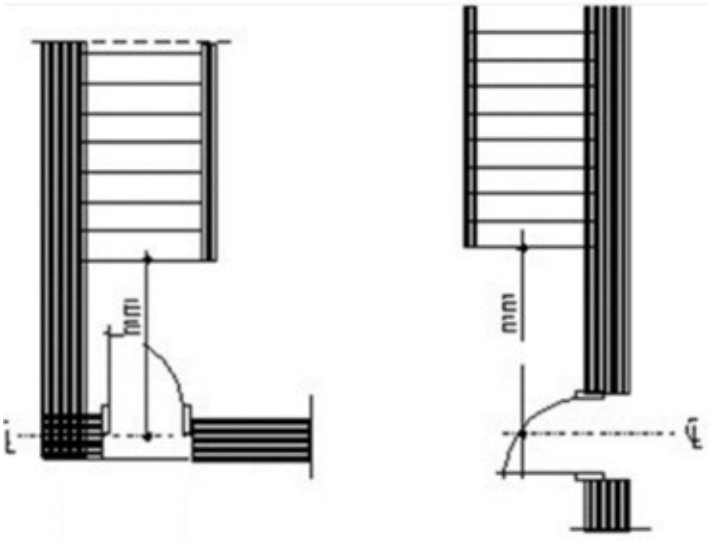
Answers

1.	**Refer to Drawing 1. Extract from FIRST Floor Plan below:**		
	Describe the reasons why the following is in contravention of the South African National Standards (SANS) 10400:		
	1.	Swing of the door from the landing.	(2)
		Will obstruct the flow of persons on the stairway	
	2.	Gas hob.	(2)
		There must be a counter on either side	
	3.	Plumbing from the sink, shower, wash hand basin (whb) and bath.	(2)
		Colour of lines must be in green	

2.	**Refer to Drawing 2.**	
	2.1 According to the NBR, there is a problem with the staircase. Identify the issue why is this against the NBR, and what would be required to correct this?	
	1x too many treads – if a stair changes level of more than 3000mm, an intermediate landing is required.	(3)

2.	**Refer to Drawing 2.**	
	2.2 The drawing might not be approved due to two problematic issues with drainage as currently indicated and annotated. Identify what they are (2marks), why are the two issues problematic according to the NBR (2 marks), and how they can be rectified?	
	The rodding eye is missing on the sewer drainage run. It is recommended that a rodding eye is installed and permanently accessible for every change of gradient or direction.	6
	Note: Allow a mark if they say sewerage line needs to be enclosed in a concrete sleeve, even though it is not strictly correct for external sewerage line.	
	There is no storm water drainage for the north deck, which is fully enclosed with retaining walls.	

Question 3

3.	**Choose the correct answer pertaining to each of the diagrams or sketches below:**		
	Drawing 3 		
	The distance between any change in floor level and the centre line of a doorway in an emergency route or between two changes of floor level in such route shall be not less than ……. metres (see figure 1 below).		
	Select ONE (1) from the following list (2 marks)		
	A	900 mm	
	B	850 mm	
	C	1500 mm	
	D	3000 mm	
	E	1000 mm	
	answer: C = 1500mm		
	SANS 10400-T:2011 EDITION 3		

Other contracts to study are as follows:

1. **New Engineering Contract (NEC):** NEC contracts are a suite of standardized construction and engineering contracts designed to promote collaboration, clarity, and effective project management.
   Overview of NEC Contracts
   NEC, or New Engineering Contracts, originated in the UK in 1993 to address inefficiencies and disputes in traditional construction contracts, emphasizing clear language, proactive risk management, and collaborative working relationships. Developed under the guidance of Martin Barnes and the Institution of Civil Engineers (ICE), NEC contracts are now widely used internationally, including in South Africa, for both public and private sector projects. They are designed to be flexible, transparent, and suitable for complex, high-value projects.

   Your study should also focus on the following topics:
   - NEC Overview and Types of NEC
   - NEC Contract Options and Clauses
   - Roles and Responsibilities
   - Time, Cost, and Risk Management
   - Communication and Collaboration Mechanisms
   - Dispute Resolution
   - Performance Monitoring and Incentives
   - Case Studies and Practical Applications
   - Legal Considerations and Compliance
   - Sustainability and the Future of NEC

   It is important to acquaint yourself with this type of contract within the Built Environment

2. **Fédération Internationale Des Ingénieurs-Conseils, i.e., the International Federation of Consulting Engineers (FIDIC):** FIDIC contracts are internationally recognized standard forms for construction and engineering projects, designed to allocate risk fairly, define roles clearly, and streamline project execution.

   Overview of FIDIC Contracts
   FIDIC, the Fédération Internationale des Ingénieurs-Conseils, is an international organization representing consulting engineers worldwide. FIDIC contracts provide a standardized framework for construction and engineering projects, primarily used in international agreements to ensure transparency, fairness, and efficiency in project delivery. They define the rights, obligations, and liabilities of the parties involved, typically the employer (client) and the contractor, and include mechanisms for dispute resolution, payment terms, and project timelines.

   Your study should also focus on the following topics:

   - Characteristics of the FIDIC Contract
   - FIDIC Agreement
   - Hierarchy of Documents
   - Types of FIDIC contract
   - Legal Risks Associated with a FIDIC Contract
   - Obligations of the Principal Agent

3. Artificial Intelligence (AI) and Building Information Modelling (BIM)

3.1. Artificial Intelligence (AI) Role in the Built Environment

Artificial Intelligence (AI) is revolutionizing engineering and architecture by introducing advanced computational techniques that enhance creativity, efficiency, and sustainability. AI-driven tools are transforming traditional workflows, enabling professionals to design smarter, more adaptive, and environmentally conscious structures.

3.1.1. Applications in Architecture

AI is widely used in architectural design for tasks such as generative design, spatial planning, and performance-based analysis. Generative design employs algorithms to autonomously create and evaluate thousands of design alternatives based on constraints like material, energy efficiency, and structural integrity. This allows architects to explore innovative solutions that balance functionality and aesthetics.

Machine Learning (ML) and neural networks are applied to optimize space utilization, predict energy performance, and enhance sustainability. For example, ML models can analyze historical energy data to optimize HVAC systems or predict the lifecycle carbon emissions of a building. AI also supports adaptive facades that respond to environmental changes, reducing energy consumption.

Your study should also focus on the following topics:

- Benefit from Artificial Intelligence (AI) in architecture;
- Challenges and Ethical Considerations of AI in architecture;
- Main features of AI in architecture.

3.2. Building Information Modelling (BIM)

Building Information Modeling (BIM) is a holistic, data-driven process for creating and managing information about a built asset throughout its entire lifecycle, from planning and design to construction and operations. It is based on an intelligent 3D model and powered by cloud platforms, enabling multi-disciplinary collaboration and integration of structured data into a single, shared digital representation.

Unlike traditional 3D CAD modeling, which focuses mainly on geometry, BIM incorporates relationships, metadata, and behaviors of real-world building components. This allows stakeholders to simulate, analyze, and optimize designs before construction begins, improving accuracy, predictability, and efficiency.

Your study should also focus on the following topics:

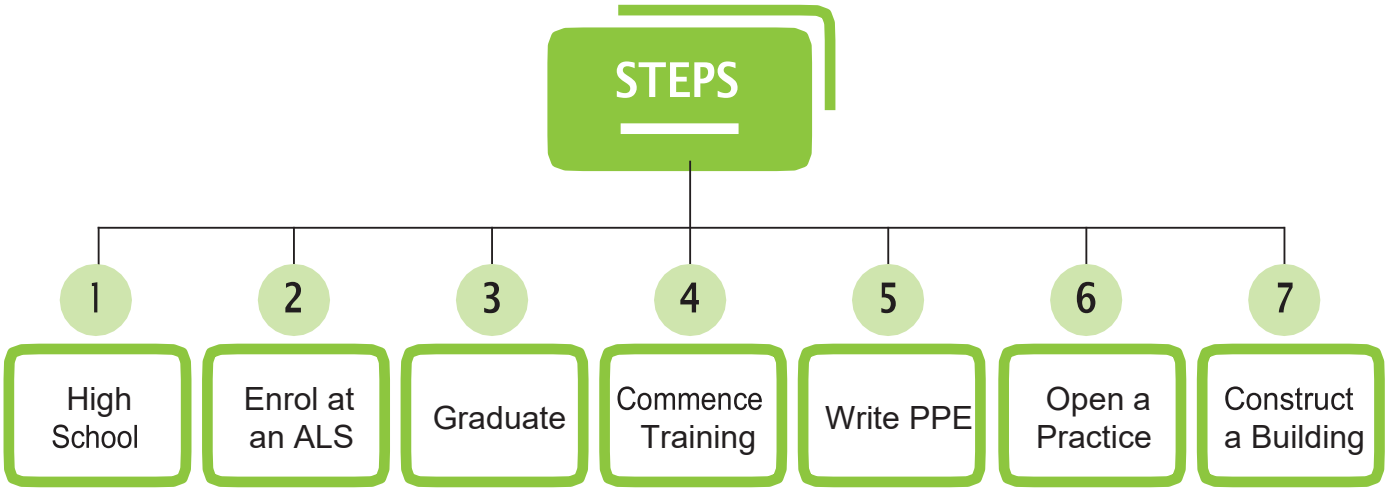
- Core Features of BIM
- Key Components of BIM
- BIM and contracting
- BIM and project management
- Benefits of using BIM

PROFESSIONAL PRACTICE EXAMINATION

PAPER 2

Return to Contents

FOCUS ON FINAL STEP OF PROFESSIONAL JOURNEY



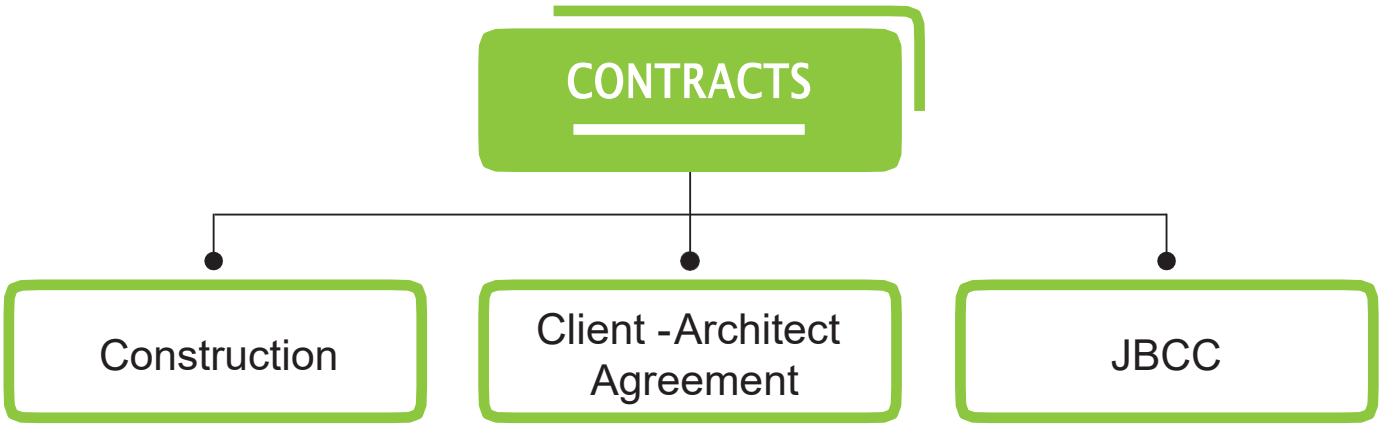
Property Law | Law of Delict | The Concept of Lien | Latin Phrases | Law of Agency | Dispute Resolution | Construction Procurement and Contracting | Clerk of Works | The Context of Principal Agency and Principal Consultancy | Joint Ventures and Consortiums | The Professional Team | Construction Pricing Strategies

SOURCE: Lizelle Jackson, SAYAP Day Sessions in partnership with SAIBD

Fantastic - you have successfully completed preparing for Paper 1. But where to next?

Based on the diagram above, we can see that topics previously focused on mainly sit within steps 1 - 6. In order to prepare for **Paper 2,** we are going to focus on the **construction phase** of your career. During the construction phase, architectural professionals encounter several parties including the employer**, contractor and other professionals across different fields**. In order to best manage the relationships between these role players, **serious agreements known as contracts** must come into play. These contracts bestow rights and hold parties responsible in terms of their engagements with each other. In the content below, we will look through contracts through the lens of the law, the types used specifically for the construction industry and focus on the JBCC Principal Building Agreement for this year's paper.

LAW OFCONTRACTS



SOURCE: Lizelle Jackson, SAYAP Day Sessions in partnership with SAIBD

OVERVIEW VIDEO:

Link to Overview of Contracts Video

Contract law is the intricate web that binds agreements and transactions, ensuring that promises are kept, and disputes find resolution. It is a realm where clarity, precision, and an understanding of legal principles are paramount. Imagine sailing through uncharted waters, where each legal concept is a navigational tool, helping you chart your course through contractual intricacies.

In this journey, we'll delve into the foundational aspects of contract law, breaking down the key components. From the initial **offer and acceptance** that kickstarts a contract to the safety nets of **remedies** and laws of **delict** that provide recourse when things go astray, we'll explore the legal currents that govern the world of contracts.

INITIATING A VALID CONTRACT:

Before a contract can be effective upon its parties, it must be valid based on the following:

- The contract must be legal
- The parties engaging must be of sound mind
- There must be consensus (or universal agreement of the terms of the contract by all parties involved)
- The expectations must be possible
- And there must be some form of formalities (like a written document recording the agreement)

OFFER AND ACCEPTANCE:

When an offer is made, and **a party accepts the offer** as it is, we have now entered into a serious agreement - and as we know - **this constitutes a contract**. However, if this does not occur, and the party provides an alternative to the offer for the initiator to consider, we call this a **counter offer**. Once a counter offer is accepted, the **previous offer is null and void**.

LAWS OF AGENCY:

Contracts often resemble a complex board game, with various players taking on different roles. The laws of agency act as the rulebook, specifying who the players are, what moves they can make, and how they interact. It's akin to understanding the rules of a board game, where each player's role is well-defined. A contractor, architect or an engineer for example can take on a role other than their title during the construction project. It is typical for architects to take on the role of principal agent in a construction project whose role is to administer the contract.

NB: In a construction project, the contract is between the **EMPLOYER** and the **CONTRACTOR**. The principal agent's role is to **ADMINISTER** the contract.

CESSION:

Consider a relay race where runners pass the baton to their teammates. In the world of contracts, cession is akin to smoothly transferring the baton of responsibility from one party to another. It ensures that the contract's momentum continues seamlessly, much like a relay team maintaining its speed during the handover. In the event of a changeover from one professional to the next, **cession** (coming from the word to cede) **allows the termination of responsibility from one party to another**. This often happens when professionals either wish to terminate their contracts to move onto other projects or in the case where there are irreconcilable differences between the various parties involved in the contract, leading to one deciding to leave.

REMEDIES:

Think of a contract as a story with possible plot twists. When something goes awry in the narrative, the remedies available act as tools to resolve conflicts and get the story back on track. They're like the plot twists that keep the story engaging, offering different ways to address conflicts and uncertainties.

As discussed in cession, there are some incidences where …

LAWS OF DELICT:

Imagine contracts as tightrope walking, where parties carefully balance their interests. However, sometimes they may stumble, resulting in harm. The laws of delict act as a safety net beneath the tightrope, providing recourse when parties fall. It's like ensuring that, even in the high-wire act of contracts, there's a safety mechanism to address unexpected mishaps.

