### 3.3.6 Engineering Management Services (Principal Consultant)

Should the client require the consulting engineer to undertake duties of an engineering management nature on behalf of the client, where the project involves (a) multi-disciplinary team(s) the additional services will include the following:

#### Stage 1 Services

- (1) Facilitate development of a clear project brief.
- (2) Establish the procurement policy for the project.
- (3) Assist the client in the procurement of necessary and appropriate other consultants including the clear definition of their roles and responsibilities.
- (4) Establish in conjunction with the client, other consultants and all relevant authorities, the site characteristics, rights and constraints for the proper design of the intended project.
- (5) Define the consultant's scope of work and services.
- (6) Conclude the terms of the agreement with the client.
- (7) Facilitate a schedule of the required consents and approvals.
- (8) Prepare, co-ordinate and monitor a project initiation programme.
- (9) Facilitate client approval of all Stage 1 documentation.

#### Typical deliverables

- Project brief
- Agreed scope of work
- Agreed services
- Project procurement policy
- Signed agreements
- Integrated schedule of consents and approvals
- Project initiation programme
- Record of all meetings

#### Stage 2 services

- (1) Assist the client in procurement of the other consultants.
- (2) Advise the client on the requirement to appoint a health and safety consultant.
- (3) Communicate the project brief to the other consultants and monitor the development of the concept and viability.
- (4) Agree format and procedures for cost control and reporting by the other consultants.
- (5) Prepare a documentation programme and indicative construction programme.
- (6) Manage and integrate the concept and viability documentation for presentation to the client for approval.
- (7) Facilitate approval of the concept and viability by the client.
- (8) Facilitate approval of the concept and viability by statutory authorities.

#### Typical deliverables

- Signed consultant/client agreements
- Indicative documentation programme and construction programme

Approval by the client to proceed to Stage 3

#### Stage 3 Services

- (1) Agree and implement communication processes and procedures for the design development of the project.
- (2) Assist the client in the procurement of the necessary other consultants including the clear definition of their roles and responsibilities.
- (3) Prepare, co-ordinate, agree and monitor a detailed design and documentation program.
- (4) Conduct and record consultants' and management meetings.
- (5) Facilitate input required by health and safety consultant.
- (6) Facilitate design reviews for compliance and cost control.
- (7) Facilitate timeous technical co-ordination.
- (8) Facilitate client approval of all Stage 3 documentation.

#### Typical deliverables

- Additional signed client/consultant agreements
- Documentation programme
- · Record of all meetings
- Approval by the client to proceed to Stage 4

#### Stage 4 services

- (1) Recommend and agree procurement strategy for contractors, subcontractors and suppliers with the client and the other consultants.
- (2) Prepare and agree the procurement programme.
- (3) Advise the client, in conjunction with the other consultants on the appropriate insurances.
- (4) Co-ordinate and monitor preparation of procurement documentation by consultants in accordance with the project procurement programme.
- (5) Manage procurement process and recommended contractors for approval by the client.
- (6) Agree the format and procedures for monitoring and control by the quantity surveyor of the cost of the works.
- (7) Co-ordinate and assemble the contract documentation for signature.

#### Typical deliverables

- Procurement programme
- Tender/contract conditions
- Record of all meetings
- Obtain approval by the client of tender recommendation(s)
- Contract documentation for signature

#### Stage 5 services

- (1) Arrange site handover to the contractor.
- (2) Establish construction documentation issue process.
- (3) Agree and monitor issue and distribution of construction documentation.

- (4) Instruct the contractor on behalf of the client to appoint subcontractors.
- (5) Conduct and record regular site meetings.
- (6) Monitor, review and approve the preparation of the construction programme by the contractor.
- (7) Regularly monitor performance of the contractor against the construction programme.
- (8) Adjudicate entitlements that arise from changes required to the construction programme.
- (9) Receive, co-ordinate and monitor approval of all contract documentation provided by contractor(s).
- (10) Agree quality assurance procedures and monitor implementation thereof by the other consultants and the contractors.
- (11) Monitor preparation and auditing of the contractor's health and safety plan and approval thereof by the health and safety consultant.
- (12) Monitor preparation of the environmental management plan by the environmental consultant.
- (13) Establish procedures for monitoring scope and cost variations.
- (14) Monitor, review, approve and issue certificates.
- (15) Receive, review and adjudicate any contractual claims.
- (16) Monitor preparation of financial control reports by the other consultants.
- (17) Prepare and submit progress reports.
- (18) Coordinate, monitor and issue practical completion lists and the certificate of practical completion.
- (19) Facilitate and expedite receipt of the occupation certificate where relevant.

