



## **NKANGALA DISTRICT MUNICIPALITY**



**PROJECT NO: 57491**

**Project No: 57491: DATA CENTRE INFRASTRUCTURE  
MAINTENANCE FOR NKANGALA DISTRICT MUNICIPALITY FOR A  
PERIOD OF THREE (3) YEARS (RE-ADVERT)**

<b>SCOPE OF WORK</b>
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**Part C3: Scope of work**

C3 Scope of work



## C3 SCOPE OF WORK

### 1. DATA CENTRE MAINTANANCE:

- **AIR- CONDITIONING- Servicing & Re-gassing**
- **Fire- Complete servicing of the FM-200 Fire Suppression**
- **Server Room- Servicing of cameras, biometrics**
- **Environmental- Servicing of the Axil P194 Monitoring Device**
- **Water- service/Replace Water Detection Sensors**

#### 1.1. Data Centre Maintenance detailed.

ITEM	OFFERING	DESCRIPTION
1.1.1	Air-Conditioning	Service and re-gassing of 9 units
1.1.2	Fire	Detection and Suppression – Complete Service
1.1.3	Server Room	Biometrics and CCTV – Service Cameras + Emergency lights
1.1.4	Environmental	Service Axil P194 environmental monitoring system
1.1.5	Water	Replace faulty Water Detection Sensors 4x

#### 1.2. Maintenance Checks: Every 6 months for 3 years

Service	Check
CCTV Dome Cameras	To be checked and cleaned
Security machine running below 65% CPU Load	Ensure the server room security workstation is running smoothly
CCTV Cameras online	Ensure all cameras are online and recording
CCTV Storage- capacity	Ensure there is enough storage space and HDD Health
CCTV Software upgraded	Ensure recording software is up to date
Gas Suppression	Service Gas suppression and supply a certificate
Alarms functioning	Ensure Alarms are functioning
Gas filters cleaned	Ensure nozzles are clean
Fire Panel and Battery functioning	Test battery and life of battery for fire panel
Biometric server and units checked	Ensure server is running and clear out logs
Server Room water detection Units Replacement	Replace Water detection units as and when required or every 2 services
Aircon Re gassed	Service and check gas for aircons and ensure no ice is forming
Aircon Filter clean and service	Service Filters and clean Aircons, outside the server room and inside the server room
Axil P194 Reports	Clear all reports on the Axil system
Emergency lights	Test all emergency lights inside the server room, and replace if not working as expected with the correct sensors to avoid the always-on situation

### 2. UPS SOLAR MAINTANANCE:



- **Servicing of Solar UPS (Thembisile Hani Fire Stations, Nokaneng Fire Stations, DR JS Fire Stations, and Middleburg Head Office)**
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## 2.1. Specifications for Fire Stations PV Solution Service

Service Three Fire station locations

- 2.1.1 JS Moroka, Cnr R544 and R511, Vaalbank fire station (GPS = DR JS Moroka Fire Station “-25.145555, 28.925374” /
- 2.1.2 Stand 39 Tweefontein, Samarobogo, 0461 (GPS = Thembisile Hani Local Fire Station)
- 2.1.3 Nokaneng Fire Station – location (WJHF+Q2P Nokaneng)

Current Installed solution per site

- 2.1.4 5 kVA Victron Multiplus PV String inverter system.
- 2.1.5 Canadian Solar 355W Poly PERC KuMax GEN4.
- 2.1.6 Victron Multiplus 4.8kW ESS / 9.6kWh Li-Ion Package.
- 2.1.7 600V Protection Box 2 Inputs 2 Outputs 16A Isolator Type I\_II SPD

### Maintenance routine

ITEM	Description
1	Update Victron Software and remote viewing
2	Discharge and rebalance battery loads
3	Check and clear all faults on system
4	Service all sites every 6 months over a three-year period
5	Load balancing and ensuring battery protection from irregular drainage
6	Report recommendations where applicable



### **3. INFRASTRUCTURE INSTALLATION**

1. Installation of a complete down-blow air-cooling HVAC system for the Middelburg Server Room:

#### **CURRENT STATUS**

- 1.1. Current Cabinet sizes (3 \* 1200mm depth 42 U cabinets)
- 1.2. Current Antistatic floor tiles

#### **INSTALLATION**

- 1.3. Install complete underfloor duct airflow system
- 1.4. Installation of complete power supply to the unit.

2. Access Control System installation

- 2.1. The current access control system is ZKTE.
- 2.2. Three access entries to be covered
- 2.3. Touchless exit button to be installed
- 2.4. Battery power backup

3. Installation of 1080/4k CCTV Camera system

- 3.1. 8 high graphics dome cameras to be installed in total
- 3.2. The system must be network-capable
- 3.3. Installation of adequate emergency lights with sensors

All installations must be done in the correct recommended security standard by a qualified installer.