In the realm of contract law, offer and acceptance piece together the agreement, laws of agency set the rules for the game, cession facilitates smooth transitions, remedies add depth to the narrative, and laws of delict act as a safety net, ensuring a structured and coherent legal framework.

EXAMPLE QUESTIONS:

1. **Provide a definition of the term 'agency'.**
   The legal position (2) where one person (the agent) is authorised to act with authority on behalf of another (2) (the employer) to create legal relations (2) with a third party (the contractor) (2).

2. **Is it true that every agreement constitutes a contract?**
   No, not every agreement is a contract.

3. **When an offer is returned and the original terms have been materially altered, what does this constitute?**
   A counter offer.

4. **What is the meant when referring to the 'delictual duty' owed by an architectural professional to the public at large?**
   A delictual duty is a legal obligation arising between people independent of any contractual or other legal relationship between them.

5. **Provide a definition of the term 'repudiation'. What does this constitute?**
   One party to a contact's refusal (2) or inability (2) to fulfil or discharge an agreement, obligation, or debt. This would constitute a breach (2) of contract.

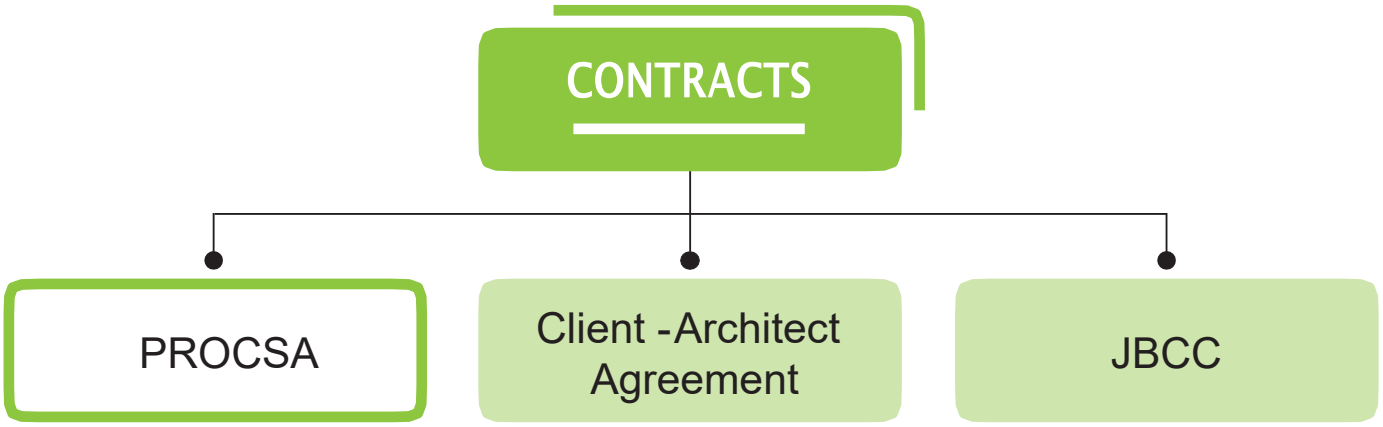
6. **Provide the definition of the word "delict" as it relates to South African law.**
   A civil wrongdoing that consists of an intentional or negligent breach of duty of care (2 marks) that results in a legal liability (2 marks).

CONSTRUCTION CONTRACTS

JBCC CONTRACTOVERVIEW

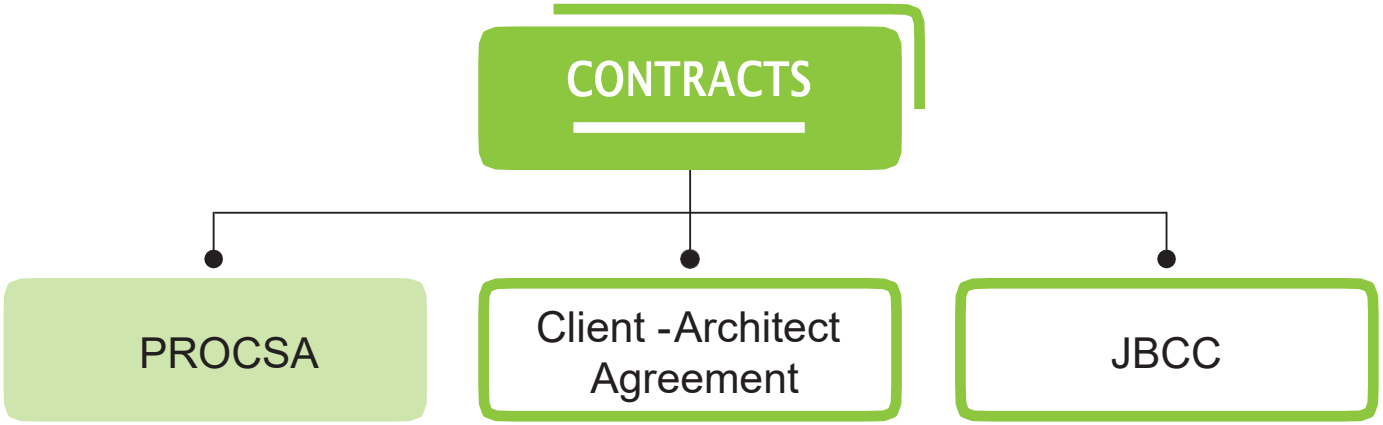
Contracts are specific to different scenarios. In the Architecture, Engineering and Construction Industry, we usually work with two stages: **Design Contracts** (pre-construction) and **Construction Contracts** (post-construction breaking ground). These contracts bestow different roles upon the various parties involved in the contract through the law of agency.

As we noted in the Law of Agency, roles can be bestowed upon individuals who are involved in a contract. The roles typically featured in contracts include **the employer** (or client), **the principal agent** (who could be the architectural designer, the project manager, the quantity surveyor or the engineer), **the contractor and the sub-contractors**.



In **design contracts**, we primarily establish a relationship between the architectural designer and the client. In these cases, which normally follow up until the local authority submission stage, professionals make use of the **Client Architect Agreement (CAA) or the PROCSA agreement. These agreements are usually used in SACAP stages 1 - 4.2**.

In these contracts, when undertaken for architectural professionals, the agreement is between the architectural professional and the client. Architectural professionals typically offer services from **Concept Design to Documentation** which includes working drawings, local authority submission and the tender process.



However, as we move onto **stage 5 and 6, we commence construction. Construction contracts underpin the vast and intricate world of construction project**s. Among the notable contracts that structure the landscape, the **Joint Building Contracts Committee (JBCC)** agreement stands as a cornerstone, renowned for its comprehensive approach. **The New Engineering Contract (NEC)** offers a versatile framework, well-suited for complex projects, while the **International Federation of Consulting Engineers (FIDIC)** contract brings an international perspective to the local scene.

As we venture further, we'll delve into the intricacies of each contract, uncovering their unique features and purposes. Much like a construction project itself, we'll lay the foundation with an exploration of these diverse contracts, building a comprehensive understanding of the construction contract ecosystem in South Africa. So, put on your hard hat and safety vest, as we embark on this journey through South Africa's construction contracts landscape.

EXAMPLE QUESTIONS:

1. **Identify three examples of what would result if there was no building contract entered into for a project?**
   Any of the following or in a similar vein (3 marks each – total of 6 marks)
   - There would be no principal agent, and the contract would be under the exclusive control of the employer.
   - The works would need to be completed entirely before the contractor is entitled to receive payment.
   - There would be no obligations to carry out variations to the works
   - The latent defects liability would run indefinitely.
   - The contractor would be liable for damages due to late completion (as opposed to penalties).

2. **Your client on a residential project has decided to make use of a contractor that was recommended by a family friend. The contractor prepared a bespoke contract for the project, and the client has asked you whether this would be a good idea. What would you advise and why?**
   Advise the client to enter into a STANDARD FORM CONTRACT such as a JBCC Principal Building or Minor Works agreement for the following reasons:
   - Standard form contracts are usually negotiated between different bodies that make up the industry in the interests of standardisation and good practice
   - Standard form contracts ensure that the risks between the contracting parties are more balanced
   - A standard form contract avoids the cost and time of individually negotiated contracts

TYPES OF CONSTRUCTION CONTRACTS

THE JBCC - COMPREHENSIVE AND TIME-TESTED

The Joint Building Contracts Committee (JBCC), often regarded as the bedrock of South African construction contracts, exemplifies comprehensiveness and reliability. Established in 1991, JBCC contracts have undergone several revisions, fine-tuning their applicability to various construction scenarios. They offer a broad range of contract documentation, catering to different project roles, sizes, and complexities. These contracts encompass the full construction lifecycle, from procurement to completion and maintenance.

THE NEC - DYNAMIC AND ADAPTABLE

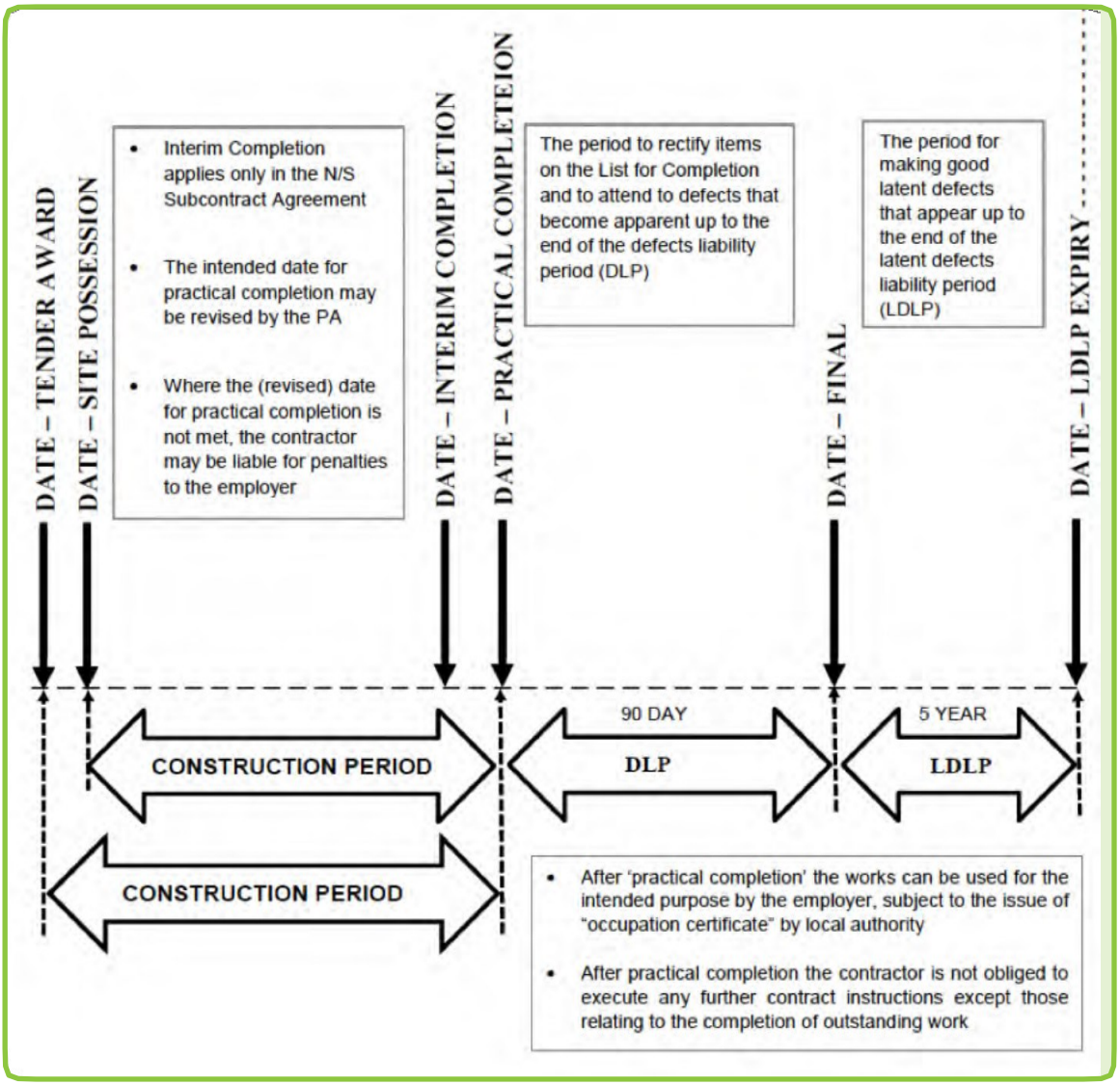
In contrast, the New Engineering Contract (NEC) showcases adaptability and efficiency. Originating in the United Kingdom, NEC contracts have gained traction in South Africa due to their flexibility in addressing the dynamics of modern construction projects. NEC contracts are particularly well-suited for complex and large-scale undertakings. They emphasize collaboration, risk management, and adaptability to unforeseen circumstances. NEC contracts come in various forms, including Engineering and Construction Contracts (ECC), Professional Services Contracts (PSC), and Term Service Contracts (TSC).

THE FIDIC - GLOBALLY INFORMED

The International Federation of Consulting Engineers (FIDIC), an international heavyweight, introduces a global perspective to South African construction projects. FIDIC contracts are recognized worldwide, making them a go-to choice for international collaborations. These contracts provide a standardized framework that facilitates international trade and cooperation. FIDIC contracts cover a wide range of construction and engineering projects, from design-build to build-operate-transfer arrangements. They address various aspects of construction, including design, procurement, and dispute resolution.

Each of these contracts represents a piece of the construction puzzle, tailored to specific project needs. As we explore further, we'll uncover the nuances of these contracts, highlighting their unique features and ideal use cases in the South African construction landscape.

JBCC: CONSTRUCTION PROCESS



Link to Video on JBCC Defects Liability Period

Enter the JBCC, a cornerstone in the South African construction landscape. Think of it as the guiding compass that steers stakeholders through the intricate labyrinth of the construction process. The JBCC acts as a structured roadmap, much like a well-marked trail in a dense forest, ensuring that every step, from project inception to completion, is taken with precision.

JBCC CONSTRUCTION PROCESS: A STAGED JOURNEY

The Joint Building Contracts Committee (JBCC) construction process is a meticulously staged journey that guides a construction project from its inception to its conclusion. Each phase is defined by specific milestones, responsibilities, and contractual obligations. Let's delve into the key stages of the JBCC construction process:

1. TENDER AWARDED:

The process commences with the successful awarding of the construction tender to the chosen contractor. At this point, the contractor assumes responsibility for the execution of the project, supported by the signed JBCC contract.

