



Electrical,
Mechanical & Fire
Engineers

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We provide our clients with a detailed and systematic multidisciplinary engineering service, which strives to achieve modern, practical and economical engineering designs and solutions.

This goal is achieved by utilizing the latest computerized modelling techniques, BIM Platforms and various design software packages to unlock the full potential of each project.

Our vibrant engineering team combines the correct mix of youth and experience to ensure we always have fresh ideas, brought to the review table with the required oversight and in strict accordance with national and international standards.



Our Story

Our History



Big and historical, economic and political changes and challenges

1985 - Rubicon and international sanctions

1982 Plantech (Pty) Ltd is a consulting engineering firm established by Hein Schuld, James Theron and Peet Olivier
First Large Project - Vanderbijl Park power system upgrade project.

Other Utilities followed, eg. Tshwane, Johannesburg, Midrand, Richards Bay, Stellenbosch municipalities and also Eskom

Isolation and economic stagnation

1988 Started working on CADKEY

1990 Personnel grows to 16 members of staff

1994 - South Africa's first democratic election

1991 Moved over from traditional drawing boards to AUTOCAD

1998 Move in 1998 from first own office building in Kariba Street to new office building in Persequor Park, Techno Park

International financial crisis

2003 **Establishment of PSW Consulting Engineers (subsidiary)**

2012 Plantech International, based in Lesotho, established

2015 Also started working on REVIT

2018 TWCE Plantech started as a subsidiary to Plantech to boost overall expertise in fire engineering

2019 Adapted a "paperless" work environment

COVID-19
Debilitating economy and social unrest

2020 TWCE Plantech merges with Plantech to offer fire engineering services inhouse under a single umbrella

20 Personnel on the team

2024 Moved offices to The Wedge Office Park



Game changers

Kasteelpark Offices
Bonearo Park

Sasol Head Office
Secunda

Novartis and
various offices in Waterfall
Atterbury and ATTACQ

Mabopane Shopping Center
Profund Bophuthatswana Provident Fund

PTA Eye Institute, Heart Hospital
*Various more Hospitals for
Muelmed & Presmed*

Safari Tuine Shopping Center
And 7 more for Safari Investments



Projects that put us 'on the map'

High Voltage 88 kV Power Lines
and SF6 & Outside Substations
Vanderbijl

City Power Strategic Partner
*Sebenza, Wilropark, Long Lake,
New Road, Grand Central Substations*

Lesotho Highlands
Power Lines & Substation
Phase 1B & Phase 2

Cellular High Voltage Substations
*Eskom (Slurry), City Power, Pretoria
Municipality, Richards Bay Municipality,
Mauritius*



We have worked for ...

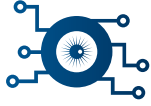


UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



Our Services

Power Systems



Master Planning



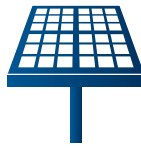
Renewable Energy



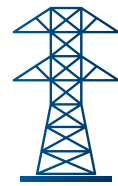
Electrical Reticulation



HV / MV Substations



Emergency / Back Up Power



Power Lines



Township
Reticulation



Railway Infrastructure



Mining / Industrial



Lightning Protection &
Earthing



Our Projects

Power Systems

Sebenza Substation

Client : City Power, Johannesburg
Type : EHV/HV Outdoor/Indoor Substation
Installation Value : R942 million
Size : 1000MVA, 400/275/132/88kV
Completion Date : November 2018

Services Offered

Full engineering services for electrical and civil works from inception to completion.



New Road Substation

Client : City Power, Johannesburg
Type : 132kV Indoor Substation
Installation Value :
Size : 120MVA, 132kV
Completion Date : 2010

Services Offered

Full engineering services for electrical and civil works from inception to completion.



Power Systems

Wilropark Substation



Client : City Power of Johannesburg
Type : Indoor High Voltage Substation
Installation Value : R146 million
Size : 3 x 45MVA, 88/11kV
Completion Date : June 2019
Services Offered

Full engineering services for electrical and civil works from inception to completion.

Kloofendal



Client : City Power of Johannesburg
Type : Project Management
Installation Value : R60,5 million
Size : Outdoor High Voltage Substation
Completion Date :
Services Offered

Project management of the construction and other works for the Kloofendal Substation.

