

March 2008

MURRAY & ROBERTS GROUP MAGAZINE

ROBUST



MIDDLE EAST
PREMIER LEAGUE
CONSTRUCTION
OPPORTUNITIES

CONCESSIONS
**A GROWING
INVESTMENT
OPPORTUNITY**

JACK CHEETHAM
WINNING
AGAINST
THE ODDS

POWER

Rising to the challenge

MAJOR PROJECTS

New awards and updates

PROJECT. champions

Securing best-of-breed project leaders



WORLD CLASS FULFILMENT IN EVERYTHING WE DO

PROJECT CHAMPIONS

SECURING BEST-OF-BREED PROJECT LEADERS FOR MEGA PROJECT DELIVERY

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MESSAGE FROM THE CE

DEAR READERS

This issue of *Robust* accompanies our interim results for the period to 30 June 2008. And what a set of results they have turned out to be. Everything that all of you have done over the past number of years, on top of the great company that Murray & Roberts has been for the past 106 years, has culminated in what is a truly outstanding performance over the half-year.

The Group is now well positioned in all its markets and we have built a formidable order book valued at R38 billion, with a tail stretching to 2015. Remember that just three and a half years ago at 30 June 2004, our order book stood at R3 billion. All the work that has gone into performance delivery and market engagement, plus the many benefits derived from our key acquisitions, has changed the scale of our business.

Order book is the lifeblood of a contracting organisation. And quality of order book is what makes the difference between existence and true value creation. We set a clear strategy to position our Group at the top end of the major project market in all our operations. I am pleased to report that we have been successful in procuring some of the key major projects that have entered our environment over the past few years.

The best news for now, however, is that we have successfully delivered on the accelerated schedule at Dubai Airport Concourse 2, our first really major project at this time, valued in excess of R7 billion. The performance of Bruce Neave and his team has been outstanding and sets a benchmark for all future major project team deliverables in the Group.

For now in South Africa, we are very focused on the power generation sector for significant long-term opportunity in our home market. We have already secured a significant mechanical and structural workload in the thermal sector and have recently submitted a tender proposal for the proposed nuclear generation program. Of course, the Group is already involved in the Pebble Bed Modular Reactor development.

And as I often say, we have no laurels to rest on, the world is always in a state of change and drawing from a well known concept, we only borrow the Group from our predecessors and build it for our successors.

Brian Bruce

PROJECT CHAMPIONS



Murray & Roberts has strengthened its leadership capacity significantly in recent years. But, is it strong enough to undertake the quantum leap necessary to deliver a range of challenging mega global projects recently undertaken?

In June 2004, the Murray & Roberts project order book stood at R3 billion. By June 2007 the order book had accelerated to R20 billion. Since then it has grown further to R38 billion, including about R15 billion of MEI and structural work for the power station build program, and the Group confidently awaits final adjudication of a further R10 billion of civil and underground construction work for the same project.

Globally, Murray & Roberts has entered the 'Premier League' of construction companies, overcoming intense global competition to secure high profile projects such as the Dubai International Airport and Trump International Hotel and Towers in the prestigious Palm Jumeirah development, also in Dubai.

In South Africa, if the sheer volume of major infrastructure projects appears daunting, their complexity is even more challenging. Many of the projects are unique in a developing economy environment. There is no prior experience of a Gautrain-type project in Africa, and the last six-pack power station was completed 15 years ago. But, with the dual challenges of 2010 and power shortages looming large, failure is not an option. Murray & Roberts needs to break the mould if it is to deliver.

BREAKING THE MOULD

"Although we've achieved unparalleled success in winning projects so far, much remains to be done," says group CE Brian Bruce. "Repeatedly over the past few years, we've highlighted as our primary business challenge the recruitment and retention of experienced people and leadership. We currently employ about 40 000 people directly, with another 30 000 indirectly employed on our projects.

"Over the coming years, we expect our total direct employment numbers to grow substantially, which means we need to raise our game to the level of military deployment."

But, ultimately, with mega projects where the difference between success and failure is often marginal, responsibility tends to rest on the shoulders of one or two individuals with the energy and determination to drive a project to success, irrespective of obstacles or unexpected reversals.

The importance of corporate leadership in the delivery of major projects has long been recognised. Brian and his colleague Sean Flanagan, with the support of a handful of senior corporate executives in the Group's domestic and international markets, shoulder much of the responsibility for major projects, from the identification, tendering and negotiation phase, to the implementation.

Ultimately, with mega projects where the difference between success and failure is often marginal, responsibility tends to rest on the shoulders of one or two individuals with the energy and determination to drive a project to success, irrespective of obstacles or unexpected reversals.

A NEW BREED OF PROJECT LEADERS

"In recent years, our leadership team has been operating at a far more efficient level than before, but now we need to ratchet up to a new level. To compete with the best, we need to recruit best-of-breed project managers with specialist global experience and a track record of successful project delivery.