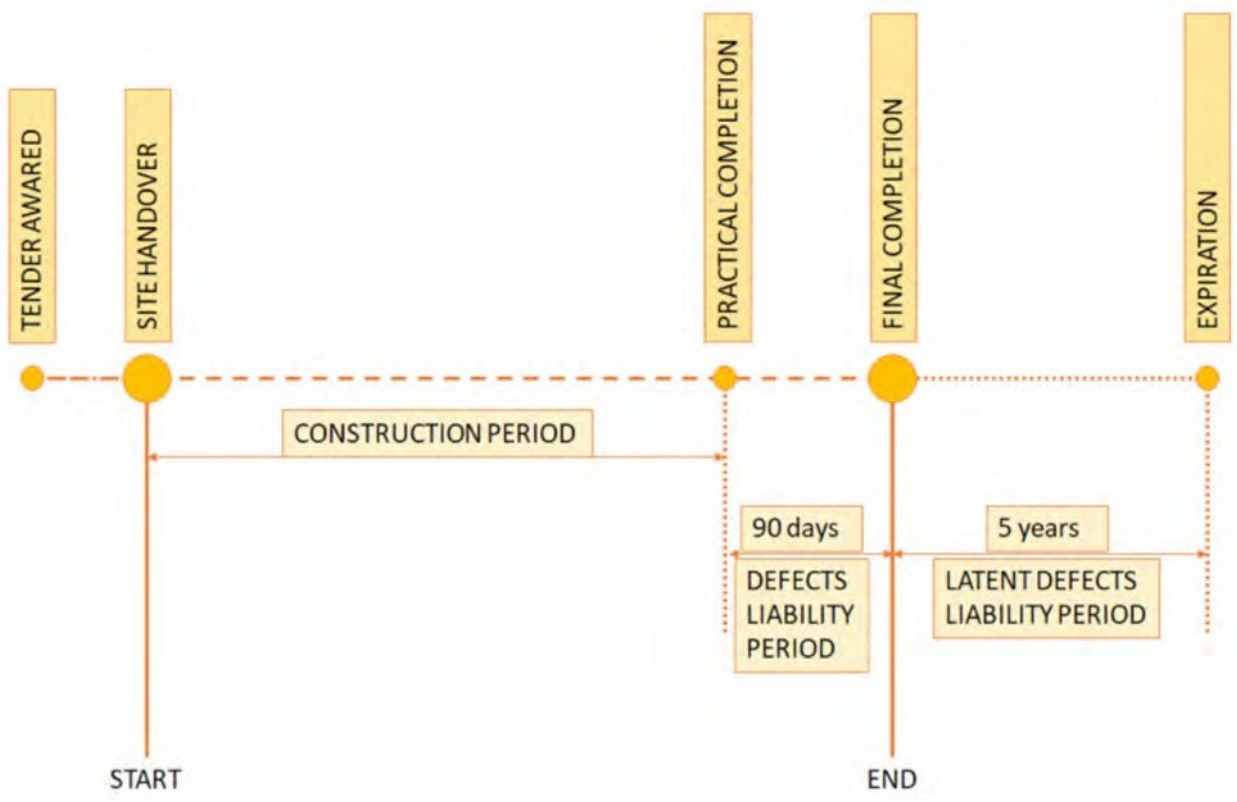
2. SITE HANDOVER:

With the contract in place, the next step is the site handover. This entails the transfer of the construction site's possession and control from the employer to the contractor. It marks the official commencement of construction activities.

3. PRACTICAL COMPLETION:

Achieving practical completion is a significant milestone. It signifies that the works are substantially complete, ready for their intended use, and free from any defects or issues that could prevent occupation or operation. Practical completion often triggers the start of the defect's liability period.

4. DEFECTS LIABILITY PERIOD:



As seen in the diagram above from the JBCC Guide to Payments and Completion Certificates, the defects liability period is a critical phase during which the contractor remains responsible for addressing any latent or patent defects that may arise. This period allows for the correction of issues that become apparent after practical completion.

5. FINAL COMPLETION:

Once all defects have been rectified, and the project meets the required quality standards, final completion is achieved. This stage signifies the project's successful conclusion and the fulfillment of the contractor's contractual obligations.

6. EXPIRATION:

The JBCC contract specifies a time frame within which the contractor must complete the works. Failure to do so may result in expiration, which may have contractual and financial implications.

7. LATENT DEFECTS LIABILITY PERIOD:

After final completion, a further period may apply to address latent defects. Latent defects are those that could not have been reasonably detected during the defect's liability period. This extended period ensures that any hidden issues are appropriately addressed.

The JBCC construction process is designed to provide a structured framework for project execution while safeguarding the interests of both the employer and the contractor. It aims to ensure that construction projects are delivered on time, within budget, and to the desired quality standards. By delineating responsibilities and timelines, the JBCC process contributes to successful project outcomes in the South African construction industry.

Check out this short:

CLICK THIS LINK

EXAMPLE QUESTIONS:

1. **In terms of the JBCC Principal Building Agreement, what is the primary difference between the following causes of delay?**
   a. Factors beyond the control of the employer or contractor.
   Such delays will result in a revision of the date for practical completion WITHOUT an adjustment of the contract value.
   b. Factors caused by the employer or the employer's agents.
   Such delays will result in a revision of the date for practical completion WITH an adjustment of the contract value.

2. **The JBCC-PBA is reached by the process of offer and acceptance…**
   a. between the tenders and the principal agent
   b. between the employer and the principal agent
   c. between the employer and the contractor
   d. between the nominated and selected subcontractors

3. **The principal agent is appointed by the employer to _____ the JBCC-PBA.**
   a. administer
   b. manage
   c. perform
   d. supervise

4. **In the JBCC-PBA, the latent defects liability period runs…**
   a. from when the tender is awarded
   b. from when the site is handed over
   c. until practical completion
   d. until the final payment certificate is issued

5. **What would occur should the employer should occupy the building prior to practical completion?**
   a. If the employer takes possession of the works prior to practical completion, practical completion would be deemed to have occurred (2) and the contractor would not be required to remedy defects (2).

6. **As principal agent, how would you determine the penalty amount?**
   a. Once practical completion has been certified, the calendar days between the contractual and actual dates of practical completion (2) is multiplied by the amount recorded in the JBCC Contract Data (2).

7. **You have been appointed as principal agent on an addition and alteration residential project.**

   The building contract has not run smoothly, with the employer growing ever more impatient with the manner in which the contractor has carried out the works. The employer has elected to levy penalties and also insists on occupying the new portion of the house, despite the fact that the contractor has not reached practical completion on the agreed date. The contractor has threatened to terminate the contract should this occur, without completing the project.

   Under normal circumstances, what are five of the consequences of the achievement of practical completion?
   a. Any of the following or in a similar vein (2 marks each – total of 10 marks)
   b. The employer takes possession of the building (and the contractor relinquishes possession/lien of the site to the employer)
   c. The contractor hands over all information for the preparation of project record ('as built') documentation as well as all applicable regulatory and statutory approval certificates.
   d. These documents are required in order that an occupation certificate be issued by the local authority (it is the employer's responsibility to procure this – agents to assist)
   e. The contractor hands over all operating and instruction manuals, product guarantees, etc.
   f. No new contract instructions may be issued (except to rectify defects)
   g. The contractor can no longer be penalised for late completion
   h. The employer must arrange for insurance of the building
   i. Public liability insurance remains in effect until final completion

8. **Identify FOUR (4) actions that would typically be required as part of the site handover of a project (1 mark each – 4 marks total).**
   - Confirm approvals and permits have been obtained
   - Compile Photographs and suitable records of site pegs, adjoining buildings, other features
   - ascertain the requirements for a formal site handover ceremony
   - Facilitate the signature of relevant site possession certificates
   - Confirm that the contractor's site establishment is agreed

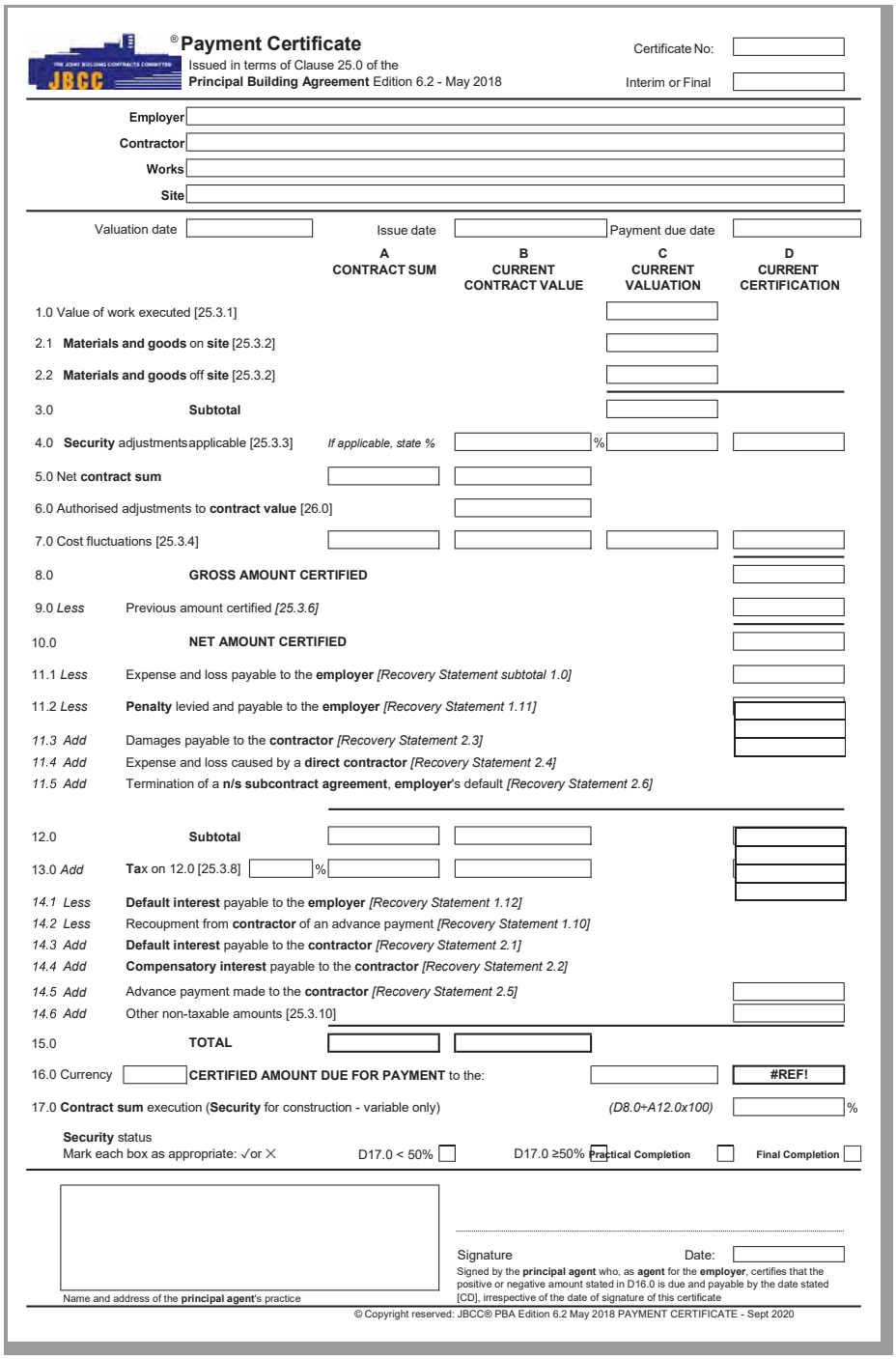
JBCC: PAYMENT CERTIFICATES

CLAUSE 25 - PAYMENTS

Clause 25 of the JBCC contract document is a critical section that deals with payments within the construction project. It outlines the procedures and requirements for processing payments to the contractor during the course of the project. We will delve deeper into the specifics of Clause 25, focusing on payment certificates—a crucial component of the payment process.

WHAT DOES A PAYMENT CERTIFICATE LOOK LIKE?

The below is a standard example of what a payment certificate format follows. Note that there is variation between a Principal Building Agreement version and a Minor Works Agreement one.



® Payment Certificate
Issued in terms of Clause 25.0 of the **Principal Building Agreement** Edition 6.2 - May 2018

Certificate No:
Interim or Final

Employer
Contractor
Works
Site

Valuation date | Issue date | Payment due date

		A CONTRACT SUM	B CURRENT CONTRACT VALUE	C CURRENT VALUATION	D CURRENT CERTIFICATION
1.0	Value of work executed [25.3.1]				
2.1	**Materials and goods** on **site** [25.3.2]				
2.2	**Materials and goods** off **site** [25.3.2]				
3.0	**Subtotal**				
4.0	**Security** adjustments applicable [25.3.3]	*If applicable, state %*	%		
5.0	Net **contract sum**				
6.0	Authorised adjustments to **contract value** [26.0]				
7.0	Cost fluctuations [25.3.4]				
8.0	**GROSS AMOUNT CERTIFIED**				
9.0 *Less*	Previous amount certified *[25.3.6]*				
10.0	**NET AMOUNT CERTIFIED**				
11.1 *Less*	Expense and loss payable to the **employer** *[Recovery Statement subtotal 1.0]*				
11.2 *Less*	**Penalty** levied and payable to the **employer** *[Recovery Statement 1.11]*				
11.3 Add	Damages payable to the **contractor** *[Recovery Statement 2.3]*				
11.4 Add	Expense and loss caused by a **direct contractor** *[Recovery Statement 2.4]*				
11.5 Add	Termination of a **n/s subcontract agreement**, **employer**'s default *[Recovery Statement 2.6]*				
12.0	**Subtotal**				
13.0 *Add*	**Tax** on 12.0 [25.3.8] %				
14.1 Less	**Default interest** payable to the **employer** *[Recovery Statement 1.12]*				
14.2 Less	Recoupment from **contractor** of an advance payment *[Recovery Statement 1.10]*				
14.3 Add	**Default interest** payable to the **contractor** *[Recovery Statement 2.1]*				
14.4 Add	**Compensatory interest** payable to the **contractor** *[Recovery Statement 2.2]*				
14.5 Add	Advance payment made to the **contractor** *[Recovery Statement 2.5]*				
14.6 Add	Other non-taxable amounts [25.3.10]				
15.0	**TOTAL**				

16.0 Currency | **CERTIFIED AMOUNT DUE FOR PAYMENT** to the: | #REF!

17.0 **Contract sum** execution (**Security** for construction - variable only) *(D8.0÷A12.0x100)* %

Security status
Mark each box as appropriate: ✓or ✕ D17.0 < 50% ☐ D17.0 ≥50% ☐ **Practical Completion** ☐ **Final Completion** ☐

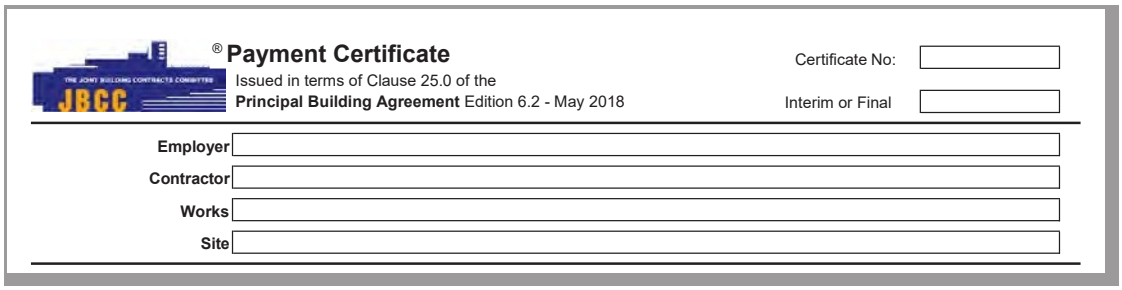
Name and address of the **principal agent**'s practice

Signature Date:
Signed by the **principal agent** who, as **agent** for the **employer**, certifies that the positive or negative amount stated in D16.0 is due and payable by the date stated [CD], irrespective of the date of signature of this certificate

HOW TO READ A PAYMENT CERTIFICATE

Payment certificates play a vital role in documenting and verifying the amounts payable to the contractor for work done, variations, and other associated costs. Therefore, as stated in clause 25.3, the certificate must contain all the data necessary for the accurate documentation of the project's cost. Payment certificates follow a standard template, as can be found in the below image with a header, body and footer.

The header contains certificate and project information, such as the certificate number, employer and contractor as well as the site worked on. This makes sense as it is easy to identify the project worked on and can be easily retrieved for filing purposes.