Lesotho Highlands Phase 2 - Advance Infrastructure



Client : LHDA
Type : 132kV OHL, 132kV Outdoor Substation, Telecommunication 33kV OHL
Installation Value : R972 million
Size : 100MVA, 132kV Supply Line over 38km
Completion Date : 2022/23
Services Offered

Full engineering services for electrical and civil works from inception to completion.



MV & LV Distribution



Lighting Design



Metering & Building Management



Hybrid Power Supply Solutions



Standby & Critical Power Diesel Generators & UPS



CCTV & Access Control



Data Networks



Renewable Energy & Battery Energy Storage Systems (BESS)



Healthcare



Energy Efficiency Certification & Compliance



Buildings: Electrical



Waterfall Corporate Campus

Client : Attacq / ZenProp

Type : Commercial

Installation Value : R58 million

Area : 76120m² 7 Office buildings, Gate House, Communal Conference Centre and Restaurant

Completion Date : Feb 2021

Services Offered

- *MV & LV Electrical Design*
- *Internal & External Lighting*
- *Emergency Power Systems*
 - *Standby Generators (2.5MW installed)*
 - *UPS (435kW installed)*
- *Fire Detection*
- *CCTV & Access Control*
- *Data Network Infrastructure*
- *Earthing & Lightning Protection*
- *4 Star Green Building Council Certification*



Club 3 & 5 Precinct

Client : Atterbury

Type : Commercial & Healthcare

Installation Value : R27 million

Area : 20 000m² Advocate Chambers, Basement Parking, Medical Clinic and Residential Housing

Completion Date : June 2018

Services Offered

- *MV & LV Electrical Design*
- *Internal & External Lighting*
- *Emergency Power Systems*
 - *Standby Generators (900kW Installed)*
 - *UPS (100kVA Installed)*
- *CCTV & Access Control*
- *Hospital Services & Bed Head Units*
- *Operating Theatres*
- *Earthing & Lightning Protection*

BMW Regional DC



Client : Attacq

Type : Regional Distribution Centre & Warehouse

Installation Value : R19.2 million

Area : 33 000m²

Completion Date : August 2018

Services Offered

Electrical and Electronic Engineering Services consisting of:

- Bulk Electrical Supply and Switchgear
- MV & LV Electrical Design
- Internal & External Lighting
- Emergency Power Systems
 - Standby Generators (450kVA Installed)
 - UPS (80kVA Installed)
- CCTV, Access Control
- Alarm System
- Earthing and Lightning Protection

Cotton On Warehouse



Client : Attacq

Type : Regional Distribution Centre & Warehouse

Installation Value : R18,52 million

Area : 20651m²

Completion Date : August 2022

Services Offered

Electrical Engineering Services consisting of:

- LV Electrical Design
- Internal & External Lighting
- Emergency Power Systems
 - Standby Generators (700kVA Installed)
 - UPS (50kVA Installed)
- Earthing and Lightning Protection
- Grid Tied Solar PV (200 kWp Installed)

Our Projects



Buildings: Electrical

WeBuyCars (Mbombela, Germiston & The Dome)

Client : WeBuyCars Properties
Type : Warehouse & Commercial
Installation Value : R13 million
Area : 8700m² + 8900m² + 14 480m²
Completion Date : April 2022

Services Offered

- *MV & LV Electrical Design*
- *Internal & External Lighting*
- *Reticulation & Trunking Systems*
- *Emergency Power Systems*
 - *Standby Generator with MV Changeover*
 - *UPS*
- *Grid Tied Solar PV (400kWp AC installed)*



Aeroklasduys & Automould Factories

Tshwane Automotive
Special Economic Zone Cluster 4

Client : COEGA
Type : Industrial
Installation Value : R37 million
Area : 25 100m²
Completion Date : March 2022

Services Offered

- *MV & LV Electrical Design*
- *Power Factor Correction*
- *Busbar Distribution System*
- *Internal & External Lighting*



