

# RCHITECTURE

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DESIGN WITH PURPOSE

## WELCOME PACK

A client's guide:

### **Welcome**

We at Rchitecture have a unique ability to see things from a wide perspective and to also focus in on small details that make up all the parts of a project. To serve the best interest of the client, we will understand the whole building(s) to be delivered; taking into account all the important issues, including function and purpose, the character and location of the site, appropriate methods of construction and value for money, as well as related legal and contractual matters.

### **Introduction**

For most clients, whether you are an individual or an organisation, a building project is usually an once-in-a-lifetime activity. This guide is intended to assist you when embarking on a building project. It will explain what architects do, outline the services that an architect can offer and demonstrate how the services of an architect can benefit the building project.

Whether you are planning to build your new corporate headquarters or wish to extend your home, a construction project can be a daunting experience without the support and guidance of a team of suitable professionals. The core of such expertise lies with the architect, whose role within the building delivery process extends far beyond merely providing drawings from which to build. Architects are highly skilled and professionally trained to nurture your vision, and to provide a service from a project's inception to its completion and beyond.

An architect will assist you in setting a viable brief and budget for the project and becomes the creative interpreter of your needs and aspirations. Yet the role of designer is only one facet of the architect's service; an architect is able to assist you in the selection of other consultants and is able to lead the professional team by fulfilling the role of principal consultant, ensuring that all contributors (such as surveyors and engineers) are working together towards a common goal and to the benefit of the project.

An architect is able to interpret the myriad of standards and regulations which must be adhered to as part of the Statutory Approval process. Furthermore, architects are trained to make sure the building contract is followed, as they act on your behalf as your principal agent, thereby guiding the building delivery process to a successful completion.

### How to initiate a project

To initiate a project, you will firstly need to compile a list of your requirements – this becomes known as a 'project brief' that forms the basis of your needs and instructions to your architect. The project brief is crucial to the success of a project; it forms the basis for designing the most appropriate solution.

Your brief should focus on what you want to achieve with the project and identify any problems that may need to be resolved. Your brief can include photographs, pictures, sites that you have researched, ideas and verbal discussions. Additionally, you need to establish the budget and time frame for the project. This will assist the architect in assessing the feasibility of the aspirations you have, which will avoid disappointment at later stages.

Each building project is different: every client, every site and every brief is unique. And there are almost as many approaches to architecture as there are architects. Most architects adopt a contemporary approach to design, while others work within a more traditional or classical genre. It is important to understand what you need before you start.

The best way to ensure that you will be happy with the design of your project is to select an architect who has values similar to your own. Compare the work of different architects to evaluate your own likes and dislikes in order to make an informed choice. If possible, visit projects designed by architects who share your aspirations and try to speak to a selection of their clients. Location, experience, scale of the project, the type of service and the size of the practice are all to be considered when selecting your architect.

Schedule a meeting with your prospective architect to discuss approaches to design and other priorities such as budget and time frame. The relationship with your architect will be one of great trust, and the more you engage during the design process the more likely it is that you will be satisfied with the end result. It should be borne in mind that the term of engagement and professional relationship can continue over a period of many years.

## **THE ARCHITECT'S SERVICE**

Once you have agreed on the initial project brief and budget, it is a good idea to consult your chosen architect as early as possible. Architects are trained to evaluate the numerous parameters before starting the design process and are able to give guidance on your project from design to documentation (planning) and construction and related costs.

The standard scope of an architect's service comprises:

- A design consultant,
- Principal consultant and
- Principal agent.

This means that the architect will act as the designer of your project, as the leader of the professional team, as the person responsible for the procurement and appointment of contractor(s) and will provide an administrative and inspection service through the construction stage on your behalf.

The standard service of an architect is a full service through all six work stages of the project. These stages are common for all projects and are outlined in more depth below.

Some architects offer the option of partial services, depending on the project and client requirements.

Where an architect is appointed to provide partial services, it is important to bear in mind that the remaining services will need to be provided by another architect or professional consultant. Additional or specialist services can be provided as circumstances require; these are usually subject to additional professional fees.

## **THE ARCHITECT'S FEE**

An investment in the services of a professional architect will safeguard the overall investment in the project. An architect's fee usually constitutes a fraction of the overall cost of the project and pales into insignificance when measured against the total project cost, including the operating costs over the lifespan of a building. High quality design can maximise the efficiency of even the smallest building, and a project that has had the input of an architect from the beginning is often less expensive to maintain and will command a greater return on the investment in the long term.

