

**Murray
& Roberts**

**Murray & Roberts
Power & Energy**

Engineers and Constructors



**WADE
WALKER**

JULY 2020

Murray & Roberts has a long and proud heritage of more than a century and is today recognised as a multinational project lifecycle group. The Group achieves this by focusing its expertise and capacity on delivering sustainable and fit-for-purpose project engineering, procurement, construction, commissioning, operations and maintenance solutions.

The Group delivers its capabilities into three global market sectors: Energy, Resources & Infrastructure, Mining Business Platform, Power, Industrial & Water Business Platform

➤ Headquartered in Johannesburg, South Africa

➤ Listed on the JSE Limited

➤ Areas of Operation:
Mozambique, Zambia and Ghana, the United Emirates, Australia and South Korea, Scotland, Canada and the USA



The Group's 2025 vision is to be a leading multinational group that applies its project lifecycle capabilities to optimise client's fixed capital investment.

STRATEGIC FUTURE

A MULTINATIONAL SPECIALIST ENGINEERING AND
CONSTRUCTION GROUP FOCUSED ON THE NATURAL
RESOURCES MARKET SECTOR

STOP.THINK.ACT.24/7: SAFETY FIRST IN EVERYTHING WE DO

BUSINESS PLATFORMS

**Energy, Resources &
Infrastructure Business**

PURPOSE

Enabling fixed capital
investments that
support the
advancement of human
development

Mining Business

VISION

To be a leading
multinational engineering
and construction group
that applies our project
life cycle capabilities to
optimise fixed capital
investment

**Power, Industrial & Water
Business**

VALUES

Integrity
Respect
Care
Accountability
Commitment

PLATFORMS ARE NAMED AFTER CORE MARKET SEGMENTS BUT ALSO UNDERTAKE WORK IN SELECTED COMPLEMENTARY MARKETS

GROUP SERVICE OFFERING



- Corporate Office
- Underground Mining

- Oil & Gas
- Power & Water



OTHER BRANDS



POWER, INDUSTRIAL & WATER BUSINESS PLATFORM

The Power & Water Platform has been renamed to Murray & Roberts Power, Industrial & Water (MRPIW) Platform and offers full asset lifecycle development, Engineering, EPC, Operations and Maintenance solutions for the Power, Water, Oil & Gas, Petrochemical, Resources, Industrial and Transmission & Distribution markets; primarily in South Africa and SSA.

The platform's businesses are:

1. Aquamarine Water Treatment
2. Murray & Roberts Mocabique Limitada (MRML)
3. Murray & Roberts Power & Energy (MRPE)
4. Murray & Roberts Water (MRW)
5. Optipower Projects
6. Wade Walker

The MRPIW Platform provides portfolio capability (with strategic execution partners) to deliver turnkey EPC and Construction only solutions for selected services in target regions, markets and clients on thermal power, water, renewable energy, transmission & distribution, oil & gas, petrochemicals, resources & industrial also including bulk liquid & gas fuel storage terminals projects.

The Platform will also strategically select investments and project development in the renewable energy, transmission, distribution, and water sectors that unlock EPC, O&M and generate annuity income.

Further, the Platform will seek to grow commissioning & asset support including operations & maintenance capabilities, particularly in the thermal power (Eskom), water, transmission and distribution as well as the complimentary market sectors.

Murray & Roberts Power & Energy is the platform's engineering, procurement and construction ("EPC") projects implementer, adding unique value to the constructability, integration and ultimate performance of the projects it undertakes. Murray & Roberts Power & Energy offers the full spectrum of multi-disciplinary EPC services including piping, tanks farms & platework, mechanical, electrical, process equipment, structural steel & instrumentation. Murray & Roberts Power & Energy offers a comprehensive engineering and design service incorporating all the major engineering disciplines

Murray & Roberts Water has the capability and expertise to design, supply equipment, construct, commission, operate and maintain water treatment plants in Africa. Services include: mine water treatment; sea water desalination; industrial effluent treatment; municipal water & waste water re-use and water supply for power generation infrastructure. These can be offered as large scale permanent plants or modular containerised plants with the option to scale up if necessary

