

SANRAL – EXPLANATION OF CONSULTANT TENDER EVALUATION SCORING FOR CONVENTIONAL PROJECTS

This document does not look at the tenderer's eligibility, compliance and responsive requirements, but merely explains the scoring methodology that is applied to tenders deemed complaint and responsive.

The criterion for scoring is made up as follows:

Evaluation Criteria	Points
Technical Knowledge	30
Management Knowledge	15
Quality System	10
Past Performance	15
Workplan Appropriateness	30
TOTAL	100

Dependant on the degree of complexity of the type of project and service requirements, the threshold is either a Category 1, 2 or 3, which equates to 70%, 80% or 85% respectively. This is decided before the tender is let and is indicated in the tender document.

For breakdown of individual components:

Technical Knowledge (30)

The tenderer, for each key position identified, may supply the 3 (three) most recent relevant project experience to that which the tender is let for. This is done in the form of returnable schedules, such as the one below:

FORM B1:		POSITION = IPL1		MANAGERIAL POSITION		CANDIDATE'S TECHNICAL/MANAGERIAL RECORD			
Personal Details of Candidate									
NAME	ID NUMBER (NO SPACES)	POSITION IN TEAM		Description					
		Project Leader							
TECHNICAL / MANAGERIAL EXPERIENCE									
(List only the most recent 5 projects that the tenderer considers relevant to the specified scope of works)									
CLIENT & PROJECT NUMBER (Note 2)	CLIENT (coded)	PROJECT TYPE (coded) (Note 3) * Add additional info in Comments box below if required.	RELEVANT KEY PERSONS EXPERIENCE STARTED (yyyy/mm/dd) (Note 4)	RELEVANT KEY PERSONS EXPERIENCE ENDED (yyyy/mm/dd) (Note 4)	VALUE (in millions of Rand) (* ,000,000) (note 5)	POSITION HELD (Note 6)	POSITION HELD (coded)	Contact Person & Position (Note 7)	Contact Number
	Other	▼ NONE	▼ Year ▼ Month ▼ Day ▼	▼ Year ▼ Month ▼ Day ▼			Undefined	▼	
	Other	▼ NONE	▼ Year ▼ Month ▼ Day ▼	▼ Year ▼ Month ▼ Day ▼			Undefined	▼	
	Other	▼ NONE	▼ Year ▼ Month ▼ Day ▼	▼ Year ▼ Month ▼ Day ▼			Undefined	▼	

For technical knowledge three (3) areas are evaluated:

- 1) Project Type Relevance
- 2) Period Relevance
- 3) Position Held

Below are lists with possible key persons (with abbreviations) and different project types (with abbreviations) to be selected from:

ABBREVIATION	DEFINITIONS
MO/MA (Excl. RRM)	Maintenance Operations and Ad-hoc Maintenance (excluding RRM projects)
MP/MS	Periodic Maintenance and Special Maintenance
DS	Development Strengthening
DI	Development Improvement
DN	Development New Facilities
CD	Community Development