® **Payment Certificate**

Issued in terms of Clause 25.0 of the
Principal Building Agreement Edition 6.2 - May 2018

Certificate No:

Interim or Final

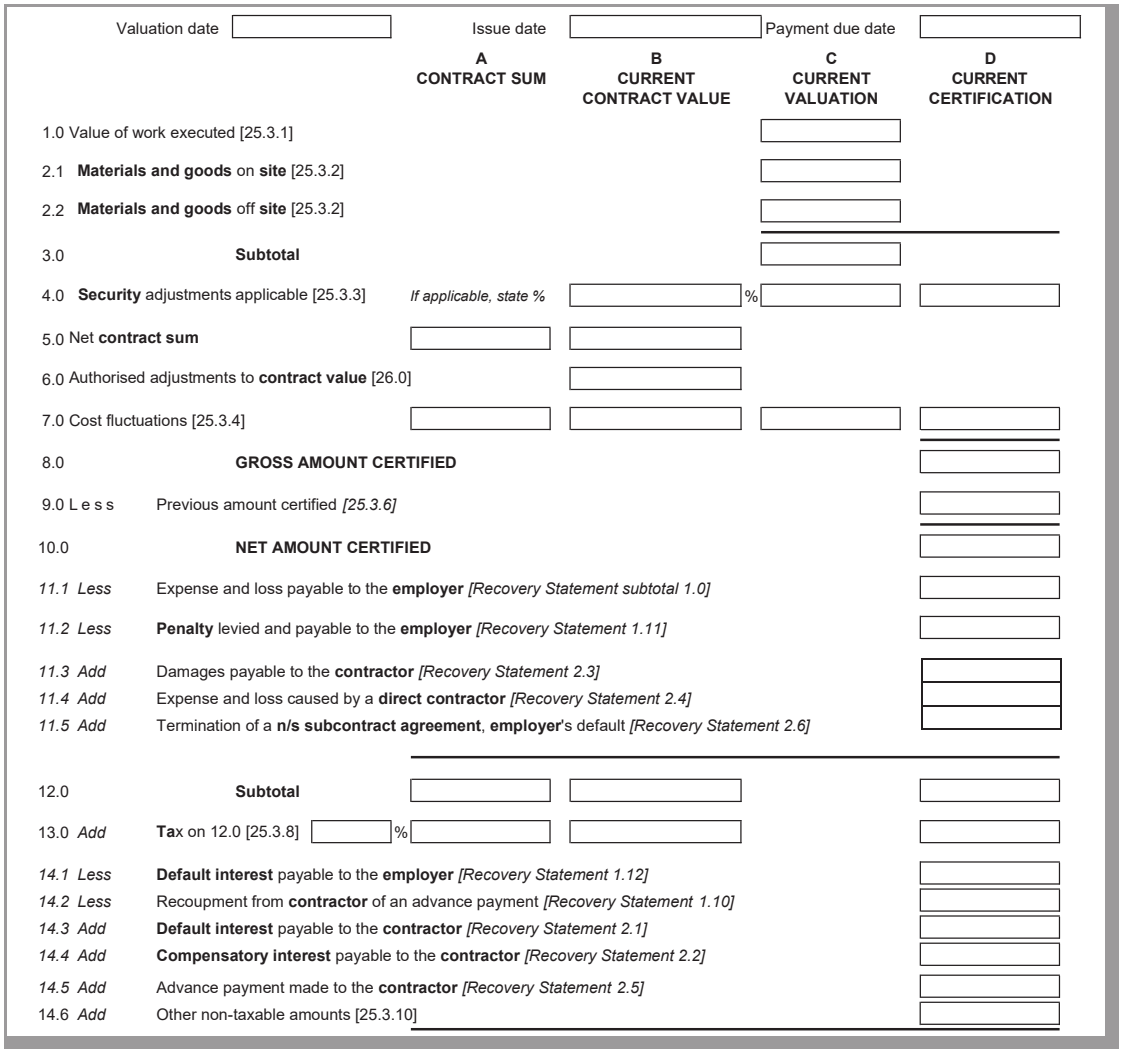
Employer

Contractor

Works

Site

We then have **the body, which contains information in the form of columns which cover financial data with timelines**, such as payment dates and amounts certified for payment. This is where most of the calculations occur. It is important to take note of where VAT is included.



Valuation date | Issue date | Payment due date

		A CONTRACT SUM	B CURRENT CONTRACT VALUE	C CURRENT VALUATION	D CURRENT CERTIFICATION
1.0	Value of work executed [25.3.1]				
2.1	**Materials and goods** on **site** [25.3.2]				
2.2	**Materials and goods** off **site** [25.3.2]				
3.0	**Subtotal**				
4.0	**Security** adjustments applicable [25.3.3]	*If applicable, state %*	%		
5.0	Net **contract sum**				
6.0	Authorised adjustments to **contract value** [26.0]				
7.0	Cost fluctuations [25.3.4]				
8.0	**GROSS AMOUNT CERTIFIED**				
9.0	L e s s Previous amount certified *[25.3.6]*				
10.0	**NET AMOUNT CERTIFIED**				
11.1	*Less* Expense and loss payable to the **employer** *[Recovery Statement subtotal 1.0]*				
11.2	*Less* **Penalty** levied and payable to the **employer** *[Recovery Statement 1.11]*				
11.3	*Add* Damages payable to the **contractor** *[Recovery Statement 2.3]*				
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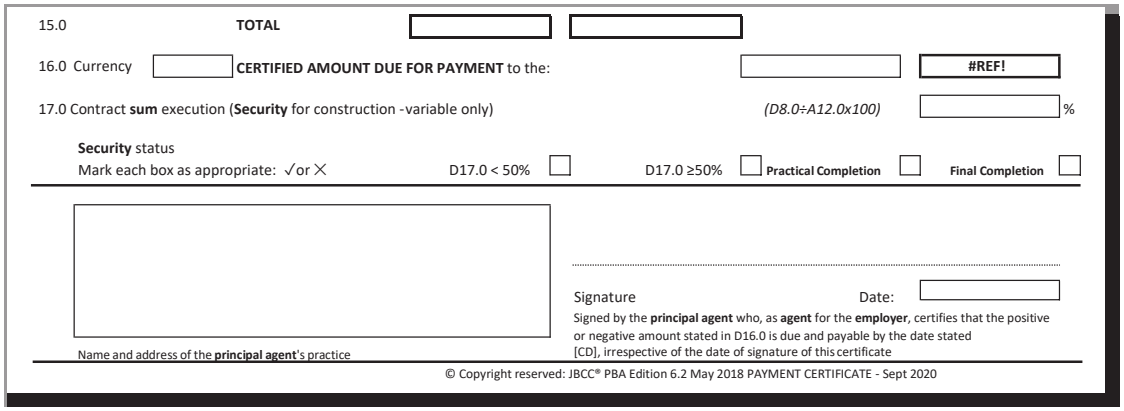
12.0	**Subtotal**				
13.0	*Add* **Tax** on 12.0 [25.3.8] %				
14.1	*Less* **Default interest** payable to the **employer** *[Recovery Statement 1.12]*				
14.2	*Less* Recoupment from **contractor** of an advance payment *[Recovery Statement 1.10]*				
14.3	*Add* **Default interest** payable to the **contractor** *[Recovery Statement 2.1]*				
14.4	*Add* **Compensatory interest** payable to the **contractor** *[Recovery Statement 2.2]*				
14.5	*Add* Advance payment made to the **contractor** *[Recovery Statement 2.5]*				
14.6	*Add* Other non-taxable amounts [25.3.10]				

Finally, **the footer includes information about the status of the project and a final official verification of the authenticity of the document**: the signature of the principal agent.


15.0 TOTAL

16.0 Currency CERTIFIED AMOUNT DUE FOR PAYMENT to the: #REF!

17.0 Contract sum execution (Security for construction -variable only) (D8.0÷A12.0x100) %

Security status
Mark each box as appropriate: ✓or ✕ D17.0 < 50% D17.0 ≥50% Practical Completion Final Completion

Signature Date:

Signed by the principal agent who, as agent for the employer, certifies that the positive or negative amount stated in D16.0 is due and payable by the date stated [CD], irrespective of the date of signature of this certificate

Name and address of the principal agent's practice

© Copyright reserved: JBCC® PBA Edition 6.2 May 2018 PAYMENT CERTIFICATE - Sept 2020

HOW TO COMPLETE A PAYMENT CERTIFICATE

Before we begin tackling the completion of a payment certificate, we have to understand what it contains based on the JBCC. An explanation of all content within it, as stated above, can be found in clause 25 of the JBCC PBA. However, an intuitive understanding will also aid in understanding how to read and use these documents.

From looking at the construction process in the previous chapter, we are aware that almost every step in the process can be traced to a clause within the JBCC. Clause 25, describes that **payment certificates act as a financial record of the construction process**.

All amounts are benchmarked and made with reference to the **contract sum, or the initial expected amount** for the project. The payment certificate thus documents what the **initial expected amount for the project was, how far the project has progressed relating to it, what events have occurred and what their financial implications are on it** and perhaps most importantly, **how close or have we stuck to the initial expected amount**. This tracing of monetary flows in a project, from employer to contractor and vice versa keep a clear and accurate record of any changes in the construction project and how this may impact the initial expected amount together with the projected timelines.

An important note to take is that **time and money are inextricably linked**. Where an adjustment may be made due to a lack of resources, funds or activity on any party's side may result in either financial expenses or a delay in timelines. **The most important timelines often referred to is the date of practical completion and site hand-over**. These two are important and should be monitored closely with respect to project progress.

The best way to keep track of all the above data which has a monetary and time-based consequences is by recording them in a legible format. In finance, it is common practice to use the set-up of **rows and columns** to easily locate, insert and retrieve project data.

The following discusses the columns set up in a payment certificate to do the aforementioned:

COLUMN A: **The Contract Sum** is a fixed amount of the budget/tendered value of the project.

According to the JBCC Guide to Completion and Payment:
"The contract sum i.t.o. the agreement remains fixed for the duration of the contract"

COLUMN B: **Current Contract Value** is the current value of the contract that has been adjusted based on events which occurred during the construction phases.

According to the JBCC Guide to Completion and Payment:
"The totals of Columns A and B give an immediate comparison between the contract sum and contract value at the time of issue of the payment certificate. The quantity surveyor, where appointed, determines the adjustments to the contract value for approval by the principal agent"

COLUMN C: **Current Valuation** Is the current valuation of the works executed in the passing stage.

According to the JBCC Guide to Completion and Payment:
"The principal agent (or the quantity surveyor) determines the valuation"

COLUMN D: **Current Certification** is the amount certified for payment.

According to the JBCC Guide to Completion and Payment:
"The principal agent certifies the current valuation amounts and items of expense and/or loss detailed in the recovery statement as well as tax on the applicable items"

ADDITIONAL RESOURCES:

Lecture Payment Certificate Typical Example Part 1

CLICK THIS LINK

EXAMPLE QUESTIONS:

The following questions are typical questions which may come out. Notice how the questioning style varies - from directly providing the values to providing you with insights where you will have to extract values yourself. Follow each example and note our hints as you progress.

Please Note: all examples, scenarios and questions are fictitious.

You are the Principal Agent on the following Contract and the JBCC PBA is in use. The following contract data is available. All amounts exclude VAT, unless otherwise stated.

- **Employer**
  Beautiful You – Dermatologist & Beauty Clinic PTY (LTD)
- **Principal Contractor**
  AB Construction PTY (LTD)
- **Works Identification**
  New 2 Storey Aesthetic Clinic, constructed of RC concrete framework, infill brickwork, external Farcade Cladding, Suspended ceilings, brick and drywall portioning internally, floor finishes, and all other services as selected, sanitary ware and external works.
- **Site Description**
  Portion 121 of ERF 753, 23rd Avenue, Rietfontein, Pretoria
- **Contract Sum**
  R253, 052, 786. 02c excl VAT
- **Security selected**
  Variable Construction Guarantee.

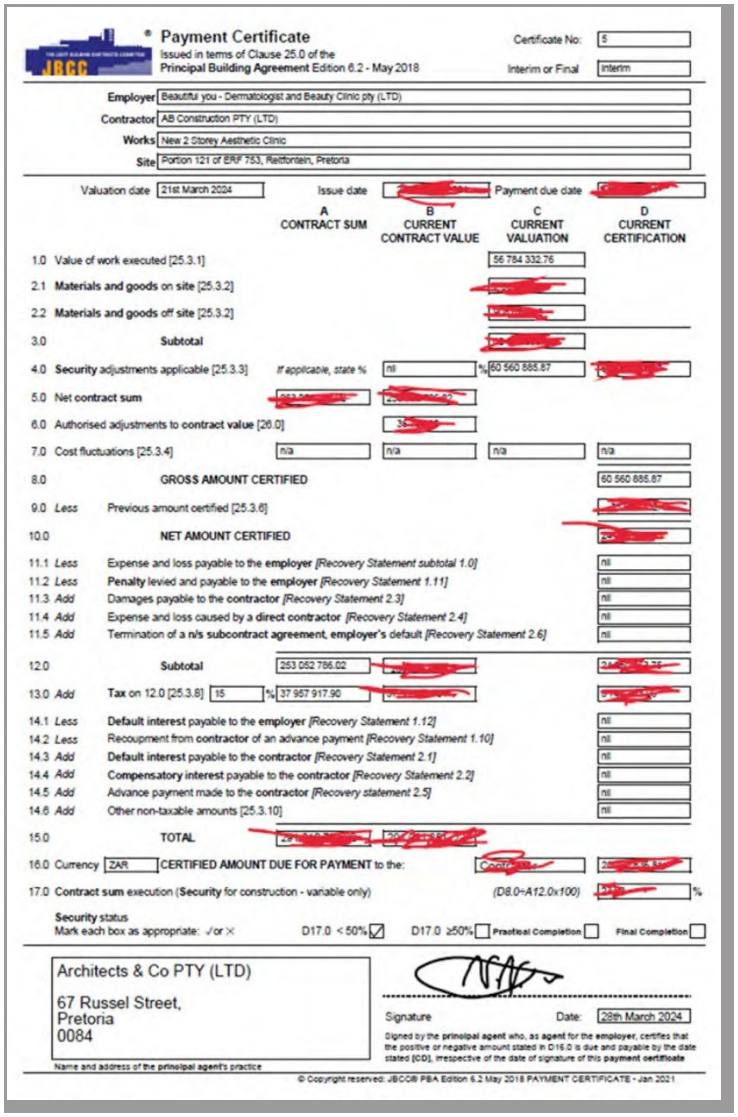
CPAP adjustment was not selected (Contract Price Adjustment Provisions). The Tender price is therefore fixed. The date on which Payment Certificates must be issued is the 28th of each month.

On 21st March 2024, you received the interim valuation no 5 from the QS, which contains the following information. All amounts exclude VAT:

- **Value of work executed to date:**
  R56,784,332.76c
- **Value of materials on site:**
  R2,867,880,22c
- **Value of Materials off site:**
  R908, 672,89c
- **Authorised adjustments to the contract value by means of additions**
  R 35, 780.26c
- **Previous Amount certified was:**
  R35,600,332,12c

EXAMPLE QUESTION:

You have initially completed the Payment Certificate; however, a disgruntled employee sabotaged it before it was to be sent for payment. Fill out and complete a new Payment certificate.