Aquamarine designs, manufactures and installs water treatment solutions. It offers a complete customised solution, including support for and maintenance of its installations. Aquamarine currently operates in a niche market for mainly small to-medium size installations and has developed a network of resellers throughout the African continent that serves as an extended business development network

OptiPower Projects delivers projects in the transmission, distribution and substation sectors of the power market. OptiPower also has its own in-house engineering department that offers full turn-key design and specialised construction solutions to its customers

Wade Walker provides major individual clients with a broad range of services in the electrical and instrumentation, engineering, design and construction fields, serving the Mining, Water Treatment, Petrochemical, Iron & Steel, Sustainable energy & Power markets since 1981.

Murray & Roberts Mozambique possesses state of the art installations and a Mozambican technical team capable of undertaking projects in all key platforms of the group, which includes full spectrum of multi-disciplinary EPC services including piping, tanks farms & platework, mechanical, electrical, process equipment, structural steel & instrumentation, and the capability and expertise to design, supply equipment, construct, commission, operate and maintain water treatment plants.



FLAGSHIP PROJECTS



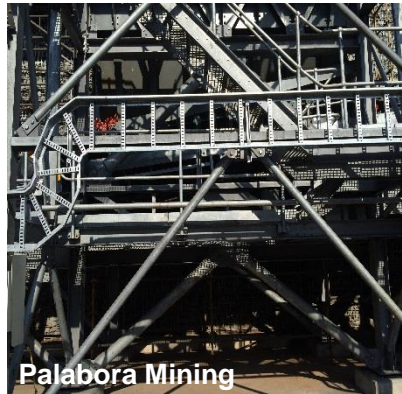
Medupi Power Station



Kusile Power Station



Takoradi MGO Storage



Palabora Mining



Grootegeluk



Foskor Stream
Replacement Project



Medupi Power Station



Wartsila



Tsumeb



Husab Mine



Wade Walker (A division of Murray and Roberts) provides major individual clients with a broad range of services in the Electrical and Instrumentation, Construction Fields, serving the Mining, Water Treatment, Petrochemical, Iron & Steel, Sustainable energy & Power markets since 1981.



Murray & Roberts is South Africa's leading contracting and construction services company, with a 117 years experience in the Energy, Resources & Infrastructure , Mining Business Platform, Power, Industrial & Water Business Platform

People: Approx. ~19 000 (World Wide)

Revenue: R 20,2 billion/annum

BBBEE Level 2 Black Ownership 95.81%

TECHNICAL CAPABILITY

Electrical & Instrumentation construction capability of our people, surface & underground

- Substations
- Overhead Lines
- Emergency power, UPS's
- MV/LV starters, reticulation systems and power lines
- MCC's
- Industrial plant COC validation
- Plant reticulation, cable racking and routing
- Small power, lighting
- Earthing and Lightning Protection.
- PLC & DCS Hardware System Installation
- Profibus, ASI bus, fieldbus and industrial networks
- Fibre Optic Cable installation, Splicing and Testing.
- Commissioning expertise
- QA and factory acceptance testing of switchgear, transformers, protection, motors
- Construction management