RRM	Routine Road Maintenance	
MSC	Special Maintenance Concrete	
MSB	Maintenance Special Bridge	
DIB	Development Improvement Bridge	
DNB	Development New Bridge	
MSS	Maintenance Special Structures	
DIS	Development Improvement Structures	
DNS	Development New Structures	
STREET LIGHTING	Street Lighting	
TRAFFIC LIGHTS	Traffic Lights	
BUILDING RETICULATION	Building Reticulation	
INTERSECTION IMPROVEMENTS	Intersection Improvements	
CAPACITY IMPROVEMENT	Capacity Improvement	
ADDITIONAL LANES	Additional Lanes	
INTERCHANGE DESIGN	Interchange Design	
H/V RE-ALIGNMENT	Horizontal / Vertical Re-Alignment	
NEW ALIGNMENT	New Alignment	
ROUTE DETERMINATION	Route Determination	
Strategic modelling/ demand forecasting	Strategic modelling/ demand forecasting	
Static (meso) network simulation models	Static (meso) network simulation models	
Dynamic (micro) simulation modelling	Dynamic (micro) simulation modelling	
Traffic impact studies / local intersections	Traffic impact studies / local intersections	
NMT and PT operations	NMT and PT operations	
Transport economic studies	Transport economic studies	
Transport policy development	Transport policy development	
ITS systems	ITS systems	
Earthworks Investigation & Design	Investigation and design of earthworks for slopes/cuttings, embankments/fills, borrow pits or quarries	
Retaining Structure Investigation & Design	Investigation and design of conventional retaining structures (gravity-, piling-, cantilever-, anchored-walls etc.) or alternative retaining structures (soil nailing, soil strengthened walls, MSE etc.)	
Foundation Investigation & Design	Investigation and design of shallow/deep foundations for bridges, major culverts or retaining structures	
Tunnelling Investigation & Design	Investigation and design of tunnels for transport infrastructure	
MAJOR TCC (WEIGH BRIDGES)	Major Traffic Control Centres (Weighbridge)	
TOLLS	Tolls	
FMS	Freeway Management Systems	
MINOR TCC (BASIC WEIGH BRIDGE)	Minor Traffic Control Centres (Basic Weighbridge)	
Geohazard Investigation (Slope Stability)	<ul style="list-style-type: none"> • Slope Stability Investigation • Slope Condition Assessment • Slope Performance Monitoring (instrumental monitoring/remote sensing/GIS) • Slope Stability Management System 	

Geohazard Investigation (Subsidence)	<ul style="list-style-type: none"> Dolomite Stability Investigation Subsidence Assessment Subsidence Monitoring (instrumental monitoring/remote sensing/GIS) Dolomite/Subsidence Management System 	
Geotechnical Investigation (CL, Quarry and BP Materials Related)	<ul style="list-style-type: none"> Subsurface investigation, material profiling, geological/geophysical logging, sampling, testing or mapping using boring methods Trial pits, soil samplers or in-situ testing methods 	
Geotechnical Investigation (Tunnelling)	<ul style="list-style-type: none"> Subsurface investigation, material profiling, geological/geophysical logging, sampling, testing or mapping using boring or geophysical methods 	
Geophysical Investigation (Ground Based & Airborne)	<ul style="list-style-type: none"> Subsurface investigation, material profiling, testing or mapping using ground based or airborne geophysical methods 	

ABBREVIATION	DEFINITION
PL	Project Leader
APL	Assistant Project Leader
DS	Design Specialist
DA	Design Assistant
CE	Contracts Engineer
ACE	Assistant Contracts Engineer
RE	Resident Engineer
ARE	Assistant Resident Engineer
RM	RRM Route Manager
ARM	Assistant Route Manager
SMT	Senior Materials Technician
CM	Contracts Manager
SA	Site Agent
MT	Materials Technician
ETS	Electronics Systems Engineer
PL(T)	Project Leader (Toll)
DS(T)	Design Specialist (Toll)
CE(T)	Contracts Engineer (Toll)
CM(T)	Contracts Manager (Toll)
ETS(T)	Electronics Systems Engineer (Toll)
ES	Electrical Systems Engineer
MS	Mechanical Systems Engineer
PE(E)	Project Engineer (Client)

1) Project Type Relevance

The relevance of the project type is evaluated against a pre-determined key person specific matrix. For a comprehensive list of matrixes please refer to the Consultant Technical Submission Spreadsheet. Below are examples of the matrices for various key Persons:

PL, CE, RE Conventional

		Project Type Relevance					
Experience	Project type	MO/MA	MP/MS	DS	DI	DN	CD
	NONE	0	0	0	0	0	0
	MO/MA	5	3	1	1	1	2
	MP/MS	5	5	2	2	2	3

DS	5	5	5	3	3	4
DI	5	5	5	5	4	5
DN	5	5	5	5	5	5
CD	4	3	2	2	2	5

DS Pavement and Materials

	1	2	3	4	5
Project type / Experience		MP/MS	MSC	DS	DI/DN
1 NONE		0	0	0	0
2 MP/MS		5	0	2	2
3 MSC		0	5	0	0
4 DS		5	3	5	4
5 DI/DN		5	3	5	5