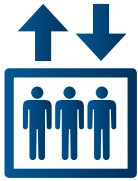
Wet Services



HVAC



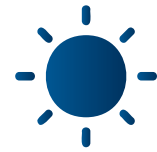
Hospital & Laboratory
Services



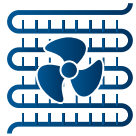
Lifts & Escalator Installations



Extraction Installations



Heating Installations



Ventilation & Evaporative
Cooling Installations



Refridgeration Installations,
Cold-storage & Freezer Rooms



Medical Gas



Fume Cupboards



Buildings: Mechanical

Allandale Office Building



Client : Atterbury

Type : Commercial Buildings

Installation Value : R16,3 million

Area : 12 000m² Offices,
16 000m² Basement Parking

Completion Date : End 2017

Services Offered

Plantech undertook the mechanical and consulting services for this building including:

- Energy efficient VRV/F system with full heat recovery air conditioning installation
- All fresh and fire and smoke related air ventilation systems
- Server room HVAC installation



Waterfall Point

Client : Attacq (Pty) Ltd

Type : Commercial Buildings

Installation Value : R12 million

Area :

Completion Date : April 2019

Services Offered

The HVAC installation includes the following:

- Two VRV/F Systems per building for the four buildings for all offices complete with Outdoor Units, Heat Recovery/Branch Selector (HR/BS) Units, Indoor Units with associated remote controllers and Central Controller.
- Ventilation in the toilets for each of the four buildings.
- Ducted outside air supply system for each of the four buildings

Our Projects



Buildings: Mechanical

Waterfall Corporate Campus

Client : Corporate Campus JV (Attacq / ZenProp)

Type : Commercial Buildings

Installation Value : R20 million

Area : 7 Office buildings, Gate House, Communal Conference Centre and Restaurant

Completion Date : Feb 2020

Services Offered

- Green Building Design – 4 Star
- HVAC
- Basement Parking Extractions



University of Johannesburg

Client : University of Johannesburg

Type : University Library for Main Campus

Installation Value : R20,8 million

Area : 23 000m² Library Space

Completion Date : Nov 2018

Services Offered

The project scope included the full HVAC upgrade at the main library of the University of Johannesburg, Auckland Park Campus.



Club 3 & 5 Precinct

Client : Atterbury

Type : Commercial Buildings

Installation Value : R21 million

Area : 20 000m² Advocate Chambers, Basement Parking, Medical Clinic and Residential Housing

Completion Date : June 2018

Services Offered

Full ECSA Stage 1 – 6 scope of work for the new Club 3 precinct. The mechanical scope includes HVAC and lifts as well as basement parking extractions.



Conceptual / Rational
Fire Design



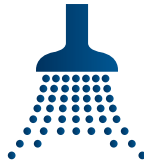
Maintenance



Fire Detection & Gaseous
Suppression System Design



Fire Risk Assessment



Sprinkler Design



Inhouse Modelling (CFD,
Hydraulic and Evacuation)



Consulting



Fire & Evacuation Plan



Peer Review Services



Our Projects



Buildings: Fire

Hotel Sky Sandton

Client : Zenprop

Type : Commercial Buildings

Installation Value : R9 million

Area : 450 Bed Hotel

Completion Date : End 2020

Services Offered

Rational fire design

ECSA Stage 1 to 6 systems designs for the following:

- Automatic sprinkler protection
- Fire water
- Automatic fire detection and voice evacuation
- Statutory emergency signage
- Smoke ventilation
- Fire sealing



Courtyard Hotel Waterfall

Client : Attacq

Type : Commercial Buildings

Installation Value : Estimated R20 million

Area : Super-basements, hotel and two office buildings

Completion Date : Hotel end 2020, some office buildings still ongoing

Services Offered

Rational fire design

ECSA Stage 1 to 6 systems designs for the following:

- Automatic sprinkler protection
- Fire water
- Automatic fire detection and voice evacuation
- Statutory emergency signage

Katherine Towers (Sandton)



Client : Alchemy Properties

Type : Commercial Buildings

Installation Value : R18 million

Area : 23 000m² A-Grade Offices, 28 000m² Parking Levels

Completion Date : End 2020

Services Offered

Rational fire design

ECSA Stage 1 to 6 systems designs for the following:

- Automatic sprinkler protection
- Fire water
- Automatic fire detection and voice evacuation
- Statutory emergency signage
- Fire sealing

WeBuyCars (Randport)



Client : WeBuyCars Properties

Type : Industrial Premises & Warehouses

Installation Value : R6 million

Area : 18 000m² Warehouse

Completion Date : April 2021

Services Offered

Rational fire design

ECSA Stage 1 to 6 systems designs for the following:

- Automatic sprinkler protection
- Fire water
- Automatic fire detection and voice evacuation
- Statutory emergency signage
- Fire sealing
- Smoke ventilation



Buildings: Fire

WeBuyCars (Nelspruit)

Client : WeBuyCars Properties

Type : Industrial Premises & Warehouses

Installation Value : R7 million

Area : 9 000m² Warehouse

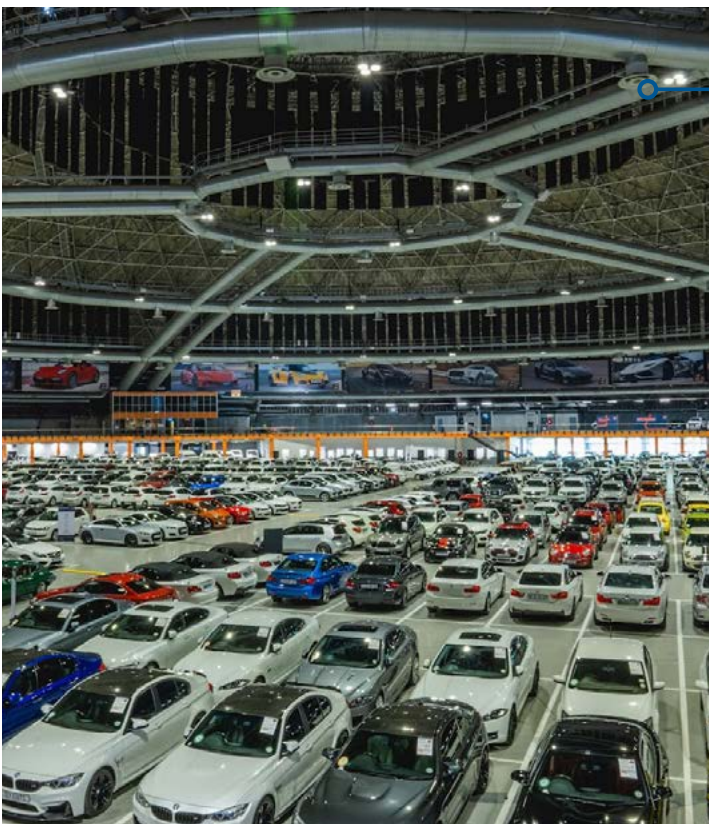
Completion Date : April 2022

Services Offered

Rational fire design

ECSA Stage 1 to 6 systems designs for the following:

- *Automatic sprinkler protection*
- *Fire water*
- *Automatic fire detection and voice evacuation*
- *Statutory emergency signage*
- *Smoke ventilation*



WeBuyCars (The Dome)

Client : WeBuyCars Properties

Type : Industrial Premises & Warehouses

Installation Value : R8 million

Area :

Completion Date : December 2021

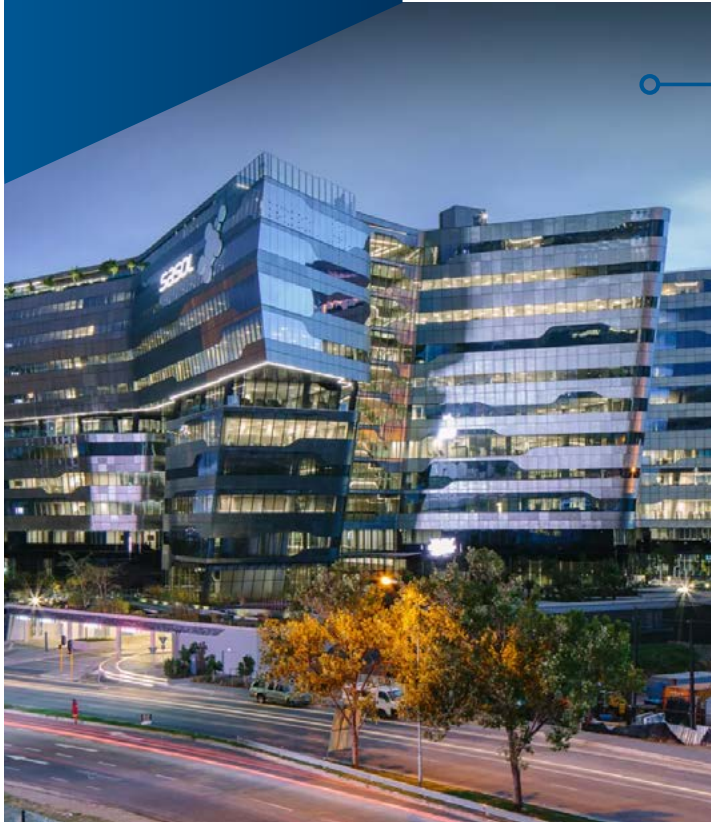
Services Offered

Rational fire design

ECSA Stage 1 to 6 systems designs for the following:

- *Automatic sprinkler protection*
- *Fire water*
- *Automatic fire detection and voice evacuation*
- *Statutory emergency signage*
- *Smoke ventilation*

Sasol Head Quarters (Sandton)



Client : Alchemy Properties

Type : Industrial Premises & Warehouses

Installation Value : R20 million

Area : 75 000m² GBA Offices,
99 000m² Parking Levels

Completion Date : Aug 2016

Services Offered

Rational fire design

ECOSA Stage 1 to 6 systems designs for the following:

- *Automatic sprinkler protection*
- *Fire water*
- *Statutory emergency signage*

Menlyn Main Central Square



Client : Menlyn Main Investment Holdings

Type : Shopping Centre

Installation Value : R30 million

Area : 30 000m² Shopping Centre,
70 000m² Parkade, 14 000m² Office

Completion Date : Aug 2016

Services Offered

Rational fire design

ECOSA Stage 1 to 6 systems designs for the following:

- *Automatic sprinkler protection*
- *Fire water*
- *Statutory emergency signage*

Commerce Crescent Development



Client : Alchemy Properties

Type : Industrial Premises & Warehouses

Installation Value : R5 million

Area : 5 000m² to 10 000m² Showroom Buildings

Completion Date : Various

Services Offered

Rational fire design

ECSA Stage 1 to 6 systems designs for the following:

- *Fire water*
- *Statutory emergency signage*
- *Automatic fire detection and alarm*

Gas Suppression

Some large Aspiration detection with gaseous suppression systems completed recently:



Sasol Headquarters

- *Server room with 1900m³ protected volume. Estimated installation value around R1.2million (completed in 2016)*

University of Pretoria Main Campus IT

- *Multiple server room with 2200m³ protected volume. Estimated installation value around R3.5million (completed in 2019)*

Lebalelo Water Users Association

- *Multiple Pumpstations – each around 1650m³ protected volume with a total installation value around R5million (completed in 2019)*

Bloemfontein Anglo Boer War Museum

- *Live Museum with around 160 cylinder IG55 Pyroshield Gaseous Protection systems and multiple HSSD systems. Installation value around R5million (completed in 2019)*

Social Responsibility

Thuto Pele which means “Education First” in the Bapedi dialect is a Plantech (PTY) Ltd corporate social initiative. In which we commit to promote the upliftment of previously disadvantaged individuals (PDIs) or PDI communities as defined in the Broad-Based Black Economic Empowerment Act, Act 53 of 2003 and the associated Codes of Good practice. Thuto Pele NPC is a shareholder of Plantech. Its main objective is to offer bursaries on behalf of Plantech through the dividends it receives as a shareholder.”



“I was blessed with a bursary opportunity by Plantech (Thuto-Pele) to further my studies during my third year of completing my BEng Electrical Engineering at the University of Pretoria. The bursary opportunity gave me a chance to focus on my studies without having to deal with the university financial stresses. The opportunity has been a great leap towards my journey of becoming a professional engineer.

Sanele Mpalala

“By awarding me the ThutoPelebursary, you lightened my financial burden, which allowed me to focus more on the most important aspect of school: learning. Your generosity has inspired me to help others and give back to the community. I hope one day I will be able to help students achieve their goals just as you have helped me.”

Mduduzi Mahlangu




“The Thuto Pele bursary was a priceless life changing moment in my career. I had just entered my final year without any vacation experience which was a prerequisite to graduating. I was without knowledge of the professional world, very anxious and without a force or something which drives me to achieving my degree. The bursary first provided an opportunity for vacation work with Plantech where I was mentored by the best professional engineers who believed in and supported me and that pushed me to perform at my very best. I was privileged to drive to various electrical sites, like Sebenza substation, and that prepared me for the world of work.”

Tshepo



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