Fees will vary depending on factors such as the location and complexity of the project and the extent of the service expected from the architect. Architectural fees are calculated as:

- A percentage of the project cost (project cost-based fee), or
- At an hourly rate (time-based fee); or
- Based on specific activities or outcomes (deliverables-based fee).

SACAP publishes Professional Fees Guidelines for project cost-based and time-based fees. These guidelines provide a 'best practice' base figure that can and should be adjusted to take into account the diverse factors applicable to a specific project. The guideline fees are not prescriptive; freedom exists for the client and architect to mutually agree on the levels of service and remuneration.

### **PROJECT COST-BASED FEE**

This is the most conventional method for calculating an architect's fee and is calculated as a percentage of the overall cost of the project. A project cost-based fee is appropriate when there is a well-defined scope of services that will be required. The calculation of such fees is initially based on the budget for the project and is adjusted to be based on the final project cost. This offers both the client and architect the assurance that the fee will reflect the scope and size of the completed project. There is no prescribed average cost-based fee.

Building cost can be found on the website of AECOM Africa property and construction cost guide.

### **TIME-BASED FEE**

Time-based fees are charged when the scope of the service is not clearly defined, when the service relates to small scale projects or if the service required is of an unusual or specialised nature. In this case, the architect will provide time sheets and charge for services at an agreed rate per hour.

### **DELIVERABLE-BASED FEE**

Deliverable-based fees are compiled in the form of a schedule of activities and outcomes involved in the architect's service. This form of fee calculation is typically used when the architect provides a partial service. The client may then choose the extent of the architect's service based on what will be required.

However, clients should be forewarned that partial services may not adequately fulfil their needs and the requirements of the service to be fulfilled should include at the very least all the statutory provisions.

In addition, the client's investment may not be fully safeguarded without the provision of full services which are advisable in most instances. The necessary services are required by law to be provided by appropriately trained professionals.

### **COMBINATIONS OF TIME-BASED AND PROJECT COST-BASED FEES**

Depending on the nature of the project, some architects apply time-based fees to the early stages of a project, with fees for later work stages based on the project cost.

This approach is useful if you have uncertainty as to the scope of your project and require the skills of an architect to assist in compiling a specific project brief. Once the unknowns of your project are defined, the architect's fees are then calculated as a percentage of final project cost. This combination of fee calculations is not usually suitable for large scale projects that require complex studies like project feasibility, site selection, and preferably full stage 'zero' services (Project Initiation stage). In these cases, clients often request an overall fee package.

### **SQUARE METER RATE-BASED FEE**

This is not generally a recognised method for the calculation of fees but may be applied on projects that require additions or alterations to an existing structure where an accurate project cost cannot be determined beforehand.

### **DISBURSEMENTS**

The reimbursement of the architect's expenses incurred on a project will generally be charged separately. Items such as the cost of travel, copying of drawings and documents, payments to local authorities for information, deposits and building plan submissions will be incurred.

Whichever method is used for the calculation of fees, it is important to request that the architect provides you with a written offer for their service and to agree on the fees prior to the start of a project. The fees are usually divided into the various work stages described below. It is customary for an architect to issue accounts on a regular basis. This is typically on a monthly basis, based on the progress achieved in each work stage. It is usually beneficial to agree on a monthly schedule to facilitate cash flow for both parties.

## APPOINTING

Once you have chosen your architect, the first step is to confirm the appointment and notify others involved of your decision. The professional Code of Conduct of SACAP requires for the appointment of the architect to be in writing, and this would usually take the form of a contract known as a Professional Service Agreement (PSA). This agreement outlines the extent of the architect's service required as part of the building delivery process, terms and conditions, and the fees to be paid, and will serve to formalise the business arrangement between you and your architect.

There are two commonly used standard forms of professional service agreements, and both are endorsed by the South African Institute of Architects (SAIA):

### THE CLIENT-PROFESSIONAL AGREEMENT

This agreement is suitable for use on most residential scale projects and projects of a medium scale where the architect provides the full scope of service, a copy of the agreement can be provided by your architect.

### THE PROCSA SUITE OF AGREEMENTS

The suite of PROCSA agreements provides for the services of a full professional team and is therefore better suited to medium- and large-scale projects. The agreements are drafted as generic, in that the terms and conditions are the same between client and all professionals related to the construction industry.