DS Structures

	1	2	3	4	5	6	7
Project type / Experience		MSB	DIB	DNB	MSS	DIS	DNS
1 NONE		0	0	0	0	0	0
2 MSB		5	2	2	5	3	3
3 DIB		5	5	5	5	5	5
4 DNB		5	4	5	5	5	5
5 MSS		3	0	0	5	2	2
6 DIS		4	3	3	5	5	5
7 DNS		4	2	2	5	4	5

DS Electrical

	1	2	3	4
Project type / Experience		STREET LIGHTING	TRAFFIC LIGHTS	BUILDING RETICULATION
1 NONE		0	0	0
2 STREET LIGHTING		5	4	2
3 TRAFFIC LIGHTS		2	5	1
4 BUILDING RETICULATION		1	3	5

DS Geometrics

	1	2	3	4	5	6	7
	<div> <div>Project</div> <div>Experience</div> </div>	INTERSECTION IMPROVEMENTS	CAPACITY IMPROVEMENT	ADDITIONAL LANES	INTERCHANGE DESIGN	H/V RE-ALIGNMENT	NEW ALIGNMENT
1	NONE	0	0	0	0	0	0
2	INTERSECTION IMPROVEMENTS	5	3	2	3	2	1
3	CAPACITY IMPROVEMENT	4	5	3	2	3	3
4	ADDITIONAL LANES	4	3	5	3	4	4
5	INTERCHANGE DESIGN	5	3	3	5	4	3
6	H/V RE-ALIGNMENT	4	3	2	2	5	4
7	NEW ALIGNMENT	5	3	3	3	5	5
8	ROUTE DETERMINATION	0	0	0	0	2	5

DS TRAFFIC AND TRANSPORTATION

[illegible]

DS GEOTECHNICAL

	1	2	3	4	5
	<div>Project type</div> <div>Experience</div>	Earthworks Investigation & Design	Retaining Structure Investigation & Design	Foundation Investigation & Design	Tunnelling Investigation & Design
1	NONE	0	0	0	0
2	Earthworks Investigation & Design	5	4	2	3
3	Retaining Structure Investigation & Design	4	5	3	3
4	Foundation Investigation & Design	2	3	5	2
5	Tunnelling Investigation & Design	3	3	3	5

DS ELECTRONIC SYSTEMS

	1	2	3	4	5
	<div>Project type</div> <div>Experience</div>	MAJOR TCC (WEIGH BRIDGES)	TOLLS	FMS	MINOR TCC (BASIC WEIGH BRIDGE)
1	NONE	0	0	0	0
2	MAJOR TCC (WEIGH BRIDGES)	5	4	2	3
3	TOLLS	4	5	0	0
4	FMS	2	0	5	0
5	MINOR TCC (BASIC WEIGH BRIDGE)	3	0	0	5

DS Engineering Geologist

	1	2	3	4	5	6
	<div>Project type</div> <div>Experience</div>	Geohazard Investigation (Slope Stability)	Geohazard Investigation (Subsidence)	Geotechnical Investigation (CL, Quarry and BP Materials Related)	Geotechnical Investigation (Tunnelling)	Geophysical Investigation (Ground Based & Airborne)
1	NONE	0	0	0	0	0
2	Geohazard Investigation (Slope Stability)	5	1	2	2	2
3	Geohazard Investigation (Subsidence)	2	5	3	2	3
4	Geotechnical Investigation (CL, Quarry and BP Materials Related)	3	3	5	3	4
5	Geotechnical Investigation (Tunnelling)	4	4	4	5	4
6	Geophysical Investigation (Ground Based & Airborne)	2	3	4	4	5

For each project experience listed, a point (out of a maximum 5) from the matrix per project type relevancy and 15 (fifteen) points overall for project type relevancy can be scored for each key person.

2) Period Relevance

For each project experience listed, a point is allocated for the time lapse between the experience gained and the tender closing date. If the experience is within 10 (ten) years of the tender closing a point of 5 (five) is allocated. If the experience is beyond 10 (ten) years but less than 15 (fifteen) years, 2.5 (two and a half) point is allocated. If the experience is longer than 15 (fifteen) years ago, 0 (zero) points are allocated.

If the experience is less than 6 (six) months, a pro-rata point is allocated to that of the point that would have been achieved as the experience is of a limited duration.