#### Typical deliverables

- Signed contracts
- Approved construction programme
- ♦ Construction documentation
- Payment certificates
- Progress reports
- · Record of meetings
- ♦ Certificate(s) of practical completion

#### Stage 6 services

- (1) Co-ordinate and monitor rectification of defects.
- (2) Manage procurement of operations and maintenance manuals, guarantees and warranties.
- (3) Manage preparation of as-built drawings and documentation.
- (4) Manage procurement of outstanding statutory certificates.
- (5) Monitor, review and issue payment certificates.
- (6) Issue completion certificates.
- (7) Manage agreement of final account(s).
- (8) Prepare and present the project close-out report.

#### Typical deliverables

- Completion certificates
- Record of necessary meetings
- Project close-out report

#### 3.3.7 Mediation, Arbitration and Litigation proceedings and similar Services

Where the client requires the consulting engineer to, on his behalf, perform the services listed hereunder or similar work, the extent thereof and remuneration therefore is subject to agreement between the client and the consulting engineer:

- (1) Dealing with matters of law, obtaining parliamentary or other statutory approval, licenses or permits.
- (2) Assisting with or participating in contemplated or actual mediation, arbitration or litigation proceedings such as Contractor disputes.
- (3) Officiating at or attending courts and commissions of enquiry, select committees and similar bodies convened by statute, regulation or decree.

#### 3.3.8 Principal Agent of the Client

When a consulting engineer is, in addition to his normal functions as consulting engineer, appointed as the **principal agent** of the client on a building or multi-disciplinary project for the purposes of procurement and construction on a project, the consulting engineer will also be responsible for the following:

#### Stage 3 services

 Prepare, co-ordinate, agree and monitor a detailed design and documentation programme

#### Typical deliverables

Detailed design and documentation programme

#### Stage 4 services

- (1) Recommend and agree procurement strategy for contractors, subcontractors and suppliers with the client and the other consultants
- (2) Prepare and agree the procurement progamme
- (3) Advise the client, in conjunction with the other consultants on the appropriate insurances
- (4) Manage procurement process and recommended contractors for approval by the client
- (5) Agree the format and procedures for monitoring and control by the quantity surveyor of the cost of the works
- (6) Co-ordinate and assemble the contract documentation for signature

#### Typical deliverables

- Procurement programme
- Tender/contract conditions
- Contract documentation for signature

#### Stage 5 services

- (1) Arrange site handover to the contractor
- (2) Establish construction documentation issue process
- (3) Agree and monitor issue and distribution of construction documentation

- (4) Instruct the contractor on behalf of the client to appoint subcontractors
- (5) Conduct and record regular site meetings
- (6) Review, approve and monitor the preparation of the construction programme by the contractor
- (7) Regularly monitor performance of the contractor against the construction programme
- (8) Adjudicate entitlements that arise from charges required to the construction programme
- (9) Receive, co-ordinate and monitor approval of all contract documentation provided by contractor(s)
- (10) Agree quality assurance procedures and monitor implementation thereof by the other consultants and the contractors
- (11) Monitor preparation and auditing of the contractor's health and safety plan and approval thereof by the health and safety consultant
- (12) Monitor preparation of the environmental management plan by the environmental consultant
- (13) Establish procedures for monitoring scope and cost variations
- (14) Monitor, review, approve and issue certificates
- (15) Receive, review and adjudicate any contractual claims
- (16) Monitor preparation of financial control reports by the other consultants
- (17) Prepare and submit progress reports
- (18) Co-ordinate, monitor and issue practical completion lists and the certificate of practical completion

#### **Typical deliverables**

- Signed contracts
- Approved construction programme
- Construction documentation
- Payment certificates
- Progress reports
- Record of meetings
- Certificate(s) of practical completion
- + Facilitate and expedite receipt of occupation certificates