Payment Certificate

Issued in terms of Clause 25.0 of the **Principal Building Agreement** Edition 6.2 - May 2018

Certificate No: 5

Interim or Final: Interim

Employer Beautiful you - Dermatologist and Beauty Clinic pty (LTD)

Contractor AB Construction PTY (LTD)

Works New 2 Storey Aesthetic Clinic

Site Portion 121 of ERF 753, Rietfontein, Pretoria

Valuation date: 21st March 2024 | Issue date: [redacted] | Payment due date: [redacted]

		A CONTRACT SUM	B CURRENT CONTRACT VALUE	C CURRENT VALUATION	D CURRENT CERTIFICATION
1.0	Value of work executed [25.3.1]			56 784 332.76	
2.1	**Materials and goods on site** [25.3.2]			[redacted]	
2.2	**Materials and goods off site** [25.3.2]			[redacted]	
3.0	**Subtotal**			[redacted]	
4.0	**Security** adjustments applicable [25.3.3]	*If applicable, state %*	nil %	60 560 885.87	[redacted]
5.0	Net **contract sum**	[redacted]	[redacted]		
6.0	Authorised adjustments to **contract value** [26.0]		[redacted]		
7.0	Cost fluctuations [25.3.4]	n/a	n/a	n/a	n/a
8.0	**GROSS AMOUNT CERTIFIED**				60 560 885.87
9.0	*Less* Previous amount certified [25.3.6]				[redacted]
10.0	**NET AMOUNT CERTIFIED**				[redacted]
11.1	*Less* Expense and loss payable to the **employer** *[Recovery Statement subtotal 1.0]*				nil
11.2	*Less* **Penalty** levied and payable to the **employer** *[Recovery Statement 1.11]*				nil
11.3	*Add* Damages payable to the **contractor** *[Recovery Statement 2.3]*				nil
11.4	*Add* Expense and loss caused by a **direct contractor** *[Recovery Statement 2.4]*				nil
11.5	*Add* Termination of a **n/s subcontract agreement, employer's** default *[Recovery Statement 2.6]*				nil
12.0	**Subtotal**	253 052 786.02	[redacted]		[redacted]
13.0	*Add* **Tax** on 12.0 [25.3.8]	15 %	37 957 917.90	[redacted]	[redacted]
14.1	*Less* **Default interest** payable to the **employer** *[Recovery Statement 1.12]*				nil
14.2	*Less* Recoupment from **contractor** of an advance payment *[Recovery Statement 1.10]*				nil
14.3	*Add* **Default interest** payable to the **contractor** *[Recovery Statement 2.1]*				nil
14.4	*Add* **Compensatory interest** payable to the **contractor** *[Recovery Statement 2.2]*				nil
14.5	*Add* Advance payment made to the **contractor** *[Recovery statement 2.5]*				nil
14.6	*Add* Other non-taxable amounts [25.3.10]				nil
15.0	**TOTAL**	[redacted]	[redacted]		
16.0	Currency ZAR **CERTIFIED AMOUNT DUE FOR PAYMENT** to the:			[redacted]	[redacted]
17.0	**Contract sum** execution (**Security** for construction - variable only)			*(D8.0÷A12.0x100)*	[redacted] %

Security status
Mark each box as appropriate: ✓or×

D17.0 <50% ☑ D17.0 ≥50% ☐ Practical Completion ☐ Final Completion ☐

Architects & Co PTY (LTD)
67 Russel Street,
Pretoria
0084

Name and address of the principal agent's practice

Signature

Date: 28th March 2024

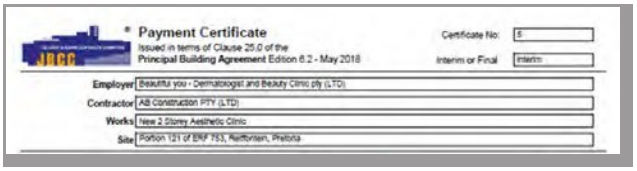
Signed by the **principal agent** who, as **agent** for the **employer**, certifies that the positive or negative amount stated in D16.0 is due and payable by the date stated (DD), irrespective of the date of signature of this payment certificate

Step 1: Identify what has been given.

In a payment certificate question as the above, list out what has been given immediately from the list of items which are necessary in order to fill out a certificate. If the project information from the header, body and footer is provided, you're well on your way to scoring all the marks. If not, it means you may have to work some out:

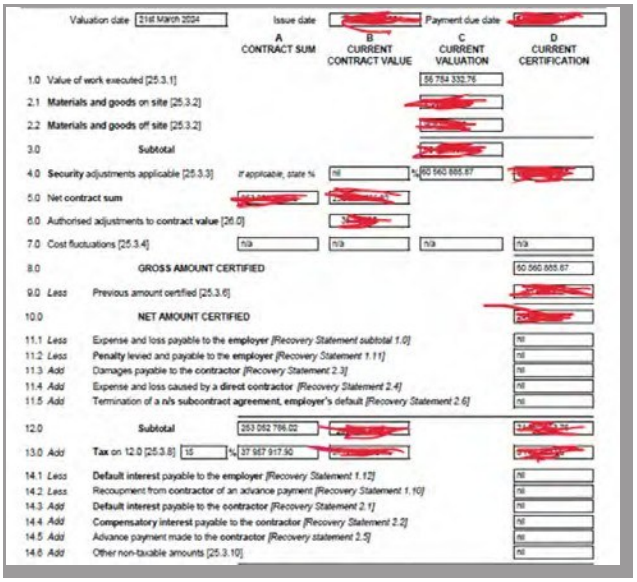
Header items = Yes

- Interim certificate number: Yes
- Employer name: Yes
- Contractor name: Yes
- Site name: Yes
- Issue dates: Yes



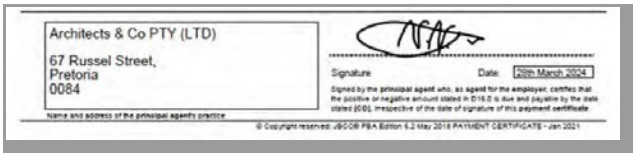
Body items = No

- Contract Sum: Yes
- Current Contract Value: Yes
- Current Valuation: Yes
- Current Certification: No
- Adjusted Values: Yes
- Previous amount certified: Yes
- VAT on all amounts: No



Footer items = Yes

- Principal Agent name = Yes
- Date issued = Yes
- Percentage progress completed = Yes



We now can proceed to fill in the values we have and work out those we do not.

Step 2: Fill in what is provided, work out what is not

Use the following hints to help you determine how to work out columns A - D:

- Column A - a.k.a - The initial value column. Never changes. The only addition which is far down is the tax which gets added.
- Column B - It's Column A but with everything that changed as a result of unaccounted for issues. They call these adjustments.
- Column C - Everything done on the project so far. Should be less than previous columns because it is building up to the main value.

- Column D - is column C, but taking out previous amounts paid. Remember, column C is everything done up until now - including things which have already been paid for. So, we don't want to pay again.

That's why we subtract everything from C by the amounts previously paid to the contractor. It will give us how much the contractor needs to get paid for his work done so far.

NB: Do not forget to add in VAT - Note that VAT in 2023 is 15% - always ensure your values are up to date and follow the latest regulations and legislation!

Complete your answers below:

Payment Certificate

Issued in terms of Clause 25.0 of the **Principal Building Agreement** Edition 6.2 - May 2018

Certificate No: 5

Interim or Final: Interim

Employer	Beautiful you - Dermatologist and Beauty Clinic pty (LTD)
Contractor	AB Construction PTY (LTD)
Works	New 2 Storey Aesthetic Clinic
Site	Portion 121 of ERF 753, Reitfontein, Pretoria

Valuation date: 21st March 2024 | Issue date: | Payment due date:

			A CONTRACT SUM	B CURRENT CONTRACT VALUE	C CURRENT VALUATION	D CURRENT CERTIFICATION
1.0		Value of work executed [25.3.1]			56 784 332.76	
2.1		**Materials and goods on site** [25.3.2]				
2.2		**Materials and goods off site** [25.3.2]				
3.0		**Subtotal**				
4.0		**Security** adjustments applicable [25.3.3]	*If applicable, state %*	nil %	60 560 885.87	
5.0		Net **contract sum**				
6.0		Authorised adjustments to **contract value** [26.0]				
7.0		Cost fluctuations [25.3.4]	n/a	n/a	n/a	n/a
8.0		**GROSS AMOUNT CERTIFIED**				60 560 885.87
9.0	*Less*	Previous amount certified [25.3.6]				
10.0		**NET AMOUNT CERTIFIED**				
11.1	*Less*	Expense and loss payable to the **employer** *[Recovery Statement subtotal 1.0]*				nil
11.2	*Less*	**Penalty** levied and payable to the **employer** *[Recovery Statement 1.11]*				nil
11.3	*Add*	Damages payable to the **contractor** *[Recovery Statement 2.3]*				nil
11.4	*Add*	Expense and loss caused by a **direct contractor** *[Recovery Statement 2.4]*				nil
11.5	*Add*	Termination of a n/s **subcontract agreement, employer's** default *[Recovery Statement 2.6]*				nil
12.0		**Subtotal**	253 052 786.02			
13.0	*Add*	**Tax** on 12.0 [25.3.8] 15 %	37 957 917.90			
14.1	*Less*	**Default interest** payable to the **employer** *[Recovery Statement 1.12]*				nil
14.2	*Less*	Recoupment from **contractor** of an advance payment *[Recovery Statement 1.10]*				nil
14.3	*Add*	**Default interest** payable to the **contractor** *[Recovery Statement 2.1]*				nil
14.4	*Add*	**Compensatory interest** payable to the **contractor** *[Recovery Statement 2.2]*				nil
14.5	*Add*	Advance payment made to the **contractor** *[Recovery statement 2.5]*				nil
14.6	*Add*	Other non-taxable amounts [25.3.10]				nil
15.0		**TOTAL**				
16.0		Currency ZAR **CERTIFIED AMOUNT DUE FOR PAYMENT** to the:				
17.0		**Contract sum** execution (**Security** for construction - variable only)			*(D8.0÷A12.0x100)*	%

Security status
Mark each box as appropriate: ✓or × D17.0 < 50% ☑ D17.0 ≥50% ☐ **Practical Completion** ☐ **Final Completion** ☐

Architects & Co PTY (LTD)

67 Russel Street,
Pretoria
0084

Name and address of the **principal agent's** practice

Signature

Date: 28th March 2024

Signed by the **principal agent** who, as **agent** for the **employer**, certifies that the positive or negative amount stated in D16.0 is due and payable by the date stated [CD], irrespective of the date of signature of this **payment certificate**

Memo

Payment Certificate

Issued in terms of Clause 25.0 of the **Principal Building Agreement** Edition 6.2 - May 2018

Certificate No: 5

Interim or Final: Interim

Employer Beautiful you - Dermatologist and Beauty Clinic pty (LTD)

Contractor AB Construction PTY (LTD)

Works New 2 Storey Aesthetic Clinic

Site Portion 121 of ERF 753, Reitfontein, Pretoria

Valuation date: 21st March 2024 | Issue date: 28th March 2024 | Payment due date: 11 April 2024

		A CONTRACT SUM	B CURRENT CONTRACT VALUE	C CURRENT VALUATION	D CURRENT CERTIFICATION
1.0	Value of work executed [25.3.1]			56 784 332.76	
2.1	**Materials and goods** on site [25.3.2]			2 867 880.22	
2.2	**Materials and goods** off site [25.3.2]			908 672. 89	
3.0	**Subtotal**			60 560 885.87	
4.0	**Security** adjustments applicable [25.3.3]	*If applicable, state %*	nil %	60 560 885.87	60 560 885.87
5.0	Net **contract sum**	253 052 786.02	253 052 786.02		
6.0	Authorised adjustments to **contract value** [26.0]		35 780.26		
7.0	Cost fluctuations [25.3.4]	n/a	n/a	n/a	n/a
8.0	**GROSS AMOUNT CERTIFIED**				60 560 885.87
9.0	*Less* Previous amount certified [25.3.6]				- 35 600 332.12
10.0	**NET AMOUNT CERTIFIED**				24 960 553.75
11.1	*Less* Expense and loss payable to the **employer** *[Recovery Statement subtotal 1.0]*				nil
11.2	*Less* **Penalty** levied and payable to the **employer** *[Recovery Statement 1.11]*				nil
11.3	*Add* Damages payable to the **contractor** *[Recovery Statement 2.3]*				nil
11.4	*Add* Expense and loss caused by a **direct contractor** *[Recovery Statement 2.4]*				nil
11.5	*Add* Termination of a n/s **subcontract agreement**, **employer's** default *[Recovery Statement 2.6]*				nil
12.0	**Subtotal**	253 052 786.02	253 088 566.28		24 960 553.75
13.0	*Add* **Tax** on 12.0 [25.3.8] 15 %	37 957 917.90	37 963 284.94		3 744 083.06
14.1	*Less* **Default interest** payable to the **employer** *[Recovery Statement 1.12]*				nil
14.2	*Less* Recoupment from **contractor** of an advance payment *[Recovery Statement 1.10]*				nil
14.3	*Add* **Default interest** payable to the **contractor** *[Recovery Statement 2.1]*				nil
14.4	*Add* **Compensatory interest** payable to the **contractor** *[Recovery Statement 2.2]*				nil
14.5	*Add* Advance payment made to the **contractor** *[Recovery statement 2.5]*				nil
14.6	*Add* Other non-taxable amounts [25.3.10]				nil
15.0	**TOTAL**	291 010 703.92	291 051 851 .22		
16.0	Currency ZAR **CERTIFIED AMOUNT DUE FOR PAYMENT** to the:			Contractor	28 704 636.81
17.0	**Contract sum** execution (**Security** for construction - variable only)			*(D8.0÷A12.0x100)*	23.93 %

Security status
Mark each box as appropriate: ✓or ✕ D17.0 < 50% ☑ D17.0 ≥50% ☐ Practical Completion ☐ Final Completion ☐

Architects & Co PTY (LTD)

67 Russel Street,
Pretoria
0084

Name and address of the principal agent's practice

Signature

Date: 28th March 2024

Signed by the **principal agent** who, as **agent** for the **employer**, certifies that the positive or negative amount stated in D16.0 is due and payable by the date stated [DD], irrespective of the date of signature of this **payment certificate**

JBCC: DISPUTE RESOLUTION

LITIGATION: TRADITIONAL

Litigation is the well-established process of resolving disputes through the court system. Parties in conflict present their cases before a judge or jury, who then render a binding decision. Litigation follows formal legal procedures, including discovery, witness testimonies, and the presentation of evidence. While litigation provides a rigorous and structured framework for dispute resolution, it often involves protracted timelines, substantial legal expenses, and a confrontational atmosphere.

ARBITRATION: ALTERNATIVE DISPUTE RESOLUTION (ADR) METHOD 1

Arbitration is an ADR method that closely resembles a simplified courtroom trial. In arbitration, an arbitrator, chosen by the parties or appointed by a governing body, reviews the evidence and arguments presented by both sides and issues a binding decision. It offers a more streamlined and efficient process compared to litigation while still ensuring a final and enforceable outcome. Arbitration is often preferred when parties seek the formality and authority of a court setting without its protracted delays.

ADJUDICATION: ALTERNATIVE DISPUTE RESOLUTION (ADR) METHOD 2

Adjudication is a specialized ADR process primarily used in the construction industry to address disputes swiftly, especially during ongoing projects. An adjudicator, typically an expert in construction matters, issues interim decisions on specific disputes to maintain the project's momentum. The decisions are provisional and subject to review in later dispute resolution stages. Adjudication is known for its rapid timelines and practical focus on project progress.