The disciplines within the PROCSA suite of agreements are as follows:

	<b>CORE SERVICES</b>	<b>OTHER CONSULTANTS AS NECESSARY</b>
Development Manager (by client or agent if necessary)	Architect Project Manager Quantity Surveyor Structural Engineer Civil Engineer Electrical Engineer Mechanical Engineer	Principal Agent (only) Fire Consultant Landscape Architect Town Planner Construction Health and Safety Agent Interior Designer Wet Services Engineer BLANK – for those disciplines not published

## THE WORK STAGES

The standard or full scope of an architect's service is provided across six work stages. The division of the building delivery process into these stages is characterised by the sequential flow of the architect's service and has been agreed to by all professional disciplines within the construction industry.

An architect can be appointed to carry out the full service or for the services applicable to your project.

Bear in mind that the remaining services will be required to be performed by another consultant or architect. Additional services mainly relate to projects that require specialised expertise.

<b>Part A – Design</b> stage 1 Inception stage 2 Concept and Viability stage 3 Design Development	<b>Part B – Contract Documentation</b> stage 4 Documentation and Procurement	<b>Part C – Contract Administration</b> stage 5 Construction stage 6 Close-out
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### Stage 1 – Inception

Receive, appraise and report on the client's requirements with regard to:

- the client's brief
- the site and rights and constraints
- budgetary constraints
- the need for consultants
- project program
- methods of contracting

Once the architect's appointment has been formalised in terms of the services you require, and the architect's fees have been agreed, the architect will engage with you to confirm a detailed project brief.

This will take into account numerous aspects such as your requirements, preferences, priorities, aspirations, your budget and the quality you require in the end product. The site for the project will be analysed in terms of physical parameters such as orientation, access and topology, and the services of a land surveyor is usually required. A study of documentation regarding local authority regulations and the rights and restrictions pertaining to the property is necessary.

In this work stage, the brief may be amended numerous times until the architect has a clear understanding of your requirements. The time spent in this stage is invaluable, as the quality of the design and end product is often determined by the project brief.

The architect will be able to advise you on which consultants will be required as part of the professional team, such as a land surveyor, quantity surveyor, selected engineers and other specialists.

You will also be advised on estimated timelines in terms of professional services and the anticipated programs for the project: design documentation, procurement of contractor(s) by a tender process or other forms of obtaining contractors and construction.

## **Stage 2 – Concept and Viability**

Prepare an initial design and advise on:

- the intended space provisions and planning relationships
- proposed materials and intended building services
- the technical and functional characteristics of the design
- conformity of the concept with the rights to the use of the land
- the anticipated costs of the project as well as project program

Based on the project brief and site analysis in the first work stage, the architect will now prepare a design concept. This will show the intended spaces in your project and how the various spaces of the building will interact and relate to best suit your requirements.

The design concept will furthermore provide an indication of the intended scope, scale, character, form and function of the project. This is presented in the form of schematic layouts, floor plans, sections and elevations to illustrate the design and may be accompanied by basic three-dimensional perspectives or sketches to illustrate the proposed look and feel of the building.

After you have reviewed and commented on the architect's design and agreed on the essence of the concept, the design will be refined to show the general construction materials and intended finishes.

This would include the conceptual resolution of all the different systems of the building such as the structural system, an outline of services such as electrical and plumbing, provisions for storm water control, etc. This work stage may entail a back-and-forth process until you and the architect are both satisfied with the way forward.

The viability of the design concept will be reviewed in relation to the proposed budget, conformity with the rights and restrictions of the property, and the project program. The professional team will be consulted and their input incorporated into the design concept.

### **Stage 3 – Design Development**

This phase involves the development of the concept design prepared in Stage II in sufficient detail in order to:

- confirm the scope and complexity
- review the design and consult with local and statutory authorities
- develop the design, construction system, materials and components
- incorporate and co-ordinate all services and the work of consultants
- review the design, costing and program with the consultants

Your feedback on the design concept will guide the architect on how best to develop the design to incorporate your requirements in more detail.

The architect considers numerous facets of the building project, including structural and construction systems, the specification of materials and choice of finishes, position of fixtures in areas such as kitchens and bathrooms, layouts for components such as electrical and security systems, etc. The design development further incorporates the input and designs by other consultants in the professional team as well as specialist suppliers or subcontractors. The costing of the project will be reviewed in relation to the initial budget.

The design development is generally presented with more detailed architectural drawings such as floor plans, elevations and sections through the building, along with three dimensional perspectives of the exterior and interior of the project. Detailed drawings of certain design components will be developed where needed. Other documents may include schedules of finishes, sanitary ware, ironmongery, etc.