PROJECT EXPERIENCE

Client	Project	Date	Value	Scope
Eskom Holding Limited Alstom S &E Africa Pty Ltd (now GE)	Medupi Power Station	2020	R600m	C & I Supply and Installation
Alstom	Kusile Power Station WFGD	2020	R70m	Turnkey Project - Engineering, Supply & Installation (Earthing, Lightning and Small Power & Instrumentation)
Air Liquide	Sasol Train 17	2017	R60m	E&I Installation Work (132 Kv to 24V Reticulation)
Swakkop Uranium	Husab HPJV	2016	R300m	E&I Installation MV/ LV Réticulation
Wartsila Resano Garcia	Wartsila Power Plant	2016	R80m	E&I Installation
Ghana Oil Company Limited	Takoradi MGO Storage & Distribution	2016	R11m	E & I Installation (Lighting & Small Power, Instrumentation & Electrical Installation)
Exxaro	Grootegeluk	2015	R200m	Out Plant and Inplant
Glencore Xstrata Mining	Tweefontein	2015	R14m	E&I Installation MV/ LV Réticulation
Royal Bafokeng Platinum Ltd (Rbplat)	Styledrift	2015	R4m	E&I Installation Work
Anglo Gold	Anglo Operations - RLT	2015	R32m	E&I Installation Work
Dundee Precious Metals	Outotec	2014	R55m	E&I Installation MV/ LV Reticulation (S02 Plant / Converter)
Foskor Pty Limited	Foskor Stream Replacement Project	2014	R22m	E & I Installation (Lighting & Small Power, Instrumentation & Electrical Installation)
DRA	Palabora Magnetite Expansion Project	2014	R16m	E&I Installation MV/ LV Réticulation
Tizir	Grand Cote Operations	2013	R90m	E&I Installation MV/ LV Reticulation
Areva	Trekkopje Maxi Project	2012	R60m	E&I Installation MV/ LV Reticulation
Tsumeb Corporation Ltd (TCL)	Tsumeb	2012	R35m	E&I Installation Work
Goldfields	Vent Shaft	2012	R9m	E&I Installation MV/ LV Reticulation
ELB	Medupi Terrace Ash	2012	R23m	E&I Installation MV/ LV Reticulation

PROJECT EXPERIENCE

Client	Project	Date	Value	Scope
RSV	Impala 16#	2011	R7m	E&I Installation MV/ LV Reticulation
Goldfields	South Deep Backfill	2011	R5.5m	E&I Installation MV/ LV Reticulation
Goldfields	Doornpoort	2011	R15m	E&I Installation MV/ LV Reticulation
Goldfields	Tailings	2011	R15m	E&I Installation MV/ LV Reticulation
Exxaro	Grootegeeluk	2011	R100m	E&I Installation MV/ LV Reticulation
Eskom	Medupi Power Station	2011	R220m	Boiler Instrumentation
BCJV	Gautrain	2011	R380m	Electrical utilities package - detail design validation and supply and installation of MV, LV panels, lighting, fire alarm system and reticulation on all stations, commissioning at stations and emergency shafts
Newmont	Akyem	2011	R120m	E&I Installation Work
Fluor	Morepule Expansion	2011	In Progress	Underground Reticulation
DML	Bosetu Copper	2011	R30m	MV & LV E&I Installation racking, drives and instrumentation
Boteti Mining	Boteti AK6	2011	R10m	Overhead Line
Freeport Mc Moran	Tenke Phase 2	2011	R12m	Procurement and Supply
Foskor	De Bottleneck Project	2010	R28m	E&I Procurement, Installation and Commissioning
AngloGold Ashanti	Obuasi TSP Hard Rock Project	2010	US\$ 2m	E & I Installation



PROJECT EXPERIENCE

Client	Project	Date	Value	Scope
Adamus Resource	Nzema	2010	R2m	E & I Installation
Debswana	Jwaneng Cut 8	2010		MV Reticulation, Termination, Racking, Drives and Instrumentation
Debswana	Orapa	2010	R21m	MV Reticulation, Termination, Racking, Drives and Instrumentation
FQM	Guelb Moghrein	2010	R7m	33KV Power Lines and Township Installation Plant E&I
Anglo Platinum	Precious Metals Refinery Area 231	2009	R53m	E&I within the refinery. Supply, installation, commissioning
Assmang	Nchwaning Beneficiation Plant	2009	R30m	E & I Installation
Hall Longmore		2009	R12m	E&I Procurement, Installation and Commissioning for Pipe Plant Expansion
Freeport Mc Moran	Tenke Fungurume	2009	R470m	1470km Cable, 130KM Rack, 2775 Luminaries, 5700 Instruments
AngloGold Ashanti	Iduapriem Expansion Project	2009	US\$ 4m	E & I Installation
FQM	Kansanshi Floatation & pebble concentrator	2009	R100m	E & I Installation
FQM	Kansanshi Gravity Concentrator	2009	R3m	E & I Installation
Ausenco	Sabidala	2009	R42m	E & I Installation
FQM	Inata Gold	2009	R3m	E & I Installation Supervision
FQM	Mauriatnia Saline Borefields	2009	R10m	E & I Installation
DeBeers	Voorspoed	2008	R29m	11Kv, LV, Fibre Optic backbone, Full Range of Instrumentation
Natal Portland		2008	R42m	KZN Plant Expansion E & I
Bindra Nickel	Bindura Nickel Concentrator	2008	R3.3m	E & I Supply, Installation & Commissioning
Norislski /Tati Nickel	DMS Plant	2008	R54m	MV, LV & I for 12m ton/annum DMS separation plant, crushers and conveyors additional Larox filter