"We are not talking about people with a fatalistic approach that 'you win some and lose some', but people who accept in life nothing short of winning every single time," says Brian.

Securing the services of such individuals will not be easy. World class project managers tend to select companies that themselves have a matching culture of success, a track

record of financial strength and the confidence to offer them *carte blanche* on the project in return for the highest standards of delivery.

And, they are unlikely to be internal appointments. "It takes a different type of person. The typical employee may not be able to lift themselves to new heights to succeed in a difficult project. They base their success not on a single contract, but on their performance over time. They accept that some projects will go wrong, and therefore do not always take full ownership of difficult projects."

In the past decade, Murray & Roberts has undergone a significant cultural transformation in which employees have been asked to subscribe to

clearly defined company values and a unitary culture. Will the Group be able to accept, at a senior level, individuals who do not share that culture, and whose primary objective is not to fit in but to work obsessively on delivering a single project?



A QUANTUM LEAP

“Hopefully, we can achieve an alignment of the two, but we must be prepared to accept individuals who do not necessarily fit the Murray & Roberts mould,” says Brian.

“That’s the test that we all face as we approach the quantum leap to the challenging space of global mega projects. These new project managers, in order to succeed, will need to know they have the support of the whole team. Without it, we set them up to fail – at our own cost.”

The Group’s unitary approach, in which it deploys its collective strength to take on major projects, is a crucial strategic factor in mega project management. This means that each operation becomes responsible for the Group’s total performance, particularly when it comes to the allocation of scarce resources. “It really is a case of the whole being greater than the sum of the parts. Every project’s success is a consequence of the entire Group’s collective engagement,” Brian says.

One does not have to look far to find an example of a company attempting to make the leap to the Premier League without adequate preparation. Murray & Roberts subsidiary Clough tried it and was quickly relegated. The business failed to recognise that the contracts it had won were beyond its immediate capability. “It has been disastrous for Clough, and we cannot afford to have the same happen at Murray & Roberts.”

TESTING ORGANISATIONAL FEAR

Brian offers the anecdote of Michael Schumacher, when the consummate Formula One winner spelled out his secret of success: “He said he drives ‘right on the edge’, where very survival depends not on thinking but purely on one’s senses and intuition. The consequences of a mistake in this space, he said, were potentially ‘catastrophic’”.

Into this heady space, Murray & Roberts will soon be testing the limits of its organisational fear. Whenever a particularly large contract is won, there tends to be a mix of three reactions: those for whom success is a thrill; those who are pleased, but take no ownership; and those who fear the project, or see

it takes a bigger project to inspire fear, or limit the impact of those who see danger where it doesn’t exist.”

In the past, in the absence of mega projects, the fear threshold was tested only through failure. Murray & Roberts therefore needs to be infused with blooded talent which demonstrates nerves of steel in difficult times. One initiative that is grooming future project managers for greater challenges is the Murray & Robert Graduate Leadership Program, where graduates are being tested in positions of responsibility much earlier in the training process.

All of this does not suggest a slackening of the rigorous risk management processes that Murray

To compete with the best, we need to recruit the very best project managers with specialist global experience and a track record of successful project delivery. We are not talking about people with a fatalistic approach that ‘you win some and lose some’, but people who accept in life nothing short of winning every single time.

it as a ‘Trojan horse’ that will ultimately destroy the organisation.

“The response of this last group is to introduce policy and processes which essentially hold up or even stop the project. The challenge is twofold: to raise our organisational fear threshold, so that

& Roberts has implemented in recent years. There is a clear understanding that success in mega projects is critically dependent on early identification and resolution of problems. “Our project leaders need to have the foresight to raise the alarm in time.” EAMONN RYANN ○



A NEW

As the need for new electricity capacity in South Africa reaches a critical stage, Murray & Roberts is securing a key implementation role in the sector



A number of Murray & Roberts companies have combined their strengths and capabilities and, together with selected international and local partners, are already involved in Eskom's massive power generation program in Southern Africa. In-house companies such as Murray & Roberts Construction (incorporating Gillis Mason), Genrec and Concor offer valuable experience gained from the previous power station build program decades ago.

The nuclear program could change the very nature of Murray & Roberts, with the Group's substantial engagement in nuclear and power generation.

Murray & Roberts has secured the construction contract with Hitachi for 12 boiler units of 750MW each – collectively valued at about R15 billion – on the Medupi and Bravo coal-fired power stations. Murray & Roberts is also a contender with various partners for the Medupi civil construction contract (about R2,5 billion) and the Ingula pumped storage construction contract

GENERATION

(about R6,5 billion), with associated works valued at about R1 billion. All of these contracts are currently under adjudication by Eskom.