The development of the design is another very important two-way process which will rely on feedback from yourself as the client.

### **Stage 4 – Documentation and Procurement**

Work stage four follows your final approval of the design development stage and is divided into two parts.

#### **4.1 – Statutory / Local Authority Documentation**

- Co-ordinate technical documentation with the consultants and complete primary co-ordination
- prepare specifications for the works
- review the costing and program with the consultants
- obtain the client's authority and submit documents for approval

The architect will prepare drawings and documentation sufficient for approval by the local authority. This includes coordinating the technical documentation of the

professional team and a further review of the anticipated costs of the project. The architect will require your authority to submit documents to the local authority on your behalf.

The approval of drawings and documentation by the local authority can prove to be a lengthy process.

SAIA and the Regional Institutes do engage with building control offices and other divisions within the local municipalities, but it is not possible to guarantee that the timeframes for approval will be adhered to.

#### **4.2 – Documentation for Construction and the Procurement/Tender Process**

- obtain the clients authority to prepare documents for the procurement offers for the execution of the works
- evaluate offers and recommend on the award of the building contract
- prepare the contract documentation (and advise on the signing of the building contract)

The architect will complete the necessary documentation for construction and full execution of the works. This documentation will include detailed specifications, schedules of windows, doors, sanitary fittings, ironmongery, details of specific construction aspects, and any specific requirements of the project. Furthermore, the documentation and drawings from engineers and other professional team members, as well as information regarding the site, the timeframe for construction, and the form of construction contract that will be entered into and the details thereof will be coordinated. Thereafter a set of tender documents will be prepared.

The architect will require you to review this set of documents and obtain your authority before proceeding the procurement process, which typically entails the call for tenders. For clients other than large governmental or institutional bodies, the architect and the other members of the professional team will identify contractors with capabilities and expertise best suited to your project. Alternatively, the tender will be open to all contractors.

The tender documentation is circulated or advertised and offers are invited from contractors within a certain timeframe. The professional team then evaluates the tenders received and compiles a recommendation on the award of the building contract to the most suitable contractor(s). There may be some negotiation before finality is reached. The building contract is agreed with respect to insurances, guarantees and other specifics. When these are agreed, the architect will prepare a set of the contract documents and arrange for the signing of the building contract between you and the contractor(s).

Your architect will advise you on the most appropriate form of construction contract for your project.

The architect will become your official representative as the principal agent with the authority and mandate to act on your behalf. Other consultants on the professional team, such as engineers and quantity surveyors, are appointed as agents to deal with specific aspects of the project and their duties will also be monitored and administered by the architect as principal agent on the project.

## **Stage 5 – Construction**

- Administer the Building Contract (if appointed as Principal Agent)
- Give possession of the site to the contractor
- Issue construction documentation
- Initiate and/or check sub-contract design and documentation as appropriate
- Inspect the works for conformity to the contract documentation
- Administer and perform the duties and obligations assigned to the principal agent in the JBCC building agreements, or fulfil the obligations provided for in other forms of contract (if appointed as Principal Agent)

Work stage five commences when the architect as principal agent hands over the site to the contractor and issues the contract documentation, drawings and schedules required. The site boundaries and servitudes are pointed out by the appointed land surveyor. The contractor then sets up the site camp, sets out the work and construction commences.

The architect arranges, chairs and records regular site meetings with the contractor and the other consultants and agents as required. The process is to inspect and monitor the works to ensure the contract is adhered to and the obligations will be achieved.

This will include reviewing samples of materials and work and mock-ups provided by the contractor both on and off site, updating and issuing a register of drawings and documents issued, as well as issuing contract instructions to the contractor.

The contractor prepares interim payment invoices (normally on a monthly basis) and the architect will review the progress achieved and materials on site and issue the appropriate payment certificate, based on the quantity surveyor's valuation.

In fulfilling the duties of the principal agent, your architect is required to fairly judge the work being carried out and must be impartial regarding the interests of the contracting parties. Having been part of the project from the beginning, and with a unique level of project comprehension, your architect is able to guide the construction stage in a manner that best suits your overall requirements as defined during the design stage of the project.

The architect provides an administration and inspection service and works intensively with the contractors leading up to the completion and delivery of the project.

When the construction work is substantially complete and can be used for the intended purpose, the architect will inspect the project and issue a practical completion certificate and a list of defects (snag list) that still need to be completed by the contractor. This completes work stage five of the project.

