

# User Requirement Specification

## **General Facilities Maintenance Contract for Eskom Telecommunications Radio Sites for a period of 3 Years on an as-and-when required basis**

### **1 Site Locations and Access Road Conditions**

- 1.1 The table below contains information on the Radio Sites covered under this contract. Should an omission be identified or a new site built during the contract, they will automatically be included. The contractor will be notified of any changes. Most of the sites falling under this contract are at altitude (included, an “Altitude” column to give the contractor an idea of the challenges they may face because of altitude and its associated weather) and are at the end of fairly challenging gravel roads / tracks leading to our mountain top sites. The column “Access” indicates vehicle requirement to gain access, although this may change in bad weather.

Number	Description	Housing Type	Access	Service Centre	Coordinates	Altitude
1	Braemar RS	Brick	Raised Body LDV	EL	32°15'15.5"S, 27°11'30.8"E	1279
2	Butterworth RS	Container	Raised Body LDV	EL	32°21'07.1"S, 28°08'12.8"E	696
3	Cathcart RS	Container	4x4 LDV	EL	32°17'52.2"S, 27°06'56.3"E	1609
4	Dordrecht RS	Container		EL	31°21'47.6"S, 27°04'00.8"E	1931
5	Dryhurst RS	Brick	Raised Body LDV	EL	32°22'16.58"S, 27°26'36.25"E	1323
6	Grays RS	Brick	Raised Body LDV	EL	32°37'04.86"S, 27°43'25.6"E	850
7	Hogsback RS	Container	Raised Body LDV	EL	32°34'53"S, 26°56'15"E	1546
8	Indwe RS	Container		EL	31°27'10.1"S, 27°18'09.0"E	1513
9	Jamestown RS	Container		EL	31°06'10.4"S, 26°46'15.24"E	1934
10	Katberg RS	Container		EL	32°27'26.2"S, 26°39'00.6"E	1615
11	Kei Mouth RS	Container	Raised Body LDV	EL	32°39'36"S, 28°17'08"E	248
12	Knapdaar RS	Container	Raised Body LDV	EL	30°42'28.5"S, 26°07'11.9"E	
13	Kramberg RS	Container	Raised Body LDV	EL	30°47'00.5"S, 26°33'59.8"E	1986
14	Lady Frere RS	Container	4x4 LDV	EL	31°41'22"S, 27°06'49"E	1737
15	Langpunt RS	Container	Raised Body LDV	EL	30°51'28"S, 27°25'54"E	2248
16	Madeira RS	Brick	Raised Body LDV	EL	31°52'28.9"S, 26°49'29.3"E	1585
17	Molteno RS	Container		EL	31°35'27.7"S, 26°08'47.6"E	2091
18	Mt Kemp RS	Brick	Raised Body LDV	EL	32°40'56"S, 27°15'35"E	1406
19	Mt Shepstone RS	Container	Raised Body LDV	EL	31°43'56.5"S, 26°46'47.4"E	1978
20	Ncora RS	Container	Raised Body LDV	EL	31°51'28"S, 27°40'16"E	1316
21	Needs Camp RS	Brick	Raised Body LDV	EL	33°00'36.03"S, 27°36'58.73"E	356
22	Nqamakwe RS	Container	Raised Body LDV	EL	32°11'34.6"S, 27°56'31.7"E	1107
23	Post Retief RS	Container	4x4 LDV	EL	32°31'56.6"S, 26°30'25.8"E	1576
24	Rhodes RS	Container	4x4 LDV	EL	30°51'46.5"S, 27°51'39.1"E	2062
25	Sada RS	Container	Raised Body LDV	EL	32°14'04.1"S, 26°33'53.4"E	1718
26	Tarkastad RS	Brick	Raised Body LDV	EL	32°00'02.9"S, 26°17'09.6"E	1385
27	Wesley RS	Container	Raised Body LDV	EL	33°12'57.5"S, 27°20'59.4"E	277
28	Witberg EC RS	Container	4x4 LDV	EL	30°41'44.6"S, 27°16'10.5"E	2405