A maximum of 5 (five) points per project period relevancy and 15 (fifteen) points overall for project period relevancy can be scored for each key person.

3) Position Held

The relevance of the position held during the project experience against the position that is tendered for is evaluated:

Technical Experience **STANDARD DEFINED**

Position Rq Experience	PL	APL	DS	DA	CE	ACE	RE	ARE	RM	ARM	SMT	CM	SA	MT	ETS	DS(T)	CE(T)	CM(T)	ETS(T)	ES	MS	PE(E)
PL	5	5	2.5	5	5	5	5	5	5	5	2.5	2.5	2.5	2.5	0	0	2.5	2.5	0	0	0	2
APL	2.5	5	2.5	5	3.75	5	5	5	5	5	2.5	2.5	2.5	2.5	0	0	0	0	0	0	0	0
DS	2.5	2.5	5	5	3.75	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0	2.5	0	0	0	0	0	2
DA	0	0	2.5	5	2.5	2.5	2.5	2.5	2.5	2.5	0	0	0	0	0	0	0	0	0	0	0	0
CE	5	5	2.5	5	5	5	5	5	5	5	2.5	2.5	2.5	2.5	0	0	2.5	2.5	0	0	0	2
ACE	2.5	5	2.5	5	3.75	5	5	5	5	5	2.5	2.5	2.5	2.5	0	0	0	0	0	0	0	2
RE	2.5	2.5	2.5	2.5	4.5	2.5	5	5	5	5	2.5	2.5	2.5	2.5	0	0	0	2.5	0	0	0	2
ARE	2.5	2.5	0	2.5	2.5	0	2.5	5	5	5	2.5	0	0	2.5	0	0	0	0	0	0	0	0
RM	2.5	2.5	0	2.5	3.75	0	2.5	5	5	5	2.5	0	0	2.5	0	0	0	0	0	0	0	0
ARM	0	0	0	0	2.5	0	0	2.5	2.5	5	2.5	0	0	2.5	0	0	0	0	0	0	0	0
SMT	0	0	2.5	2.5	1.25	0	2.5	2.5	2.5	2.5	5	0	0	5	0	0	0	0	0	0	0	0
CM	2.5	5	2.5	5	5	2.5	5	5	5	5	2.5	5	5	2.5	0	0	2.5	2.5	0	0	0	2
SA	2.5	2.5	2.5	2.5	3.75	2.5	5	5	5	5	2.5	2.5	5	2.5	0	0	0	0	0	0	0	0
MT	0	0	2.5	2.5	0	0	2.5	2.5	2.5	2.5	5	0	0	5	0	0	0	0	0	0	0	0
ETS	0	0	2.5	2.5	0	0	0	0	0	0	0	0	0	5	0	0	0	0	2.5	0	0	2
DS(T)	0	0	2.5	2.5	0	0	0	0	0	0	0	0	0	0	0	5	2.5	2.5	0	2.5	2.5	0
CE(T)	2.5	2.5	2.5	2.5	5	5	2.5	5	2.5	5	0	5	2.5	0	2.5	2.5	5	5	2.5	2.5	2.5	2
CM(T)	2.5	2.5	2.5	2.5	5	5	2.5	5	2.5	5	0	5	2.5	0	2.5	2.5	2.5	5	2.5	2.5	2.5	2
ETS(T)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	2.5	2.5	0
ES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.5	0	0	0	2.5	5	2.5	0
MS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.5	0	0	0	2.5	2.5	5	0
PE(E)	2.5	5	2.5	5	5	2.5	2.5	5	5	5	0	2.5	2.5	0	0	2.5	2.5	2.5	0	0	0	5
Undefined	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A maximum of 5 (five) points per project position held relevancy (technical experience) and 15 (fifteen) points overall for position held relevancy can be scored for each key person.

Therefore, a total of 45 (forty-five) points can be scored for each key person listed in the tender document. The total for all key persons is totalled and this score is then converted back down into a score out of a maximum of 30 (thirty) for technical knowledge.

Management Knowledge (15)

The same returnable schedules as for the Technical Knowledge is used to evaluate the Managerial Knowledge.