#### Stage 6 services

- Co-ordinate and monitor rectification of defects
- (2) Manage procurement of operations and maintenance manuals, guarantees and warranties
- (3) Manage preparation of as-built drawings and documentation
- (4) Manage procurement of outstanding statutory certificates
- (5) Monitor, review and issue payment certificates
- (6) Issue completion certificates
- (7) Manage agreement of final account(s)
- (8) Prepare and present the project close-out report

#### Typical deliverables

- Completion certificates
- Record of necessary meetings
- Project close-out report

#### 4. GUIDELINE TARIFF OF FEES

#### 4.1 Application of Tariff of Fees

- (1) The guideline tariff of fees contained in this Schedule applies in respect of the services set out in clause 0.
- (2) The client should remunerate the consulting engineer, for the services rendered, on the basis of clauses 4.2 to 4.6. In cases where the client and consulting engineer have agreed that clauses 4.2 and 4.3 are not applicable, payment should be on the basis of clause 4.5.
- (3) The client shall reimburse the consulting engineer for all expenses and costs incurred in terms of clause 4.6 in performing his services, irrespective of whether fees are charged in terms of clauses 4.2 and 4.3 or clause 4.5, as well as for all costs incurred on behalf, and with the approval, of the client.
- (4) While the tariff of fees contained in this Schedule can be applied to many projects the factors that influence the fees to be paid for design services on a project are complex and depend on a number of contributing factors. These contributing factors that should be taken into account may include, inter alia, all or any of the following:
  - (a) Project complexity: Projects may range from relatively simple projects where the designs are based on well established, common practices to more complex projects where the works call for the application of new, unusual or untried techniques, designs, systems or applications.
  - (b) Monetary value of the works: This may range from a situation where the value of the work is very high relative to the services being rendered to a project where the value of the works is abnormally low relative to the services required from the consulting engineer.
  - (c) Time duration: This may involve projects where the works are executed over appreciably shorter or longer periods than would normally be expected for any of the stages defined in 3.1.
  - (d) Level of responsibility, liability and risk: These may range from relatively low levels of responsibility and/or risks to projects with unusually high responsibilities and/or risks that are expected to be carried by the consulting engineer.
  - (e) Level of expertise, qualifications, skills and experience: Some works do not require a high degree of expertise while other works may require more specialized expertise or substantial skills and experience that cost more to develop and retain.
  - (f) Level of technology required and changes in technology that may influence the costs of the services provided
  - (g) Whether aspects related to labour intensive works need to be considered in the design.
  - (h) Level of effort: Some projects do not call for substantial effort as the works can be designed without extensive investigations or field measurements while others may call for unusually high effort on the part of the consulting engineer because of, for example, research required or integration with existing works or repairs to existing infrastructure where the status quo needs to be investigated in considerable detail and these need to be accommodated within the design.
  - (i) Potential value added: In some instances the design, no matter how sophisticated will not add much value to the overall project while in other cases greater design optimization can lead to considerable savings in capital, maintenance or operations costs, or add value to the final project. For example, in the case of Industrial Engineers, where a fee based on the value of the Works is not generally appropriate, a fee based on the value added by the service may be more appropriate.

- (j) Client Requirements: Some clients have relatively few requirements and/or many standard details and the consulting engineer's designs are accepted at face value. Other clients require considerable details to be investigated during design development to satisfy their own, often complex, internal processes.
- (k) Business Strategy: Some firms may decide to offer a low price to enter a market segment at a low cost or to keep employees busy while waiting for economic upswings.
- (I) Project Definition: In some projects the design concept and scope is self evident or detailed in the Terms of Reference and does not require much further investigation and analysis of options, while in other projects the design development requires extensive analysis and testing of various options.
- (5) Combinations of one or more of the above factors may result in a substantial adjustment of the tariff that is required to fairly compensate the consulting engineer and this adjustment factor should be negotiated in good faith by both parties.
- (6) Agreement on any adjustment of or special fees should be reached at the time of the engagement of the consulting engineer or as soon after circumstances warrant such as practically possible, but in all cases prior to the consulting engineer rendering services which may be affected.
- (7) Where the normal services relate to more than one of the disciplines of consulting engineering contemplated in clauses 4.2.1 to 4.2.8, namely civil, structural, mechanical, electrical or electronic engineering services, a separate fee for services in each discipline should be calculated in accordance with the relevant clause.
- (8) Where at the instance and with the consent of the client the works are undertaken on separate non-contiguous sites, continuity is interrupted or are unusually fragmented or are constructed as separately documented phases or sections, the fee for normal services is:
  - (a) the sum of the fees calculated separately for each site, contract, phase or section as if they were separate works; or
  - (b) a fee agreed to between the client and the consulting engineer and which fee lies between the fee calculated on the total cost of the works and the sum of the fees contemplated in clause (a) above.
- (9) For the calculation of fees, "Duplication of works" is defined as the re-use of designs, drawings and details done by a consultant to duplicate a complete unit (e.g. a building or bridge).
- (10) The fee for services provided in the report stage is calculated on a time basis.
- (11) The following fees may be claimed after each stage of services or monthly or as agreed between the consulting engineer and the client:
  - (a) Percentage fees determined on the basis of the cost of the works prevailing at the time of the fee calculation and pro-rata to the completed services, or a portion of the total fee based on completion of the stages along the lines indicated in 4.2.9.
  - (b) Time based fees applicable when the services were rendered.
- (12) Disbursements as set out in clause (3) may be claimed monthly.
- (13) Clients should note that if the fee finally agreed is substantially less than the guidelines provided, inadequate attention may be given to design with a resulting increase in project risk.