29	Barkley Pass RS	Container	Raised Body LDV	Mthatha	31°12'25"S, 27°49'47"E	2075
30	Baziya RS	Brick	4x4 LDV	Mthatha	31°33'25.7"S, 28°23'56.2"E	1653
31	Cala RS	Container	4x4 LDV	Mthatha	31°33'14"S, 27°44'56"E	1735
32	Coffeabay RS	Container	Raised Body LDV	Mthatha	31°48'14.2"S, 29°04'43.8"E	653
33	Gudlani_MTN RS	Container		Mthatha	30°37'53.54"S, 28°33'12.39"E	1744
34	Lusikisiki RS	Container		Mthatha	31°22'59"S, 29°33'54.3"E	
35	Mt Ayliff RS	Container	Raised Body LDV	Mthatha	30°50'14"S, 29°23'56"E	
36	Mt Frere_MTN RS			Mthatha	30°55'33.73"S, 28°58'57.04"E	
37	Mt Hargreaves RS	Container	Raised Body LDV	Mthatha	30°23'34.3"S, 28°45'55.7"E	2130
38	Port St Johns RS	Container	Raised Body LDV	Mthatha	31°36'42.9"S, 29°31'17.9"E	356
39	Vaalkop EC RS	Container	Raised Body LDV	Mthatha	31°11'29.8"S, 27°58'24.8"E	2351
40	Willowvale RS	Container	Raised Body LDV	Mthatha	32°16'02"S, 28°30'40"E	599
41	Aberdeen RS	Container	Raised Body LDV	PE	32°41'08.8"S, 23°59'54.6"E	1003
42	Adamskraal RS	Container	Raised Body LDV	PE	33°31'20.2"S, 23°35'49.1"E	1090
43	Alexandria RS	Container	Raised Body LDV	PE	33°37'56.2"S, 26°10'49.7"E	357
44	Baviaanskloof RS	Container	4x4 LDV	PE	33°35'09.2"S, 23°56'16.3"E	996
45	Bedford RS	Brick	Raised Body LDV	PE	32°38'04.0"S, 26°02'50.6"E	1423
46	Bulberg RS	Container	4x4 LDV	PE	31°17'08.0"S, 25°35'24.8"E	1797
47	Coldstream RS	Container	Raised Body LDV	PE	33°18'58.8"S, 26°24'27.0"E	809
48	Cradock RS	Brick	Raised Body LDV	PE	32°18'02.7"S, 25°32'30.2"E	1820
49	Cradock RS (Old Site)	Brick	Raised Body LDV	PE	32°18'02.7"S, 25°32'30.2"E	1820
50	Elandsrivier RS	Container	Raised Body LDV	PE	33°38'52.4"S, 24°48'00.3"E	822
51	Fullerton RS	Container	4x4 LDV	PE	33°12'15.3"S, 24°19'27.5"E	1043
52	Governorskop RS	Brick	Raised Body LDV	PE	33°17'04.6"S, 26°42'13.1"E	849
53	Joubertina RS	Container	Raised Body LDV	PE	33°49'14.2"S, 23°52'20.3"E	737
54	Kareedouw Mountain RS	Container	Raised Body LDV	PE	34°01'31.5"S, 24°25'45.6"E	736
55	Kasouga RS	Container	Raised Body LDV	PE	33°42'11.5"S, 26°33'36.0"E	193
56	Kruisfontein RS	Container	Raised Body LDV	PE	34°00'55.6"S, 24°44'38.8"E	210
57	Lady Slipper RS	Brick	Raised Body LDV	PE	33°53'10.3"S, 25°15'46.6"E	576
58	Louterwater RS	Container	Raised Body LDV	PE	33°48'05.1"S, 23°39'59.2"E	667
59	Lovemore Heights RS	Brick	Raised Body LDV	PE	33°59'32.6"S, 25°31'13.9"E	243
60	Misgund RS	Container	4x4 LDV	PE	33°45'00"S, 23°31'09"E	948
61	Olifantskop RS	Brick	Raised Body LDV	PE	33°18'57.7"S, 25°58'07.6"E	707
62	Ouberg RS	Container	Raised Body LDV	PE	32°05'36"S, 24°26'36"E	1687
63	Ouposberg RS	Container	Raised Body LDV	PE	33°33'16"S, 23°16'43.7"E	1266
64	Pearston RS	Container	4x4 LDV	PE	32°53'02.4"S, 25°08'09.1"E	852
65	Suurberg RS	Container	Raised Body LDV	PE	33°14'43.5"S, 25°32'51.8"E	951
66	Tygerhoek RS	Container	4x4 LDV	PE	33°34'27.4"S, 25°00'06.3"E	1024
67	Uniondale RS	Container	Raised Body LDV	PE	33°43'24.0"S, 23°03'04.4"E	1043
68	Viewlands RS	Brick	Raised Body LDV	PE	33°16'21.7"S, 25°46'01.7"E	901
69	Willowmore RS	Container	Raised Body LDV	PE	33°14'06.6"S, 23°27'34.6"E	1402