MEDIATION: ALTERNATIVE DISPUTE RESOLUTION (ADR) METHOD 3

Mediation introduces an impartial third party, known as a mediator, into the dispute resolution process. The mediator's role is to facilitate communication between the conflicting parties, guiding them toward a voluntary and mutually acceptable resolution. Unlike a judge in a courtroom setting, a mediator does not impose decisions but helps the parties find common ground. Mediation is a flexible and confidential process that often leads to a quicker resolution compared to litigation.

EXAMPLE QUESTIONS:

1. **In the JBCC-PBA, if a dispute or a disagreement has been declared…**
   a. the principal agent must cease issuing payment certificates
   b. the contractor must vacate the site
   c. both parties must continue to perform their obligations
   d. the employer takes possession of the site from the contractor

2. **Provide two examples of the lawful termination of a contract.**
   Any of the following (2.5 marks each – total of 5 marks)
   - The performance of all contractual obligations.
   - Mutual agreement to terminate if not all obligations are performed.
   - The ceding of obligations of a party to another party under a new contract.

3. **The proceedings followed in this dispute resolution are similar to regular litigation as the decision taken is final and binding.**
   Arbitration

4. **What would the next step be to consider if the first attempts by a party to negotiate a resolution upon a dispute is unsuccessful?**
   Mediation

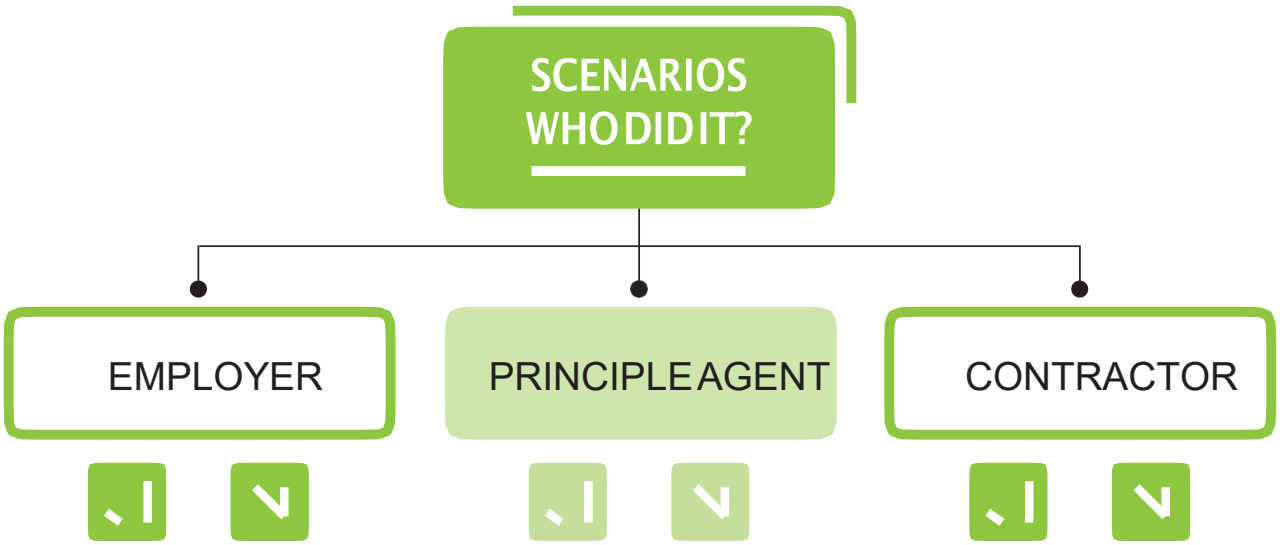
5. **In a certain dispute solution, the decision is considered to be final and binding. This means that the decisions made are not permitted to be reviewed by a court, unless specifically agreed to by the parties. Which dispute resolution is being referred to?**
   Mediation

6. **Resolving disputes in this manner, is usually unsatisfactory as the proceedings are typically more costly and technicalities in the construction industry is normally not well known by the party considering the claims and complaints.**
   Litigation

7. **This method of dispute resolution is similar to arbitration in that an independent third party is appointed to evaluate the dispute and issue a decision.**
   Adjudication

8. **Which of the follow is not regarded as an alternative dispute resolution method.**
   Select ONE (1) from the following list (2 marks)
   a. Settlement
   b. Mediation
   c. Adjudication
   d. Arbitration
   e. Litigation

JBCC: SCENARIO QUESTIONS



Contracts and scenario questions can be daunting for candidates writing the PPE, especially those who feel that they have had little or no construction and on-site experience. To mitigate this, we have produced a step-by-step guide to answering the scenario questions in both paper 1 and paper 2.

The above diagram indicates an approach to take when thinking about a scenario, looking at cases when the employer has caused a breach (indicated by a cross) and when the employer is able to claim his rights (indicated by a tick) and what does the JBCC say about each.

The following is a method which can be used to assist one in breaking down scenario questions to best produce a robust and well-reasoned answer with references.

1. Follow the basic method of applying yourself to the scenario:

The premise of the JBCC or any contract questions is based on **RIGHTS & RESPONSIBILITIES**. To administer the contract, here is a general method to apply to the scenarios:

- **What happened?**
- **Whose rights were violated?**
- **Whose responsibility is it to fix?**

2. You will now move onto gaining insight from a variety of sources.

Once you have applied this thinking and identified the role players, there are **3 sources** from which you can draw on to conceive your answer:

- **Common sense, logical thinking**
- **Experience**
- **JBCC or the relevant contract**

You will be required to use all 3 of the above.

3. **Referencing will be the next step toward justifying your logical arguments.**

Once you have identified the role players and drawn on your sources of information, you will be able to formulate an answer which resembles the following paragraph. Utilising common sense and logical thinking does not require any referencing, however to build the most robust and legally binding case which complies to the contract you will have to reference the JBCC or contract you are using. Referencing the contract is not much different to referencing an academic paper. You start with:

1) The name of the contract
2) The clause you are referring to
3) The contents of the clause

It follows a layout similar to the below:

According to the [Contract], **in clause** [number], **in the event of** [scenario] **the** [role player] **whose rights have been violated must have the event remedied by** [role player].

This is how it will be done [apply your thinking and state direct words from the contract].

Therefore, in conclusion [conclude with a sentence which summarises the previous insights]

4. **Now that you have a basic idea of how to construct an argument for a scenario, simulate scenarios for yourself based on common events and write it out for yourself. An example has been provided for you:**

At XXXX construction project, there is an employer, contractor and architect.

Based on the information provided, it appears that XXXX has violated the contract by doing XXXX.

The rights of XXXX have been breached and therefore it is XXXX responsibility to remedy the

contract.

According to the XXXX, in clause XXXX, in the event of XXXX the XXXX whose rights have been violated must have the event remedied by XXXX.

This is how it will be done XXXX.

Therefore, in conclusion, XXXX must be done to mitigate the impact of the situation.

5. **Simulation of a scenario is usually based commonly on one of the below circumstances and can be a combination of two or more scenarios. Fill in the 'XXXX' with the most common scenarios you can think of:**

a. Late payment
b. Contractor not completing works on time
c. contractor not arriving to the site
d. Extenuating circumstances
e. Client unhappy with quality of work
f. Building plans not submitted to council or in breach of municipal code
g. Site has underlying rock conditions proving it difficult to build/terrain not suitable for building
h. Snags picked up on site
i. Delictual duty

6. **So, for example, following the above structure and substituting the 'XXXX' with scenario C, we can create the following answer:**

At a NEW CONSTRUCTION project, there is an employer, architect and contractor.

The CONTRACTOR states that he is BUSY ON ANOTHER INCOMPLETE PROJECT and has violated the contract by NOT COMING IN TO WORK.

The rights of the EMPLOYER have been breached, and therefore it is the responsibility of the CONTRACTOR to remedy the situation. The PRINCIPAL AGENT will step in to mediate the situation.

According to the JBCC PBA which was signed, in clause 12, it is the duty of the contractor to hold onto the terms of agreement.

To mitigate the impact it, the PRINCIPAL AGENT may mediate between the 2 parties to remedy the situation.

Optional: The EMPLOYER could suspend or have contract with the contractor TERMINATED according to clause 28 and 29.

EXAMPLE QUESTIONS:

Please Note: all examples, scenarios and questions are fictitious

Question 1

In terms of the JBCC Principal Building agreement the Principal Contractor is entitled to a revision of the date to practical completion in certain circumstances and also entitled to an adjustment of the Contract Sum. What would the position be with regards to the above, in the following 4 circumstances?

Assume that the Contractor has fully complied with the requirements for making such claims.

Give full reasons for your answers:

a) Work has been stopped (four) working days by heavy rains which the principal agent considers not to be unusual for this time of the year. (5 marks)

b) Work on the critical path of the programmed is delayed because the contractor did not receive steel bending schedules from the structural engineer. The engineer's response was that the contractor did not provide him with a programme or request for the supply of information. (5marks)

c) A nominated subcontractor delays the progress of the works because the timber built-in units, which he manufactured in his factory were destroyed by a fire at his factory and had to be re-manufactured.

d) Work is delayed for 7 days because of the employer did not timorously pay local authority for a water connection for the supply of water to the works. (5 marks)

Answer

a) The contractor is entitled to a revision of the date of practical completion without adjustment of the contract value in terms of clause 23.1.1. The fact that the principal agent considered the rain not to be unusual is irrelevant; the contractor is entitled to delays caused by any inclement weather, not just exceptionally increment weather.

b) Clause 23.2.5 entitles the contactor to a revision of the date for practical completion for a delay caused by "failure to issue or the late issue of a contract instruction following a request from the contractor". However, if the Contractor does not request such instruction, he will not be entitled to his claim. A programme for the supply of information would be considered to be a request for information. [12.2.6 &13]

c) The delay was not caused by any default of the subcontractor, but by an event beyond his control. In terms of clause 23.1.3/6 he would be entitled to a revision of the date for practical completion without an adjustment of the contract value.

d) It is the obligation of the contractor, not the employer, to arrange for a water connection for water for the works [12.2.15], including paying therefore, and consequently the contractor is not entitled to a revision of the rate for practical completion. The position is different under the Minor Works Agreement, where the employer may be required to arrange for the water connection.

Question 2

2.1 You have been appointed by Jack Sprat as Principal Agent to administer the JBCC Principal Building Agreement, Edition 6.2 – February 2018 during stage 5 for the construction of a 15 story Hotel. In your own words explain why you believe the JBCC PBA should be used?

2.2 What are some of the Principal Agent's responsibilities during stage 5?

2.3 Mr Jack Sprat indicated that he wants to make changes and expand the Children's Playroom area and the Gym area at the hotel. Explain briefly to the client what would be required from the following affected parties, to ensure that the changes are executed correctly and without any future issues.

2.3.1 Architect (1)

2.3.2 Principal Agent (1)

2.3.3 Engineer (1)

2.3.4 Quantity Surveyor (1)

2.3.5 Contractor (1)

Answer

2.1

1. The JBCC Minor Works Agreement is a relatively simple agreement ideally suitable for small to medium projects of short duration where the work is not of a very complex nature.
2. It also provides essentially for:
   - One Agent to represent the Employer;
   - One Completion phase and not multiple Sections;
   - A simplified subcontract process where the Principal Contractor uses only his own and known Domestic Subcontractors8 and no N&S Subcontractors;
3. No Contract Price Adjustment, but a fixed contract price; etc – other benefits

2.2

- Administer the building contract. (3)
- Give possession of the site to the contractor. (3)
- Issue construction documentation. (3)

2.3

2.3.1. Architect (1)

Design and draw the plans to indicate the changes. (3)

2.3.2 Principal Agent (1)
Liaise with all parties. (3)

2.3.3 Engineer (1)

Check the structural components together with the changes. (3)

2.3.4 Quantity Surveyor (1)

Calculate the building material quantities. (3)

2.3.5. Contractor (1)

Determine the additional time. (3)

Question 3

Acting on behalf of the governing body of LearnTopia Private School, the Head Teacher, Ms Felicia Pricely, appointed Mr Martin Young, a recently registered architectural professional, to provide the standard scope of architectural services for the construction of a student residential unit for the school. Due to the limited funds available for the project, it was agreed that a quantity surveyor would not be appointed during construction, and that Mr. Young would carry out valuations and issue monthly interim payment certificates in accordance with the obligations of principal agent.

LearnTopia appointed Flying-Bye Construction as the contractor for the project in terms of the JBCC Principal Building Agreement. During the third month of construction, Ms Pricely contacted Mr Young i n a panic: the governing body had discovered that the amounts certified and duly paid to Flying-Bye Construction over the first two months of the project add up to a total of more than 70% of the contract sum. This was despite the fact that less than 15% of the construction works had been carried out, with a further seven months of the construction period remaining.

Aside from the issuing of interim payment certificates, describe TWO (2) further obligations of the principal agent as part of the JBCC Principal Building Agreement (3 marks each – 6 marks total).

Answer

Any TWO of the following – 3 marks each:

FROM Memo:

- Administration: In administering the contract, the principal agent performs certain of the employer's contractual obligations, and accepts the performance of certain obligations of the contractor. The principal agent receives all notices, claims and other communications from the parties.
- Inspections and instructions: The principal agent (and other agents) are obligated to inspect the works as these progress and to inform the contractor of the standard and state of completion required in order to achieve practical completion. These inspections also entail an assessment of progress of the works in financial terms. Prior to practical completion, the principal agent may issue contract instructions to the contractor regarding alterations to the design, standards or quality of the works – provided that such instructions do not substantially change the scope of the works.
- Completion certificates: On achievement of practical completion, the principal agent issues the certificate of practical completion (or a list for practical completion that outlines the outstanding work required where practical completion was not achieved). Where final completion has been achieved, the principal agent issues the certificate of final completion which defines that the contractor's obligations have been fulfilled other than for latent defects; where final completion has not been achieved, the principal agent issues a list of outstanding work required in order to achieve final completion.

Question 4

Mr Young chose to ignore the potential risks faced on the project because he believed that the first two payment certificates were correct as he used the exact amounts claimed by the contractor. In terms of the JBCC Principal Building Agreement, describe why Mr Young was incorrect in his reasoning.

Answer

Let's apply our formula to this question to create a more robust answer which is logical, comes from the JBCC as a source and references it:

At a NEW CONSTRUCTION project, there is an employer, architect and contractor who have undertaken the JBCC Principal Building Agreement.

The CONTRACTOR claimed for work THAT HE HAS NOT YET COMPLETED and has violated the contract by CLAIMING PAYMENT FROM THE EMPLOYER. ADDITIONALLY, THE PRINCIPAL AGENT WAS NEGLIGENT IN HIS DUTY DUE TO HIS INEXPERIENCE AND ALLOWED THESE PAYMENTS TO BE MADE.

The rights of the EMPLOYER have been breached, and therefore it is the responsibility of the CONTRACTOR to remedy the situation. The PRINCIPAL AGENT will step in to mediate the situation.

According to the JBCC PBA which was signed, in clause 12, it is the duty of the contractor to hold onto the terms of agreement.

To mitigate the impact, the PRINCIPAL AGENT may mediate between the 2 parties to remedy the situation. He is required to conduct his DUE DILIGENCE as stated in the JBCC PBA and INSPECT THE EXISTING WORKS TO ASSESS THE EXTENT OF IMPACT IT HAS ON THE PROJECT.

TIMELINES WILL NEED TO BE REVISED AND DISCUSSED WITH THE EMPLOYER. THE WORKS WILL NEED TO BE INSPECTED, AND THE CONTRACTORS CONTRACT MAY BE TERMINATED ACCORDING TO CLAUSES 28 AND 29.