#### 4.2 **Fees for Normal Services**

In the following tables the fee guidelines consist of the sum of a primary and secondary fee depending on the Cost of the Works. Alternatively, if the scope of services and scope of work are relatively well defined and a reasonable budget of the Cost of Works is available, then the client and consultant can agree a single percentage fee based on this budgeted cost and the overall fee calculated using the tables below as well as any relevant complexity factors.

For example, if a civil engineering project involves alterations to a structure with complex structural engineering and a reasonable expectation of the Cost of the Works is R31million then the fee calculated using the tables would be:

Fee from 4.2.1: = R1 251 500 + 8% \* R18 150 000 = R2 703 500 for normal civil works

Plus R 551 900 + 3% \* R 18 150 000 = R1 096 400 additional for structures

Therefore total = R 3 799 900

Multiplied by a complexity factor for additions to existing buildings of 1.25 = R4 749 875 which is equal to a percentage fee of: R4 749 875/ R31 000 000 = 15.32%

Alternatively, consider the example of a relatively simple rural road project with a reasonable budget value of R21 000 000. Then the fee calculated using the tables would be:

Fee from 4.2.1: = R 1 251 500 + 8% \* R 8 150 000 = R1 903 500

Multiplied by a complexity factor of 0.85 for rural roads = R1 617 975 which is equal to a percentage fee of: R1 617 975/R21 000 000 = 7.70%

Fee negotiations would typically commence using these starting values and judgement regarding project complexity to arrive at a finally agreed percentage fee. The fee amount to be paid will generally be based upon the final cost of the works or any other suitably agreed arrangement.

# 4.2.1 Civil and Structural Engineering Services pertaining to Engineering Projects

(1) The basic fee for normal services in the disciplines of civil and structural engineering, pertaining to Engineering Projects, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific cost of the works in respect of which the services were rendered on the project excluding the report stage described in clause 3.2.1 which is normally reimbursed on a time basis in terms of clause 4.5

Cost of the Works		Basis of Fee Calculation			
For projects up	or projects up to R 512 000		A Lump Sum or on a Time Basis		
Where the cost of the works:					
Exceeds	But does not exceed	Primary Fee	Secondary fee		
R 512 000	R 1 280 000	R 64 000	12,5% on the balance over	R 512 000	
R 1 280 000	R 6 300 000	R 160 000	10,0% on the balance over	R 1 280 000	
R 6 300 000	R 12 850 000	R 662 000	9,0% on the balance over	R 6 300 000	
R 12 850 000	R 32 000 000	R 1 251 500	8,0% on the balance over	R 12 850 000	
R 32 000 000	R 64 000 000	R 2 783 500	6,0% on the balance over	R 32 000 000	
R 64 000 000	R 385 500 000	R 4 703 500	5,5% on the balance over	R 64 000 000	
R 385 500 000		R 22 386 000	5.0% on the balance over	R385 500 000	

The following additional fee is typically applicable to the value of the reinforced concrete and structural steel portions of the works, inclusive of the costs of concrete, reinforcing, formwork, structural steel work and any pro-rata preliminary and general amounts. Where structures of identical design are repeated on the same project, the combined costs is normally cumulated for the determination of the cost of the reinforced concrete and structural steel works. In cases where structures require individual design, a separate additional fee is normally calculated for each structure based on the cost of the reinforced concrete and/or structural steel work for that particular structure. The additional fee is the sum of the primary fee and the secondary fee applicable to the specific cost of the works in respect of which the services were rendered on the project as shown below.