## 2 Contract Kick-Off

2.1 At the kick-off of this contract, an evaluation will be carried out to establish initial maintenance requirements. This evaluation will include a site visit to each site and

be carried out by both an Eskom Official and contractor appointee. The information gathered will be evaluated by Eskom and translated into a schedule. Eskom will after this initial phase initiate further action as it identifies defects. The contractor will be able to bill for expenses to carry out the initial evaluation

- 2.2 A tick sheet will form the basis of the initial evaluation to ensure all aspects are assessed and will be provided by Eskom

### **3 Services Required**

- 3.1 The list below is not exhaustive and is provided to give the contractor an idea of what skills they should possess in-house to be able to carry out requirements of this contract. Should an omission be identified later, the service can still be requested, based on establishing whether it is within the contractors capabilities. Skills outside those identified on the list can be procured by the contractor under the "Material / Purchases / Hiring Equipment / Professional Services at % Mark-up" line item in the price list

General Facilities Maintenance Services
Carpentry
Electrical (including issuing of COCs)
Fencing and Gate Maintenance
General Maintenance
General Welding
Minor Access Road Maintenance
Masonry
Painting
Running and Termination of Cables
Site Stoning
Spray Washing of Containers / Buildings
Stationary Generator Maintenance and Refueling
Tower Maintenance (Working at Heights)
Trenching and Ducting
Vegetation Control (including maintenance of firebreaks and application of Herbicide)
Waterproofing and Sealing

### **4 Travel / Work / Accommodation Arrangements**

- 4.1 It is accepted that travel / work be undertaken by a minimum of 2 people (eg: Artisan or Supervisor + Assistant). This to ensure safety, both while driving as well as while working on site
- 4.2 Should a larger team be required due to the nature of the work, it should be negotiated between Eskom and the contractor
- 4.3 It is accepted that teams stay over should safety dictate it. This is to be communicated to the Eskom Senior Supervisor before doing so
- 4.4 Any accommodation requirement that should crop up due to unforeseen circumstances / delays should be negotiated with the Eskom Senior Supervisor

### **5 Hand Tools / Equipment / Portable Electrical Equipment and Plant**

- 5.1 It is expected that the contractor has the necessary Hand Tools, Equipment and Portable Electrical Equipment in-house to carry out General Facilities Maintenance
- 5.2 Transport of goods and material that is within the capability of a LDV or 4x4 bakkie is covered under the "Travel per km" line items in the price list. Transport requiring

a truck will be covered under the “Material / Purchases / Hiring Equipment / Professional Services at % Mark-up” line item

- 5.3 Plant as well as specialist equipment can be hired under the “Material / Purchases / Hiring Equipment / Professional Services at % Mark-up” line item in the price list, but dependent on negotiation with the Eskom Senior Supervisor
- 5.4 Any vehicles, specialized equipment or plant owned by the contractor and used under this contract which cannot be billed against one of the standard line items should be billed out at standard market rates under line item “Material / Purchases / Hiring Equipment / Professional Services at % Mark-up”. This by negotiation with Eskom Senior Supervisor

## **6 Process for Carrying Out Work**

- 6.1 Any work to be carried out will be requested by the Eskom Senior Supervisor
- 6.2 This to be done on a quote based system where Eskom requests a quote based on the scope required
- 6.3 On acceptance of a quote, the Eskom Senior Supervisor will issue a Purchase or Task Order (depending on time constraints)
- 6.4 Should the nature of work change due to unforeseen conditions identified on-site, such changes will be conveyed to the Eskom Senior Supervisor who will give consent to such variation from the scope. This to be followed up by re-quoting and amending of Purchase / Task order ASAP

## **7 Pricing / Quoting**

- 7.1 The nature of pricing in this contract is mostly based on time and materials
- 7.2 Contractor will quote to carry out required scope as presented by the Eskom Senior Supervisor based on the following line items:

Contract Line Items to be Tendered On
Artisan / Supervisor Labour - Normal Time
Artisan / Supervisor Labour - Overtime @ 1,5
Artisan / Supervisor Labour - Overtime @ 2
Assistant Labour - Normal Time
Assistant Labour - Overtime @ 1,5
Assistant Labour - Overtime @ 2
Artisan / Supervisor Travel - Normal Time
Artisan / Supervisor Travel - Overtime @ 1,5
Artisan / Supervisor Travel - Overtime @ 2
Assistant Travel - Normal Time
Assistant Travel - Overtime @ 1,5
Assistant Travel - Overtime @ 2
Tower Work Labour - Normal Time
Tower Work Labour - Overtime @ 1,5
Tower Work Labour - Overtime @ 2
Travel per KM - LDV / Sedan
Travel per KM - 4x4
Material / Purchases / Hiring Equipment / Professional Services at % Mark-up
Accommodation

- 7.3 In support of travel expenses (during quoting), the contractor will submit a Travel Plan containing an active Google Maps Route Link. This must match up with km and travel time (@100km/hr) quoted on

- 7.4 Travel will be calculated from the contractors base as negotiated-on at contract award
- 7.5 Invoices from contractors suppliers will be submitted in support of billing against the line item "Material / Purchases / Hiring Equipment / Professional Services at % Mark-up"
- 7.6 No travel km can be claimed within a radius of 50km
- 7.7 Transport of goods, where it is beyond the capability of an LDV or 4x4 must be billed against the line item "Material / Purchases / Hiring Equipment / Professional Services at % Mark-up"
- 7.8 Maintenance visits must be clustered according to what is reasonable to keep travel expenses down for Eskom. Eskom requires that the contractor submits a Travel Plan as part of the quoting process to ensure travel has been evaluated to be most efficient

## 8 Example Example

- 8.1 To help the contractor develop a better understanding of how the contract should be priced, an example of a quote is presented below:
- 8.2 **Stoning of Barkly Pass Radio Site - 150mm depth of 19mm crushed stone**
  - 8.2.1 Distance from base (EL in this example) – 270km one-way. One double cab would be sufficient
  - 8.2.2 Travel time – 2hr42min calculated @ an average of 100km/hr
  - 8.2.3 Site dimensions – 20x20m
  - 8.2.4 Labour duration – 2 Days at 8hrs per day to complete on-site works
  - 8.2.5 Staffing – 1 x Artisan or Supervisor plus 3 x Assistants
  - 8.2.6 Accommodation – It will be required that the team stay over for three nights to keep overtime expenditure down. They will travel up on the first day, work for two days and return on the morning of the forth, totalling 3 nights out
  - 8.2.7 The rates presented in the table below are only for the purpose of this example

Quotation			
	Number of Units	Rate	Sub-Total
Artisan / Supervisor Labour (2 days x 8hrs)	16	R 200	R 3 200
Assistant Labour (3 people @ 2days x 8hrs)	48	R 100	R 4 800
Artisan / Supervisor Travel-Time (travel time 2hr42m one-way = 5hr24m)	5.4	R 150	R 810
Assistant Travel-Time (same as above)	5.4	R 75	R 405
Travel km (270 x 2 = 540km) - Double Cab Bakkie	540	R 6	R 3 240
Material (20 x 20 x 0.15 = 60m <sup>3</sup> of crushed stone delivered = R 30 000. As invoiced by supplier)	R 30 000	15% Mark-up	R 34 500
Accommodation (4 people for 3 nights = 12)	12	R 700	R 8 400
Total			R 55 355

## 9 Verification of Work

- 9.1 All work to be checked for quality and completeness by Eskom Official before sign-off and payment
- 9.2 Where it makes sense, photographic proof must be provided on request by the Eskom official as proof of quality and completeness. This will be negotiated on a per job basis or as such situations arise

## **10 Policies, Procedures and Standards**

10.1 All work is to be carried out according to Eskom's Policies, Procedures and Standards. These will be provided as needed per job

## **11 General**

11.1 There are no toilet facilities on site

11.2 There is no water on site

11.3 There is electricity on site (except for a couple solar sites)

11.4 No transportation of personnel on the back of a bakkie / truck