For management knowledge up to 2 (two) areas are evaluated:

- 1) Client
- 2) Position Held (only for managerial positions, e.g. PL; CE; RE)

- 1) Client

The tender is allocated points for the client the work experience was done for:

CLIENT CODE	POINT
National Roads Authority	5
Concessionaire	5
Provincial Authority	5
Relevant SOE	4.5
Metro Council	4.5
Municipality	4
Private	3.75
Other	3.75

A maximum of 5 (five) points per project client relevancy and 15 (fifteen) points overall for client relevancy can be scored.

2) Position Held (only for managerial positions)

This is only used for certain key positions that are expected to perform a managerial function during the contract. The relevance of the position held during the managerial experience against the position that is tendered for is evaluated:

Managerial Experience

Position Rq Experience	PL	CE	RE	RM	PL(T)	CE(T)	CM(T)	
PL	5	5	5	5	2.5	2.5	2.5	PL Project Leader
APL	2.5	3.75	5	5	0	0	0	APL Alternate Project Leader
DS	2.5	2.5	2.5	2.5	0	0	0	DS Design Specialist
DA	0	0	0	0	0	0	0	DA Design Assistant
CE	5	5	5	5	0	2.5	0	CE Contracts Engineer
ACE	2.5	3.75	5	5	0	0	0	ACE Alternate Contracts Engineer
RE	2.5	5	5	5	0	0	0	RE Resident Engineer
ARE	2.5	2.5	2.5	2.5	0	0	0	ARE Assistant Resident Engineer
RM	2.5	5	2.5	5	0	0	0	RM RRM Route Manager
ARM	0	2.5	0	2.5	0	0	0	ARM Assistant Route Manager
SMT	0	0	2.5	2.5	0	0	0	SMT Senior Materials Technician
CM	5	5	5	5	0	0	2.5	CM Contracts Manager
SA	2.5	5	5	5	0	0	0	SA Site Agent
MT	0	0	2.5	2.5	0	0	0	
ETS	0	0	0	0	0	0	0	PL(T) Project Leader (Toll)
DS(T)	0	0	0	0	2.5	2.5	2.5	ETS Electronics Systems Engineer
CE(T)	2.5	5	2.5	2.5	5	5	5	DS(T) Design Specialist (Toll)
CM(T)	0	5	2.5	2.5	2.5	2.5	5	CE(T) Contracts Engineer (Toll)
ETS(T)	0	0	0	0	2.5	2.5	2.5	CM(T) Contracts Manager (Toll)
ES	0	0	0	0	0	0	2.5	ETS(T) Electronics Systems Engineer (Toll)
MS	0	0	0	0	0	0	2.5	ES Electrical Systems Engineer
PE(E)	2.5	5	2.5	2.5	2.5	2.5	2.5	MS Mechanical Systems Engineer
								PE(E) Project Engineer (Client)

A maximum of 5 (five) points per project position held relevancy (managerial experience) and 15 (fifteen) points overall for position held relevancy can be scored.

Therefore a total of 15 (fifteen) – non-managerial positions, and 30 (thirty) points – managerial positions, can be scored for each key position listed in the tender document. The total for all key positions are totalled and this score is then converted back down into a score out of 15 (fifteen) for managerial experience.

Quality System (10)

The quality assurance system offered by the tenderer is evaluated as follows:

Quality Assurance System Type		
1	System has ISO Certification	10
2	System has been registered for certification	6
3	System is an in-house production	4

For full ISO certification, a tenderer is awarded 10 (ten) points, for a quality assurance system that has been submitted to ISO for certification, but not yet received, 6 (six) points are allocated. If the tenderer's quality assurance system is purely an in-house system, 4 (four) points are allocated.

The total number of points allocated are tallied and a score out of 10 (ten) is awarded.

Past Performance (15)

Past Performance reports must be submitted by the tenderer for any 3 (three) completed projects in the last 10 (ten) years by the tenderer (any member of the Joint venture).

Past Performance Ratings will be allocated based on any one or a combination of the following Performance Assessment reports:

- i. CIDB: ANNEX 1 - PSP Performance Report for completed projects

A maximum of 5 (five) points per project and 15 (fifteen) points overall can be scored for past performance as per table below.