Cost of ti	ne Works		Basis of Fee Calculation	
For projects up to R 512 000		A Lump Sum or on a Time Basis		
Where the cost of the works:				
Exceeds	But does not exceed	Primary Fee	Secondary fee	
R 512 000	R 1 280 000	R 25 600	5,0% on the balance over	R 512 000
R 1 280 000	R 6 300 000	R 64 000	4,5% on the balance over	R 1 280 009
R 6 300 000	R 12 850 000	R 289 900	4,0% on the balance over	R 6 300 000
R 12 850 000	R 32 000 000	R 551 900	3,0% on the balance over	R 12 850 000
R 32 000 000	R 64 000 000	R 1 126 400	2,0% on the balance over	R 32 000 000
FI 64 000 000	R 385 500 000	R 1 766 400	1,5% on the balance over	R 64 000 000
R 385 500 000		R 6 588 900	1,5% on the balance over	R385 500 000

- (3) To calculate the fee for railway track work in terms of this item, 50 per cent of the cost of the permanent way materials is normally excluded from the cost of the works in view of the limited design input normally required for these elements, but the full cost of ballast and equipment specially designed by the consultant is normally included in the cost of the works.
- For normal services relating to a description of the works mentioned in the first column of (4) the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause (1) and (2) is normally multiplied by the category factors mentioned against that description in the second column of the table. In cases more than one of the descriptions below applies, the effective factor will typically be the product of the factors involved.
- These factors do not apply when fees are a lump sum or on a time basis. (5)
- (6) In the case of road works, where the road traverses both rural and urban areas, an adjustment pro-rata to the length of road in rural and urban area is normally made.
- In the case of road rehabilitation a combination of factors applies depending on the (7) situation of the road (rural or urban) and the category factor for alterations to existing works.

Description of the Works	Typical factor by which basic fee is multiplied
Rural roads (single carriageways), excluding bridges	0,85
Rural freeways and dual carriageways, excluding bridges	0,95
Freeways and dual carriageways through existing periurban areas, excluding bridges	1,00
Single Carriageways through existing urban areas	1.00
Freeways and dual carriageways through existing urban areas	1,25
Gravel roads: Primary roads Secondary roads Informal roads	1,25 to 1,50 1,00 to 1,25 0,75 to 1,00
Water and waste water treatment works	1,25
Services (Excluding roads) for existing informal settlements including roads and to reduced standards or supplies	1,25 to 1,50
Water and sanitation in rural areas	1,35
Alterations to existing works and labour based works or contractor development.  (Only applicable to the fees on the portion or section of works affected)	1,25
Mass concrete foundations, brickwork and cladding designed and detailed by the consulting engineer (Only applicable to the design portion of the fees on such works)	0,33
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25

## 4.2.2 Civil Engineering Services pertaining to Building and Multi-Disciplinary Projects

(1) The basic fee for normal services in the discipline of civil engineering, pertaining to Building and Multi Disciplinary Projects, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific cost of the works in respect of which the services were rendered on the project excluding the report stage described in clause 3.2.1 which is normally reimbursed on a time basis in terms of clause 4.5.

Cost of the Works For projects up to R 512 000			Basis of Fee Calculation	
		A Lump Sum or on a Time Basis		
Where the cost of the works:				
Exceeds	But does not exceed	Primary Fee	Secondary fee	
R 512 000	R 1 280 000	R 64 000	12,5% on the balance over	R 512 000
R 1 280 000	R 6 300 000	R 160 000	10,0% on the balance over	R 1 280 000
R 6 300 000	R 12 850 000	R 662 000	9,0% on the balance over	R 6 300 000
R 12 850 000	R 32 000 000	R 1 251 500	8,0% on the balance over	R 12 850 000
R 32 000 000	R 64 000 000	R 2 783 500	7,0% on the balance over	R 32 000 000
R 64 000 000	R 385 500 000	R 5 023 500	7,0% on the balance over	R 64 000 000
R 385 500 000		R 27 528 500	7,0% on the balance over	R385 500 000