ADDITIONALLY, TO PREVENT THIS FROM OCCURRING IN FUTURE, THE PRINCIPAL AGENT WOULD NEED TO PREPARE AND ISSUE THE FINAL ACCOUNT TO THE CONTRACTOR WITHIN 90 DAYS OF FINAL COMPLETION.

SOURCES:

SACAP Professional Practice Handbook.

SAYAP Day Sessions Study Slides by Lizelle Jackson in Partnership with SAIBD.

SAIA Study Guide.

JBCC Principal Building Agreement.

JBCC Guide to Payment Certificates.

Past Papers from 2010 - 2025.

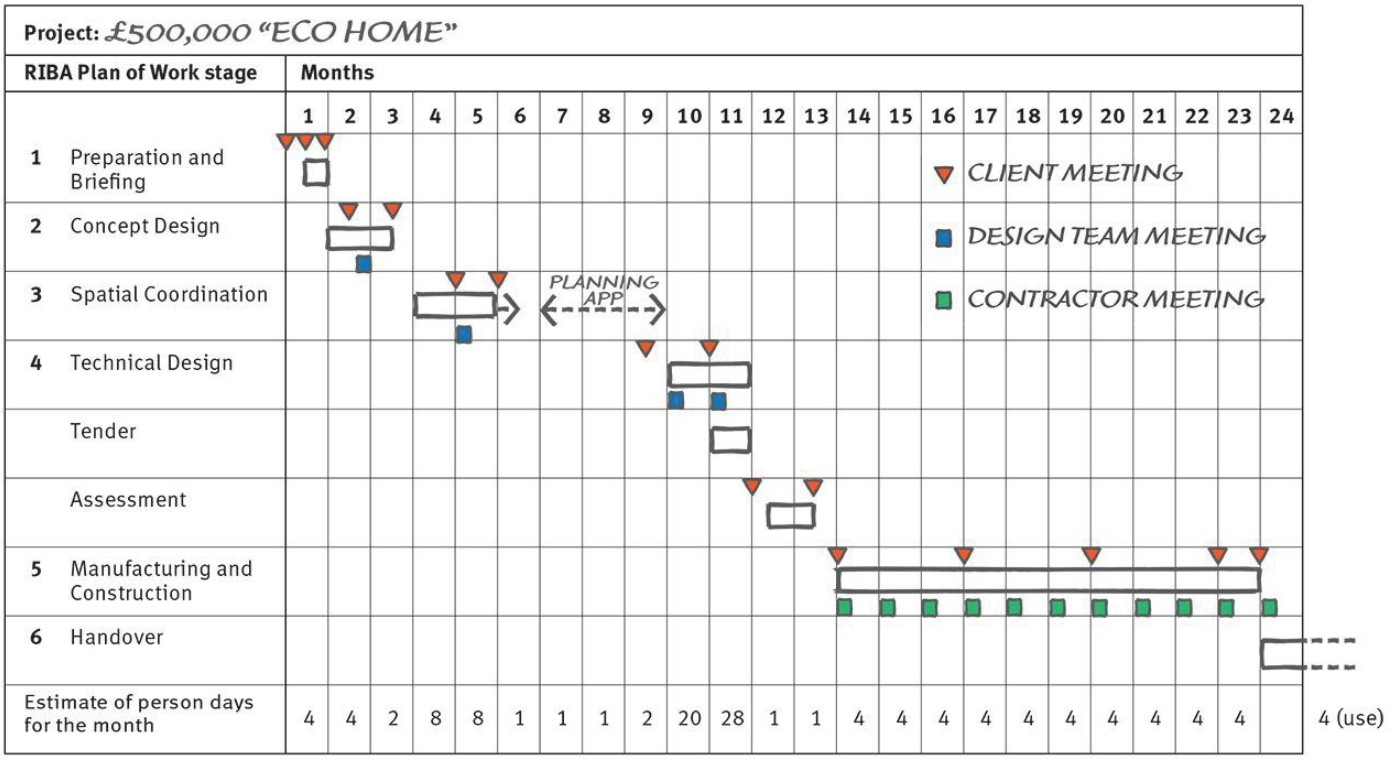
ARCHITECTURAL PROFESSIONAL PRACTICE EXAM

SUPPLEMENTARY GUIDEBOOK

This guidebook was created to supplement the presentation offered at the bi-annual SACAP PPE Webinar. It aims to cover topics which expand on SACAP's shared vision to ensure the Professional Practice Examination is relevant and contextually appropriate. Research data used to compile this document can be found from the independent research organisation, Archi-ology.

PROJECT MANAGEMENT: GANTT CHARTS IN ARCHITECTURAL PRACTICE (PAPER 02)

AN APPROACH TOWARD VISUAL PROJECT MANAGEMENT



Total 125 person days @ £400 per day = £50,000 *plus* profit 15% *plus* risk 5% = £60,000

Source: https://www.ribaj.com/intelligence/practice-management-webinar-setting-the-right-fees

CLICK THIS LINK

WHAT IS A GANTT CHART?

For those who may not have come across it as yet, a Gantt chart is a project planning tool used to visually represent the timeline of tasks in a project. Each task is represented by a horizontal bar; the length and position of the bar reflect its start date, duration, and end date.

In our industry, it is typically used in the construction stage, however it can be used throughout both project design and construction processes.

Gantt charts help architectural professionals manage:

- Time (duration of stages)
- Dependencies (what must be done before what)
- Overlaps (parallel tasks like documentation and procurement)
- Critical paths (the sequence that dictates project duration)

WHY USE A GANTT CHART?

As any experienced professional will tell you - architectural projects are not linear. They involve multiple overlapping workstreams — council approvals, client sign-offs, procurement, construction sequencing, etc. A Gantt chart helps by:

- Creating clarity for the team
- Offering a realistic project roadmap
- Tracking delays or slippage
- Supporting Stage 1–6 planning as required by SACAP

HOW TO READ A GANTT CHART

Component	Description
Tasks	Listed vertically (e.g., Concept Design, Council Submission)
Time Axis	Horizontal (days, weeks, months)
Bars	Horizontal bars show the start and end date of each task
Dependencies	Lines or arrows that show which tasks must be completed before others can begin
Milestones	Flags or diamonds that mark key decision points or deliverables
Progress Tracker	Coloured shading within bars to reflect progress

THE GANTT CHART CAN BE CONSIDERED A LEGAL DOCUMENT

In contracts like JBCC or FIDIC, your project programme may be:

- Attached as a contractual appendix
- Used in claims for extension of time (EOT)
- A benchmark for performance penalties

Ensure that:

- Milestones are realistic and agreed upon in writing
- Programme updates are dated and traceable
- Revisions are issued formally when scope or timelines shift

COMMON MISTAKES TO AVOID

Mistake	Why It's Risky
Overlapping dependent tasks without logic	Results in unrealistic timelines
Ignoring statutory approval times	Causes project delays
Failing to update progress	Undermines project tracking
Omitting milestones	Makes it hard to measure deliverables

USEFUL TERMS TO KNOW FOR THE EXAM

- **Critical Path:** The longest sequence of dependent tasks that dictates project duration
- **Float/Slack:** Extra time allowed for a task without delaying the project
- **Baseline Programme:** The approved version of the timeline before changes begins
- **Progress Update:** An adjustment that shows % completed

POSSIBLE EXAMINATIONQUESTIONS

QUESTION 1:

A 21-week project by Demo Contractors is scheduled in the Gantt chart below. Due to the recent KZN floods, the small-scale project had to be delayed in the Ground Works phase. This pushes the project deadlines out by 2 (two weeks).

This project is run under the JBCC Principal Building Agreement. You are the appointed principal agent on this project. The contractor wishes to ask for an extension of time as a result of the floods.

Activity ID	Activity Name	TIMESCALE (WEEKS)																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
WBS 1 : GROUND WORKS																						
1	Excavation																					
2	Backfill and Compaction																					
WBS 2 : STRUCTURAL WORKS																						
3	Reinforced Concrete Works																					
4	Steel Works																					
WBS 3 : FINISHING WORKS																						
5	Brick Laying																					
6	Wall Plastering																					
7	Painting																					
8	Floor Covering																					
WBS 4 : ELECTRICAL WORKS																						
9	Conduit Works																					
10	Cable Pulling																					
WBS 5 : MECHANICAL WORKS																						
11	Plumbing Works																					
12	Fittings																					

Source: Gantt Chart Example - https://www.projectcubicle.com/gantt-chart-example/

CLICK THIS LINK

1.1. Under the JBCC, what is the term used to describe this natural event which has caused the delay in the works? (2)

Force Majeure

QUESTION 2:

21 The critical path has been delayed. Is the contractor within his right to claim for an extension of time? (3)
Yes. According to the JBCC PBA, if such an event occurs which is out of the control of the contractor, he is within his right to claim for such an extension

22 If the contractor is granted an extension of time, how far out would this move the Structural Works phase? (2)
Based on the graph, the Structural Works phase will only commence in week 4.

23 Should the above come into effect, is there any slack for the steel works phase to run as per project plan? (2)
No, as it is dependent on the completion of the Structural Works.

24 The bricklayer and the wall plasterer are in conflict about their timelines as the bricklayer decides that plastering should only commence in Week 14. Explain if this is justified. (4)
This is not justified on the part of the bricklayer - and they should come to consensus on what their timelines will look like. Their phases run parallel to each other. However, logically speaking, it is necessary for the bricklayer to commence his work before the wall plasterer. However, it is not necessary for him to complete his work before plastering commences.

QUESTION 3:

3.1 The client refuses to accept the request for an extension of time and wishes to terminate the contract. Explain to the client the due process to follow before terminating a contract, as well the terms around which this can occur. (5)
The client has the following options: i) Attempt to remedy the situation; ii) Formally request the termination of the contract following the rules laid out in clause 28, 29 and 30; failing to do either of the above within reason will lead to a breach in contract on the part of the client

THE BUSINESS OF ARCHITECTURE (PAPER 01)

RETHINKING OUR PRACTICES THROUGH VALUE OFFERING

Source: SACAP October 2024 PPE Webinar Presentation

AN HONEST LOOK AT OUR PROFESSION'S FINANCIAL LANDSCAPE

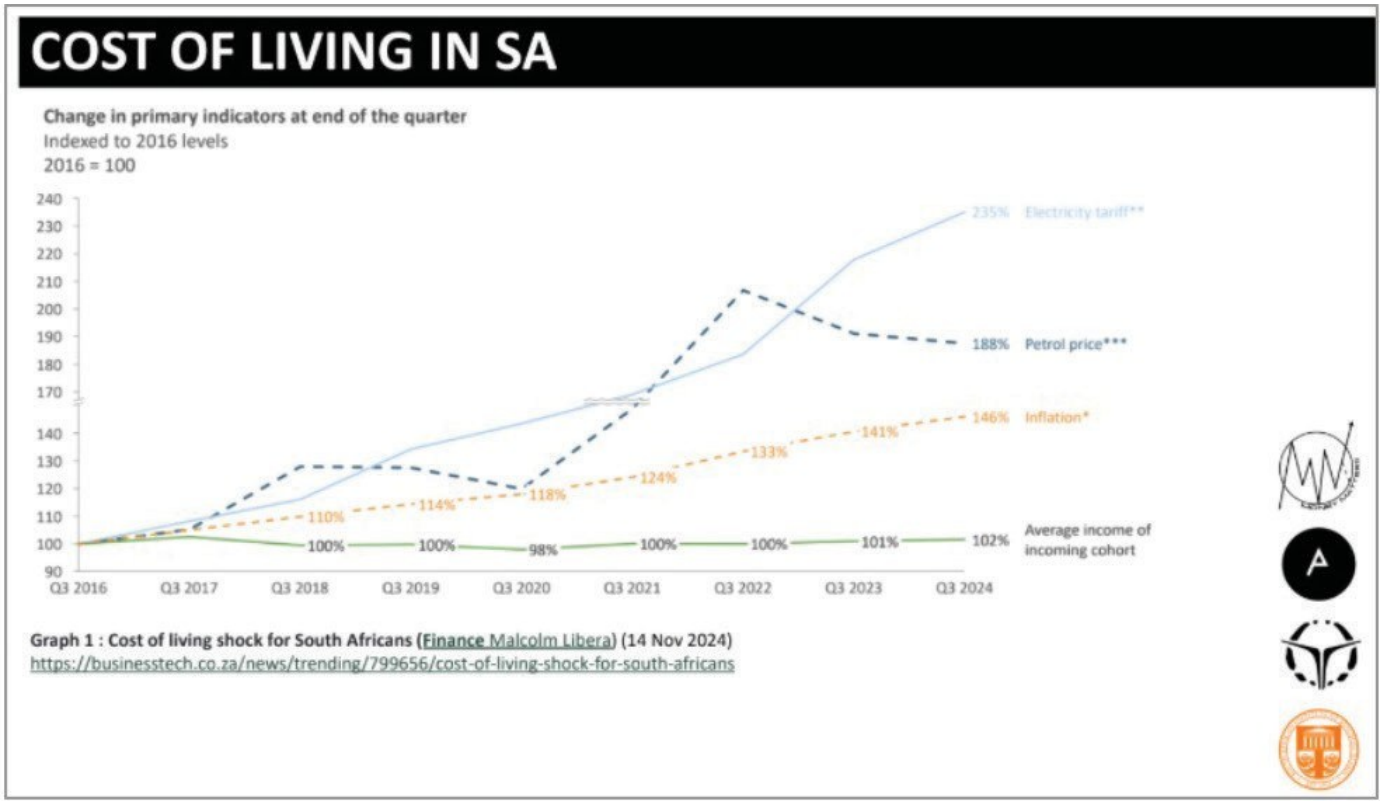
"We are taught to value design, but seldom are we taught how to value ourselves."

Despite the prestige and responsibility that come with shaping the built environment, architectural professionals, from draughtspersons to senior technologists to architects, consistently rank among the least financially rewarded in the built environment sector.

This is not anecdotal. It's a lived experience. Many practitioners, particularly early-career professionals and small practice owners, are burdened by overheads, low fees, delayed payments, and a culture of undercharging, often justified by a misplaced sense of social empowerment.

Financial well-being is often overlooked and incorrectly branded as 'selfishness' amongst professionals. Whilst this is a mostly uninformed perspective, it is also a powerful reason as to why many professionals are averse to a financially healthy, profit driven business. Prioritising your financial health as a soon-to-be professional is just as critical as providing a competent service.

MONEY MATTERS



Source: Money Matters Presentation on "Why Are We the Underpaid Profession?" - hosted by SAIBD, Y: A SAIBD INITIATIVE & An Architect

In early 2025, a CPD-accredited seminar titled "Why Are We the Underpaid Profession?" from the Money Matters team at Y: A SAIBD Initiative explored this issue in depth. Attendees from various professional levels echoed the same concern: "We're passionate, but we're not profitable."

Key insights from the CPD session:

- Architectural professionals in comparison to most other professionals (e.g. Engineers) are the lowest paid
- Architecture students graduate with technical skills but little to no business education or financial literacy skills
- Many professionals charge below SACAP fee guidelines as they are deemed unaffordable by the public
- Architectural designers barely make the nationwide minimum wage, and in many cases do not make the minimum wage
- Under-pricing has become normalised, resulting in a "race to the bottom"
- Clients seldom understand the value of architectural services

THE GLOBALPROBLEM

This is not uniquely South African. From the Royal Institute of British Architects in the UK to the American Institute of Architects in the US, architecture is widely acknowledged as a financially undervalued profession despite its social and technical impact.

