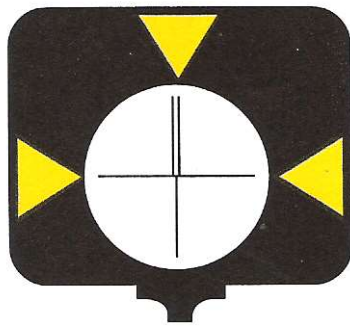


SURMAC

SURVEY & MAPPING



COMPANY PROFILE

Surmac – Company Overview

Surmac was established in 1996 specializing in all aspects of distribution and sub- transmission power line survey and design including planning, route selection & negotiations, field survey to obtain data to produce a long section used for tower spotting using “Model Maker” survey software in order to maximise the design, producing of final plans & spanning sheets, pegging and setting out of the powerline.

Surmac has the services of 4 registered surveyors and 2 CAD operators and specializes in the tower-spotting or line optimization function during the survey design function, a skill that can be passed on to local surveyors who are often employed to assist with the field survey function. In addition 2 additional surveyors who are regular sub-contractors can be called in to assist with large projects.

A drone is presently available to **Sumac** to carry out aerial survey to assist with the route selection field survey and data capture. This type of survey is to be pursued by the company to be offered on a permanent basis.

Sumac has carried out extensive electrification, system strengthening and HV supply projects throughout South Africa as well as Swaziland , Zambia, Mozambique , Kenya and Tanzania (Project engineers and surveyors were trained in the use of model maker during this project).

Company Details

Company Name	Sumac Survey & Mapping
Date Established	01 June 1996
Physical Address	28 Montgomery Drive Athlone 3201
Postal Address	PO Box 255 Msunduzi 3231
Telephone	+27 (0)33 3429877
Facsimile	+27 (0)86 5157329



Sole Proprietor Details

Name	Andrew Duncan McFarland
Date of Birth	28 August 1962
Nationality	South African
Home Language	English
Other Languages	Afrikaans, Conversational Zulu
Qualifications	T3 National Diploma Land Surveying Natal Technikon Diploma in Project Management School of Project Management (University of Pretoria)
Professional Affiliations	PLATO (Professional Land & Technical Surveyors) Registered surveyor Reg No:GT gES S0487 SARWA (South African Rights of Way Association) Member Reg No: RW0022
Affiliated Courses	Environmental Impact Management Negotiations and rights of way Power line Templating and design

Existing Service Provider to Eskom Eastern Region
Eskom Vendor Number: 11015655
C & D Tariff Supplies
Electrification Surveys
HV Line Surveys
System Strengthening
As Built Surveys

Services Offered

Powerline surveys

- **Planning of powerline routes in conjunction with planning and design consultants**
- **Route selection of proposed routes**
- **Negotiation of power line routes and signing of Wayleaves and option forms**
- **Survey of routes (bends / tees and terminals)**
- **Profiling of routes, including service crossings (Tache or GPS)**



SURMAC

- Templating of routes (tower spotting) for optimal tower / pole utilization
- Marketing of customers
- Production of tower schedule
- Setting out of tower / stay positions (HV Lines)
- Complete survey of electrification reticulation projects (MV and LV)
- G.I.S data capture
- GPS mapping
- General engineering surveys
- Servitude negotiations
- Project management

Sample Projects Completed

Name of Project	Alto Moloque – Gurue 33kV Power Line
Client	Masana Aviation for Linjebygg (Norway)
Country of Installation	Mozambique (Nampula Province)
Line Construction Configuration	Horizontal and H-Pole / “Mink” Conductor
Voltage	33kV
Length of Line (km)	25 km
Date of Commissioning	December 1999

Name of Project	Riverdale 132kV Tee Line
Client	Eskom Kwa-Zulu Natal
Country of Installation	South Africa (Kwa-Zulu Natal Province)
Line Construction Configuration	245 Series Towers Self-Supporting “Dove”
Conductor	
Voltage	132kV
Length of Line (km)	5 km
Date of Commissioning	December 2000

Name of Project	Nchelenge 66kV Line
Client	dev Serv for Zesco
Country of Installation	Zambia (Nampula Province)
Line Construction Configuration	H-Pole “Dog” Conductor
Voltage	66kV
Length of Line (km)	48 km
Date of Commissioning	October 2001



SURMAC

Name of Project Qumbu Phase 3 Electrification
Client Roshcon
Country of Installation South Africa
Line Construction Configuration Wood Pole
Voltage 22kV
Length of Line (km) 100km MV
210km LV
Date of Commissioning December 2003

Name of Project Mispah – Msinga 132kV Line
Client CRH Surveys
Country of Installation South Africa
Line Construction Configuration 132kV Guyed Tower Suspensions
Voltage 132kV “Kingbird”
Length of Line (km) 35 km
Date of Commissioning 2007

Name of Project Qolweni Cala 66kV Line
Client KRB Masana
Country of Installation South Africa
Line Construction Configuration 66kV Stayed “Hare” Conductor
Voltage 66kV
Length of Line (km) 35km
Date of Commissioning August 2007

Name of Project MCA-TANZANIA
Client SYMBION POWER LLC- F. Nortjie
Country of Installation TANZANIA
Line Construction Configuration 33 KV “Dog”
Voltage 11Kv “Dog”
Length of Line (km) 300 km
Date of Commissioning April 2012

Name of Project Nhlawe electrification
Client Eskom – Jos Summers
Country of Installation RSA -KZN
Line Construction Configuration 22KkV “Fox”
Voltage 22kV
Length of Line (km) 68km MV
120km LV
Date of Commissioning April 2013



Name of Project Phelandaba electrification
Client Eskom – Des Pietersen
Country of Installation RSA -KZN
Line Construction Configuration 22KkV “Fox”
Voltage 22kV
Length of Line (km) 24km MV
68km LV
Date of Commissioning June 2016

Name of Project Takazi electrification
Client Eskom – Sbo Dube
Country of Installation RSA – Eastern Cape
Line Construction Configuration 22KkV “Fox”
Voltage 22kV
Length of Line (km) 40 km MV
83 km LV
Date of Commissioning March 2017

Name of Project KWALE MINE – 11KV
Client BASE RESOURCES
Country of Installation KENYA
Line Construction Configuration 22KkV “BEAR ”
Voltage 22kV
Length of Line (km) 15km MV
Date of Commissioning APRI 2018

Name of Project Ariadne – Eros 400/ 132 KV D/C line
Client Jyoti Structures Africa
Country of Installation RSA – KZN
Line Construction Configuration 400 /132 KV Double Circuit
Voltage 400 /132 KV
Length of Line (km) 122 km

Name of Project Moma Mine 88kv line
Client Corona Tech
Country of installation Mozambique
Line construction Configuration Mono Pole
Line Length/ No of Customers 7KM

Name of Project Edwaleni Stonehenge 132 kv line
Client Murray and Roberts
Country of installation Swaziland
Line construction Configuration Lattice tower
Line Length 53km



SURMAC