(2) For normal services relating to a description of the works mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause (1) is normally multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will typically be the product of the factors involved.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Typical factor by which basic fee is multiplied
Alterations to existing works and labour based works or contractor development (Only applicable to the fees on the portion or section of works affected)	1,25
Internal water and drainage for buildings upon specific agreement with the client to render such services	1,25
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25

### 4.2.3 Structural Engineering Services pertaining to Building Projects

(1) The basic fee for normal services in the discipline of structural engineering, pertaining to Building Projects, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific cost of the works in respect of which the services were rendered on the project excluding the report stage described in clause 3.2.1 which shall be reimbursed on a time basis in terms of clause 4.5.

Cost of the Works		Basis of Fee Calculation				
For projects up	to R 512 000	A Lump Sum or on a Time Basis		sis		
Where the cost of the works:				Primary Fee		
Exceeds	But does not exceed	Secondary fee				
R 512 000	R 1 280 000	R 64 000	12,5% on the balance over	R 512 000		
R 1 280 000	R 6 300 000	R 160 000	10,0% on the balance over	R 1 280 000		
R 6 300 000	R 12 850 000	R 662 000	9,0% on the balance over	R 6 300 000		
R 12 850 000	R 32 000 000	R 1 251 500	8,0% on the balance over	R 12 850 000		
R 32 000 000	R 64 000 000	R 2 783 500	7,0% on the balance over	R 32 000 000		
R 64 000 000	R 385 500 000	R 5 023 500	7,0% on the balance over	R 64 000 000		
R 385 500 000		R 27 528 500	7,0% on the balance over	R385 500 000		

(2) For normal services relating to a description of the works mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause (1) is normally multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will typically be the product of the factors involved.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Typical factor by which basic fee is multiplied
Alterations to existing works or unusual and complicated building structures or contractor development (Only applicable to the fees on the portion or section of works affected)	1,25
Mass concrete foundations and brickwork designed and cladding designed and detailed by the consulting engineer (Only applicable to the design portion of the fees on such works)	0,33
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25

#### 4.2.4 Mechanical Engineering Services pertaining to Engineering Projects

(1) The basic fee for normal services in the discipline of mechanical engineering, pertaining to Engineering Projects, is determined from the table below. The fee is the sum of the primary fee and the secondary fee applicable to the specific cost of the works in respect of which the services were rendered on the project excluding the report stage described in clause 3.2.1 which shall be reimbursed on a time basis in terms of clause 4.5.

Cost of the Works		Basis of Fee Calculation			
For projects up	or projects up to R 512 000		A Lump Sum or on a Time Basis		
Where the cost of the works:					
Exceeds	But does not exceed	Primary Fee	Secondary fee		
R 512 000	R 1 280 000	R 64 000	12,5% on the balance over	R 512 000	
R 1 280 000	R 6 300 000	R 160 000	10,0% on the balance over	R 1 280 000	
R 6 300 000	R 12 850 000	R 662 000	8,0% on the balance over	R 6 300 000	
R 12 850 000	R 32 000 000	R 1 186 000	7,0% on the balance over	R 12 850 000	
R 32 000 000	R 64 000 000	R 2 526 500	6,0% on the balance over	R 32 000 000	
R 64 000 000	R 385 500 000	R 4 446 500	5.5% on the balance over	R 64 000 000	
R 385 500 000	R 385 500 000	R 22 129 000	5.5% on the balance over	R385 500 000	

(2) For normal services relating to a description of the works mentioned in the first column of the following table, the proportion of the basic fee relating to the specific item calculated in terms of clause (1) is normally multiplied by the category factor mentioned against that description in the second column of the table. In case more than one of the descriptions below applies, the effective factor will typically be the product of the factors involved.

These factors do not apply when fees are a lump sum or on a time basis.

Description of the Works	Typical factor by which basic fee is multiplied
Alterations to existing works or contractor development (Only applicable to the fees on the portion or section of works affected.)	1,25
Wet services, for domestic hot and cold water and drainage pipe work inside buildings.	1,25
Duplication of works (Only applicable to the design portion of the fees on duplicated works)	0,25