CIDB Rating	Poor $x < -0.1$	Adequate $-0.1 \leq x < 0.9$	Good $0.9 \leq x < 1.8$	Excellent $x \geq 1.8$
SANRAL score	1	3	4	5

Reference letters

A maximum of 5 (five) points per project and 15 (fifteen) points overall can be scored for reference letters as per table below.

Rating	Poor	Adequate	Good	Excellent
SANRAL score	1	3	4	5

Sworn Affidavit

For tenderers with less than 3 (three) completed projects, a sworn affidavit (refer to Returnable Schedule B6) shall be submitted stating that the tenderer has in the last 10 (ten) years only completed either 0 (zero), 1 (one) or 2 (two) projects, and as a result cannot submit the required 3 (three) past performance project reports. In the event of a submitted sworn affidavit, the following will apply:

- Submission of 0 (zero) past performance project reports, a rating of "Adequate" or 2 (two) points will be applied for all 3 (three) projects.
- Submission of 1 (one) past performance project reports, the rating as submitted will be applied, and a rating of "Adequate" or 2 (two) points will be applied for each of the other 2 (two) projects.

- c) Submission of 2 (two) past performance project reports, the ratings as submitted will be applied, and a rating of “Adequate” or 2 (two) points will be applied for the other 1 (one) project.

Workplan Appropriateness (30)

The tender must supply proposed hours that certain identified items in the Pricing Schedule will require. This is used to gauge the tenderer’s knowledge and understanding of the amount of work required to perform the scope of work and is compared to the hours tendered by all the other tenderer’s hours to represent industry norm.

Each tender submits their hours calculated from various items in the Pricing Schedule:

SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD		NORMALISED HOURS	
PLEASE INSERT TENDERER NAME ON INPUT DATA SHEET			
Project Number :		SANRAL.N.xxx-xxx-20xx/1	
Project Description:		An example project	
FORM C2.4: KEY PERSONS FOR THIS PROJECT AND SUMMARY OF NORMALIZED HOURS TENDERED			
SERVICE PROVIDER			
TOTAL HOURS TENDERED FOR THE SERVICE PROVIDER (ALL CATEGORIES)			0
TOTAL ALL NORMALISED HOURS			0.00
Key Persons Listed for this Project			
SUMMARY OF ALL KEY PERSONS NORMALISED HOURS		NHT	% of Total Hours
POSITION	NAME		% of Key Persons Hours Only
PL1		0.00	#DIV/0!
DS1		0.00	#DIV/0!
CE1		0.00	#DIV/0!
TOTAL KEY PERSONS NORMALISED HOURS ONLY		0.00	
TOTAL ALL NORMALISED HOURS		0.00	

The Workplan Appropriateness hours are entered on a spreadsheet to calculate the 80th percentile.

CALCULATION OF HOUR BENCHMARK AND WORKPLAN APPROPRIATENESS SCORE						ENTER HOURS TENDERED AS PER C2.4	30
Number	Consultant	Tender Respon sive	Sum Normalised Hours	Sum Normalised Hours Outliers Removed	WA Score Max= 35		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
	Mean		0				
	Standard Deviation		0				
	Mean +50%		0				
	Mean -50%		0				
	Percentile	80%		0.00			
	Points Drop per % above or below 80%		0.5				

The following steps are followed:

- 1) Calculate the mean of all compliant, responsive tenders.
- 2) Determine 50% above and below the mean.
- 3) Re-calculate the mean excluding any outliers identified above.
- 4) Determine the 80% percentile based on the tenderers of Sum Normalised Hours with Outliers Removed.
- 5) Allocate points (to all responsive tenders including outliers) out of 30 based on the percentage (%) difference between the tenderers normalised hours and the 80th percentile hours. Any negative values will score 0 (zero) points.
- 6) The formula used to calculate the points allocated to each compliant responsive tenderer is:

$$= \text{Workplan Appropriateness points (30)} - 100 * ((1 - \text{Tenderers hours} / 80 \text{ Percentile hours}) * \text{Points drop per \% above or below 80 percentile}(0,5))$$

Conclusion

The various scores for the 5 (five) criteria are added together to establish the final score for the tenderer and whether the tender makes the required threshold allocated to this project.