The building is normally occupied once practical completion has been certified.

### **Stage 6 – Close-out**

- Facilitate the project close-out including the preparation of the necessary documentation to effect completion, handover and operation of the project
- After the contractor's obligations with respect to the building contract are fulfilled, the architectural professional shall issue the certificates related to contract completion
- Provide the client with as-built drawings
- Assist the client to obtain the occupation certificate

The architect now inspects the work of the contractor and verifies that defects have been addressed and rectified. The contractor submits a final payment claim which the architect evaluates. He then issues a works completion certificate when final completion is achieved. The preparation of the final account is the responsibility of the quantity surveyor. The final payment certificate follows final completion.

The architect prepares a set of project record documents (previously known as 'as built drawings') that consists of drawings and further documentation that incorporates changes made during construction.

The architect also prepares all the maintenance manuals, guarantees and warranties that are required for record and maintenance purposes.

Note that the architect's services conclude upon final completion.

The contractor is liable for the repair of any latent defects for a period of five years after final completion

- The contractor's liability, however, does not cover maintenance. Latent defects are those which were not apparent at the time of completion and which only appear during the defects liability period. The architect may be called upon to inspect these defects as they appear, and issue instructions to the contractor to rectify them, but this is an additional service for which fees will be charged.

After final completion new undertakings and related costs and fees may become necessary and be incurred as the building work and services contracted for have been completed.

## THE CONCLUSION

The architect's service is complete upon the issue of the final certificate or its equivalent. This certificate indicates that the project is complete and defect free at that specific point in time.

Should latent defects emerge after final completion has been certified, it is advisable to call upon the architect, along with other members of the professional team as necessary, to investigate and request the contractor to rectify these defects. The duration of the latent defects liability period depends on the type of building contract (five years is provided for in the JBCC Principal Building Agreement).

In such cases, where it is determined that the latent defect is not as a result of the architect's negligence and is not a liability of the architect, then the architect may provide an additional service for which an additional fee is due.

Should the latent defect be apportioned as the responsibility of the architect, then the architect is liable for the rectification cost of the defect as long as this falls within the five-year liability period of the architect as per the professional services agreement, otherwise the liability is prescribed.

Options for partial and additional services:

Options for partial services

The following options for partial architectural services are most frequently selected:

- Architect and principal consultant (not principal agent)
- Architect (design only)
- Architect of record (design by others)
- Principal agent only
- Partial services from work stage 4.2 to 6

Additional services

The following services may be provided in addition to the standard scope, for an additional fee:

- Specialised design services
- Special management services
- Special studies
- Work on existing premises and/or heritage buildings
- Other services such as participation in litigation or dispute resolution

## IN CONCLUSION

The most critical aspects to consider when engaging the services of an architect relate to effective communication. Be honest with your architect and if you are unhappy with the way things are progressing, be open about these concerns. Architects take pride in providing their best possible service and the problems you experience may be resolved through discussion or negotiation.

Architects see their role as 'the creation of excellence in the built environment'. The role is, as stated, the interpretation of the client's need and aspirations, to provide solutions to meet the need and document the product to be delivered by others. In this building delivery process, the architect must also exercise particular care to act as judge of the contractor's performance, as it is the contractor that delivers the building. The architect's duty in this regard is to be impartial with regard to all contracting parties.

The architect is required to judge the work being carried out fairly and act decisively in all matters relating to the quality of the finished work.

The architect has the client's mandate to act as their representative and to carry out juristic acts on the client's behalf, which the client is not allowed in law, to carry out themselves. The architect is required to act with 'Utmost Good Faith' in carrying out their services.

The profession has come a long way ...Vitruvius, one of the earliest known theorists of architecture states: 'Architecture is a science, arising out of many other sciences, and adorned with much and varied learning: by the help of which a judgment is formed of those works which are the result of other arts'.

In his book, 'De architectura', Vitruvius states that a good building should satisfy the three principles of: – 'Firmitatis, Utilitatis and Venustatis', roughly translated as: –

- Durability - it should stand up robustly and remain in good condition.
- Utility - it should be useful and function well for the people using it.
- Beauty - it should delight people and raise their spirits.

From this commentary it can be seen that the architect's service can be defined as 'seeking to achieve a balance in the designed and documented solution to the client's expressed need'. Importantly, as expressed in the third criteria above, is to achieve solutions that delight people and raise their spirits.

Reference [www.saiia.org.za](http://www.saiia.org.za)