PROJECT EXPERIENCE

Client	Project	Date	Value	Scope
SEP JV	Sishen Expansion	2008	R120m	E & I Installation, Sishen Expansion
DRA Mineral Project	Mafube Coal Washing Plant	2008	R12m	E & I Installation, Mafube Coal Washing Plant
Kumba	Sishen beneficiation	2007	R84m	Supply, logistics, installation of lighting, cabling instrumentation cables and racking, terminations
Bateman Engineering	De Beers Marine	2007	R10m	De Beers Marine
FQM	Kolwezi	2007		E&I, plant installations
FQM	Frontier	2007	R 42 m	33kV. 18km racking, 180km cables, 1300 field devices
Gold Star resources	Bogoso	2006	R 38m	Instrumentation, LV & MV, material handling, crushers, mills, CIL, brown fields
Red Back Mining	Chirano Gold Mine	2005	R 18m	E&I Installation
Newmont Ghana	Ahafo	2005	R 17m	33kV overhead power line, switchyard, town reticulation
FQM	Kansanshi	2005	R 30m	Installation included 33kV, instrumentation, fibre at PLC profibus systems as well as power factor correction yard
Mozal Aluminium	Mozal	2003	R 14m	Conventional instrumentation comprising PLC's, fibre optic cabling and junction boxes
Geita Gold Mining	GGM CIL & Oxygen Plant upgrade	2003	R 2m	Installation included 11kV switch, LV, PLC, MCC's with cabling for both electrical and instrumentation.
Avmin	Chambisi	2001	R 25m	Material handling, furnace, leach & electro winning plant MV, LV and instrumentation, fibre links

PROFESSIONAL EXPERTISE

- Murray & Roberts maintains a core staff of permanent employees.
- Applying the vision, experience and energy of a strong leadership team to the pursuit of profitable growth
- Enhancing diversity in our workforce. Working in partnership to create a better future for all our people
- Partnership Building trust with our partners, suppliers, financiers and advisors



EMPOWERING OUR PEOPLE

- **Level 2 BBBEE**
- Drive employment equity throughout the business
- Ensure local investment enhances business capacity, creates jobs and value-adding skills
- Promote sustainable economic growth and stability
- Supporting a socially responsive, free market economy.



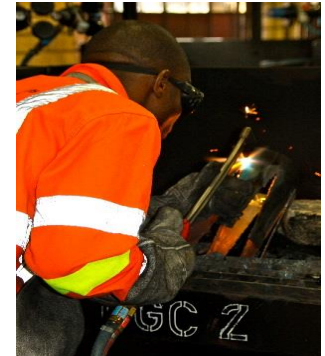
SKILLS PROCUREMENT & DEVELOPMENT

Skills Procurement

- Recruitment in local communities
- Engagement with B-BBEE accredited sub-contractors, suppliers and providers of employment services

Skills Development

- The Department of Education – Universities, Further Education & Training College
- Specialised (artisan) training providers
- Graduate Development and Bursary Scheme



CSI STRATEGY

Corporate Social Investment (CSI) programme:

Maths, science and technology education
Literacy & numeracy education in early childhood
Environment education

Murray & Roberts Child Welfare:

Employee involvement
Payroll giving
Staff-motivated funding

Letsema Sizwe Community Trust:

BBBEE Initiative



SUMMARY

- Experience in Africa with large industrial project
- Local presence supported by international best practice
- Fit-for-purpose solutions based on South African context and capabilities
- Transformation and localization experience and expertise
- Current **REAL** experience