Contributing Global Factors:

- Low fee competition
- Misalignment between risk and reward
- Lack of unified advocacy
- Rise in cost of living

This is a systemic issue, which can be addressed — not through waiting for reform — but by designing better businesses, diversifying income streams, and communicating value more effectively.

DESIGNING A BUSINESS LIKE YOU DESIGN A BUILDING

"If you can design a complex mixed-use building, you can design a practice model that pays you."

In Pellegrino and Rudin's ***Out of Architecture***, the authors discuss how through diversification by means of emerging technologies, architectural designers tap into their polymath capabilities to reinvent their value proposition.

Referencing this notion, the final chapter of the ***What was Architecture? the Future of Architecture*** book by **An Architect** discusses how by reinventing the idea of an architect and redesigning architectural practice around it, the profession can introduce a value-based system as opposed to the predominant time or project-cost based fee calculation.

Architecture redefined by value allows for greater financial prospect. In essence, architectural design is problem-solving through structured processes. And your business should follow the same principles. Let's look at a few examples of how to implement this analogy going forward:

Architectural Design Element	Business Design Equivalent
Site Analysis	Market Research
Concept Design	Business Model Ideation
Construction Drawing	Service Offerings & Pricing
Specification	Terms, Contracts, Policies
Supervision	Client Management Systems

DIVERSIFYING YOUR BUSINESS MODEL

Traditional practices rely solely on project-based design fees (often long-lead, high-risk, and capped). Diversification is often seen as the key to financial stability and resilience.

Consider Adding:

- **CPD Training & Accreditation**
  Host or facilitate workshops from company data which does not compromise IP, but definitely promotes your firm's expertise.
- **Technology Consulting**
  Have an in-house BIM department of specialist? Offer services to firms needing AI integration for drawing generation, BIM optimization, or client visualisation
- **Productisation**
  Sell templated drawing sets, checklists, pro forma contracts, or Revit families.
- **Design-for-Development**
  Collaborate on property developments where you're rewarded with equity or revenue share, not just a once-off fee.
- **Strategic Facilitation**
  Offer services such as urban development advisory, community consultation or climate-smart audits for schools, NGOs, and municipalities.

UNCONVENTIONAL STRATEGIES YOU SHOULD CONSIDER

"Test fast to fail fast" is a similar idea to Mark Zuckerberg's "Move fast and break things". Whilst most architectural firms may be averse to this, the core idea is that one finds out what works in a field quickly, before building an elaborate offering or product which has little to no market adoption.

The aim of a business is sales and profit - and if this is not what your goal is, then you are instead creating a social impact organisation, not a business. And that's alright - however if it is financial stability, one is looking for, experimentation to find where revenue lies is a great way to assess product market fit - or the viability of a business idea.

Doing what is unconventional is a great way to find out what the market values. Here are some interesting ways to consider finding your spot in the market:

- **CPD as Brand:** Use your events as both income and visibility.
- **Licensing Content:** Allow others to use your frameworks (BIM families, YouTube channel content, etc.)
- **Architecture-as-Media:** Use short videos, reels, and case studies to build your authority and generate leads.

As SACAP pushes for ethical, professional, and competent practice and the world rapidly evolves around us, competence as a professional will now begin to include business design thinking.

POSSIBLE EXAMINATIONQUESTIONS

QUESTION 1:

Describe three ways in which an architectural practice can diversify income beyond project-based design fees (6).

Three ways to diversify income beyond project-based fees:

1. CPD Training & Educational Content
   Create and deliver accredited workshops or online courses, generates income and builds authority.
2. Productisation of IP
   Sell templates, toolkits, or AI-generated design assets. Ideal for passive income and scalable offerings.
3. Strategic Consulting Services
   Offer advisory work to NGOs, schools, or developers on compliance, feasibility, or spatial planning, less time-intensive than full design.

QUESTION 2:

Explain why discounting design services may result in long-term professional harm (6).

Why discounting design fees causes long-term harm:

1. Devalues the Profession (1)
   Leads to a market expectation of cheap services, harming the industry's overall reputation. (1)
2. Increases Legal & Financial Risk (1)
   Undercharging may invalidate PI insurance and force corners to be cut on quality or supervision. (1)
3. Undermines Business Sustainability (1)
   Leaves no room to invest in staff, systems, or emerging technologies — restricting growth and innovation. (1)

QUESTION 3:

What is the role of emerging technologies such as 3D Printing and Artificial Intelligence in expanding our services in the architectural profession (5)?

AI enables new services like automated feasibility studies and new forms of design visualisation. 3D Printing supports physical prototyping and modular product development, opening opportunities in product manufacturing, housing, education, and public infrastructure.

Together, these tools allow architects to diversify their offerings, build new revenue models, and respond to local and global shifts in the built environment.

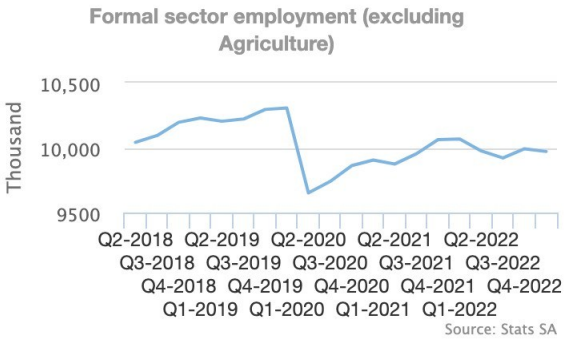
Emerging technologies are useful as innovation is a fundamental pillar in economic growth. However Emerging Technologies must be tested and critically evaluated before wide-scale adoption. It is only through this method that long term sustainability of these technologies will yield valuable outcomes.

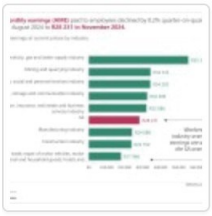
INTERPRETINGSTATISTICALDATA(PAPER01)

USINGDATA TO BUILDANINFORMEDARCHITECTURALPRACTICE

QLFS QLFS QLFS

QES QES





South Africa Sees Modest Job Growth Amid Year-Long Decline

After a challenging year of job losses, South Africa's formal non-agricultural sector showed a glimmer of recovery in the final quarter of 2024. According to the Quarterly Employment Statistics (QES, Q4:2024) survey released by Statistics South Africa (Stats SA), employment in the sector rose by 12 000 jobs, reaching 10,64 million by December 2024. This

read more »

Posted on March 25, 2025 Facebook Twitter Linkedin

Source: Statistics South Africa (StatsSA)- https://www.statssa.gov.za/?page_id=737&id=1

CLICK THIS LINK

In an environment of shifting housing demand, fluctuating infrastructure spend, and unpredictable economic conditions, the contemporary architectural professional cannot afford to operate without context. StatsSA (Statistics South Africa) provides rich, free, public data that can help forecast, position, and future-proof your business.

WHY STATISTICS MATTER FORARCHITECTURAL PRACTICE

"Design is responsive — not just to the client brief, but to economic and demographic signals."

Before undertaking any business endeavours - and in our case, an architectural business - one should be sure to conduct market research for demand and target audience. Statistics offers one assistance on understanding the market's needs
- and quite easily one can gain an understanding that statistics is more than numbers - it offers insight into where money can be *extracted from the economy*. From a strategic standpoint, understanding statistics supports:

- **Business Forecasting** – Will public or private sector spend dominate next year?
- **Service Diversification** – Is the demand growing for educational, healthcare, or residential infrastructure?
- **Geographic Targeting** – Which provinces or metros are seeing construction growth?
- **Fee Positioning** – Are clients in distressed sectors less likely to afford full services?

Knowing the macro trends gives the practitioner a *competitive edge,* and positions them as an informed partner rather than just a service provider. This means your clients can find greater value in what you provide as a service - translating into referrals and a robust reputation.

SOURCESOFSTATISTICALDATAFORARCHITECTURALDESIGNERS

Sources are critical to ensure that the truthfulness of your data. Reliable sources ensure that the base from which one makes decisions is sound and credible. Without reliable data sources, decisions made may not have intended consequences. The following are a small selection of places where one can obtain local and relevant data for the South African context:

- **StatsSA – Quarterly Statistics**
  Number of building plans passed, value of construction, additions vs new works. Trends in construction, real estate, professional services, and finance. Urban growth, rural decline, youth demographics, aging population trends
- **Municipal Infrastructure Reports - Example City of Cape Town**
  Direct correlation to public-sector-led opportunities in housing, roads, clinics, etc.
- **Professional Bodies & Voluntary Associations - Example PIA**
  Examples are the SACAP Annual Report and the PIA Annual Fee Reports which detail views about the architectural profession based on data collected from practitioners.
- **Independent Research Consulting Services - Example McKinsey & Archi-ology**
  Research focused organisations such as McKinsey and Archi-ology are examples of places to get relevant and insightful information about the industry.

READING STATISTICAL CHARTS:A PRACTICAL APPROACH

Accurate data is great - when you can read it. The point of data is to drive insight. Insight becomes difficult to understand when there are only numbers as a form of abstraction of real-life events. So, as designers whose primary aim is to make accessible that which is not easily obtainable, visualisation serves to solve this problem.

Charts, graphs, diagrams - all are ways to make information accessible. By becoming familiar with the conventions used in statistical representation, professionals become more acquainted with the language of data analysis.

TYPES OF CHARTS YOU'LL ENCOUNTER

Chart Type	Use Case
Bar Charts	Compare provincial or municipal building plans passed
Line Graphs	Show trends (e.g. total construction value over time)
Pie Charts	Distribution of budget by department (e.g. Education vs Health)
Tables	Raw numerical data – often more detailed but harder to read
Index Charts	Confidence or performance trends over time

WHAT TO LOOK FOR

1. **Title:** Always check *what the chart is measuring and in what unit* (e.g. Rands, % change, sqm)
2. **Time Period:** Data is only relevant if the time frame is understood
3. **Comparison Base:** Is it year-on-year, quarter-on-quarter, or nominal values?
4. **Growth vs Volume:** Are more buildings going up, or just higher value ones?

Insight: A 40% increase in “residential buildings value” might reflect cost inflation, not construction growth. It is important to be able to consider such nuances.

APPLYING STATISTICS TO MAKE DATA-DRIVEN DECISIONS

After considering all the above, the below examples should give one a direction on how to practically apply statistics to inform decision making:

1. **Service Focus**
   Stats: Government spend on school infrastructure is up 22%
   Response: Package CPD training or design frameworks around “Learning Environments of the Future”
2. **Fee Strategy**
   Stats: Average household disposable income down 6%
   Response: Create tiered service offerings (concept-only, submission-only, design-build-lite)
3. **Geographic Focus**
   Stats: Western Cape approvals flat, Free State approvals up 11%
   Response: Partner with local professionals in Free State to tap new markets
4. **CPD + Product Ideation**
   Stats: Construction confidence down
   Response: Offer workshops titled “Recession-Proofing Your Architecture Practice” or design risk-focused tools (e.g. client vetting checklists)

COMMON MISTAKES TO AVOID

Mistake	Why It’s Risky
Not reading units or dates	May confuse trend direction or scale
Confusing volume and value	Leads to flawed strategy
Ignoring local context	StatsSA gives macro data — verify it with local municipality or client feedback
Over-reliance on one dataset	Multiple sources (e.g., NHBRC, CIDB) give better triangulation

DESIGN YOUR PRACTICE WITH DATA

If you can interpret a site analysis, you can interpret a chart.

Statistics like that from StatsSA does not just inform government policy; it should inform architectural business design. Your service offerings, prices, timing, and location strategy can all be elevated by understanding what’s happening in the broader economy.

Don’t guess. Design with data.

POSSIBLE EXAMINATIONQUESTIONS

QUESTION 1:

Data Extract (fictionalised from real patterns):
"In Q1 2025, Gauteng recorded a 17% increase in residential building plans passed (by value), while KZN and EC saw a combined 12% decline. Nationally, non-residential approvals shrank by 8%."

1.1 What could a plausible interpretation for this data be? (3)

- Gauteng is a growth hotspot — focus your residential marketing here
- Shift away from non-residential tenders unless in high-demand provinces
- Diversify into residential alterations/additions, which are often recession-resilient

QUESTION 2:

2.1 Based on the above scenario, what strategic actions can be taken?

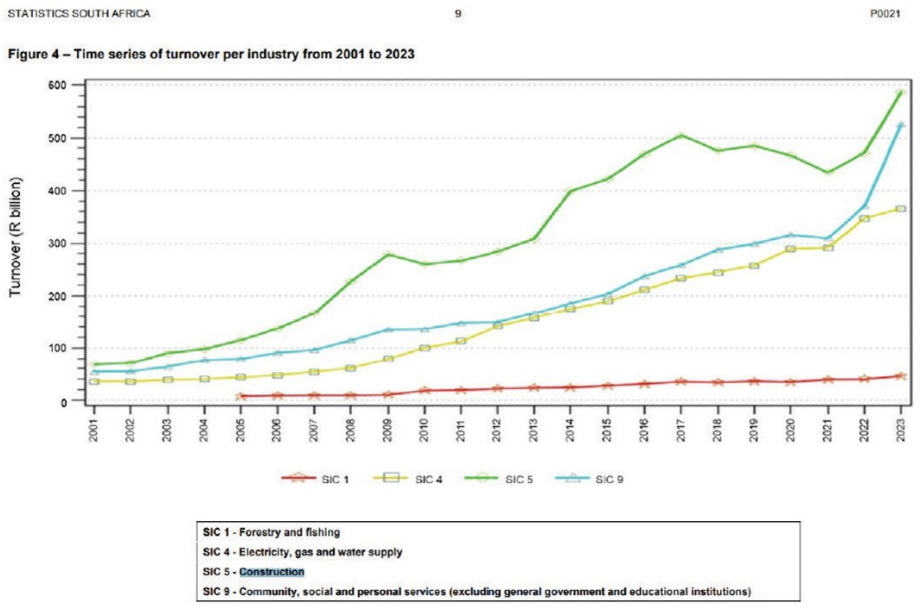
- Launch a lead-generation campaign targeting small developers in Gauteng
- Offer modular or pre-approved housing typologies
- Bundle submissions and 3D packages to shorten client decision cycles

QUESTION 3:

According to Supplynetwork Africa, 'things are looking up for construction in 2025'. With the construction of data centres on the rise as a result of renewed interest in Big Data and Artificial Intelligence, it appears that trends point toward an upward projection.

You query this information with your quantity surveyor, who then points towards trends to determine whether this is valid. He points toward data from Statistics SA and shows you a graph of the construction industry from 2023.

He explains that the graph indicates a sharp rise in the construction industry's turnover from 2003 to 2010, which he credits to the 2010 Fifa World Cup. He then further explains that there was only a recovery from 2022 onwards.



(Source Image: Stats SA, Annual Financial Statistics (AFS), 2023)

(Source article https://supplynetwork-africa.co.za/things-are-looking-up-for-construction-in-2025/)

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3.1 Looking at the construction industry (SIC 5, Green line), there appears to be an upward trend. How could this inform your outlook on the architectural industry? (2)

Upward trends in construction generally are legacy projects. This means that plans were submitted for these structures in years preceding its construction. However, increase in turnover for the construction industry suggests that architectural professionals should be acquiring new work despite the positive outlook.

3.2. As an architectural practitioner, you see these trends and consider opening up a construction division within your firm. Discuss a low-risk approach toward ensuring you can benefit from positive industry growth in construction whilst ensuring that you keep your architectural business afloat. (3)

- You can partner with a contractor and create a joint venture per project to ensure that your liability remains limited.
- Move toward becoming a project manager on construction.
- Take on the role of building inspection officer.

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