In addition, Murray & Roberts is pursuing an involvement in the DME peaking station at Coega in partnership with Italian turbine manufacturer Ansaldo Energia, and the Group is engaged in negotiations with its partners for the Mmamabula coal-fired power station (3 units of 815 MW) in Botswana for CIC Energy and International Power.

Less advanced at this stage, but potentially far bigger in scale is Eskom's nuclear program. Very much in its formative stages, this total program could amount to almost R1 trillion in capital expenditure. Murray & Roberts, with US partners Westinghouse (a world leader in nuclear technology) and Shaw Group, has submitted the Phase 1 tender for Eskom's proposed nuclear generation build program. The projected capital cost for Nuclear-1 is R100 billion to R120 billion with an option for a 20GW fleet. Eskom has five proposed sites for the additional 20 000MW nuclear power stations, including the PBMR expansion program to be built between 2008 and 2025. Murray & Roberts, with a partner, is the EPCM contractor for PBMR.

"That we were able to assemble the executive capacity to engage this fast track nuclear tender with the quality we did, and have the balance sheet capacity

to support the risk of our significant role in the build program, if successful, is testament to what we have achieved as a Group," says CE, Brian Bruce.

Danny Quan, a senior executive of Murray & Roberts leading the business development of the Group's power sector engagement, says nuclear power generation has grown in importance globally as it is clean energy compared to traditional carbon-based sources, and because the latest generation of nuclear technology is far safer.

Eskom wants to replicate the Korean experience: by the fifth or sixth nuclear reactor, 85% of the build should be indigenous to South Africa.

He says that an exciting feature of Eskom's approach is that it wants to replicate the Korean experience: by the fifth or sixth nuclear reactor, 85% of the build should be indigenous to South Africa.

"That fits with our strategy of being a recipient of the transfer of technology. This is a South African bid with US technology and this is why we believe that we can be successful in our bid. This program could change the very nature of Murray & Roberts, with the Group's substantial engagement in nuclear and power generation.

"We are currently entering negotiations on the nuclear program with Eskom. Eskom would need to appoint a technology partner soon to finalise

the design of this program and secure long-lead supply items. The first nuclear reactor should be commissioned in 2016, with additional capacity coming out every year thereafter," Quan says.

"Currently, all processes and equipment need to be imported, but with Government and private sector commitment, over time much of this could be serviced from and manufactured in South Africa. Manufacturing would have to comply with stringent nuclear safety and quality requirements, and

thereafter as the global nuclear roll-out continues, South African business may be able to participate in the export market – much as it has in the global automotive manufacturing industry and the conversion of gas to liquids."

Danny Quan expects this fleet option to be in the form of a public private partnership as Government will want the involvement of the private sector, together with its technology partners, in the construction and nuclear manufacturing programs.

"This may require Government to offer investment support to nuclear manufacturers and vendors to be part of a nuclear global resource framework." EAMONN RYANN ○

MIDDLE EAST

Ranked in the premier league of global contractors, Murray & Roberts showcases world class projects in Dubai

TRUMP TOWERS

A joint venture of Al Habtoor Engineering and Murray & Roberts has been selected as preferred bidder for the contract to build the Trump International Hotel & Tower on the Palm Jumeirah.

The development, which has an estimated cost of \$600 million (R5,0 billion), will be made up of a 378-room five-star hotel and 397 residential apartments.

Arabian Forasol Foundations has commenced enabling works on the 61-storey structure, which will form the centrepiece of the Golden Mile on the Palm Jumeirah.

The project has been designed by Atkins, while BBGM has been appointed to complete the interiors of both the hotel and the apartments. Consultant Halcrow and Leslie Robertson from US-based engineering consultancy, LERA, are also involved in the project.

The design of the Trump International Hotel & Tower was changed in April 2006. Initially, the tower was to be shaped like an opening golden tulip, but is now set to feature a split-linked tower with an innovative open-core design that will minimise shadows.

The building will feature vertically mounted solar panels to generate energy, as well as pipes running through its external skin, which will heat water.

Each residence has access to five-star hotel services and amenities, including a gymnasium, spa and a fitness centre.

The development was launched in October 2005, as part of a joint venture between Nakheel and the Trump Organisation, whose president and chairman is Donald Trump.

Referring to the Palm Jumeirah, Trump said: "This is not just the best location

in Dubai, it is the best location in the Middle East."

The project has been earmarked for completion in 2009.

DUBAI INTERNATIONAL AIRPORT

Murray & Roberts delivered Phase 1 completion of the \$1,5 billion Dubai International Airport project at the end of December 2007, meeting accelerated schedule obligations. This followed an almost superhuman effort by the project team under the leadership of Bruce Neave.

The Group is currently negotiating approximately \$2 billion of new work for Concourse 3 and has authorised the submission of proposals for two projects



■ Bruce Neave, project leader – Dubai International Airport

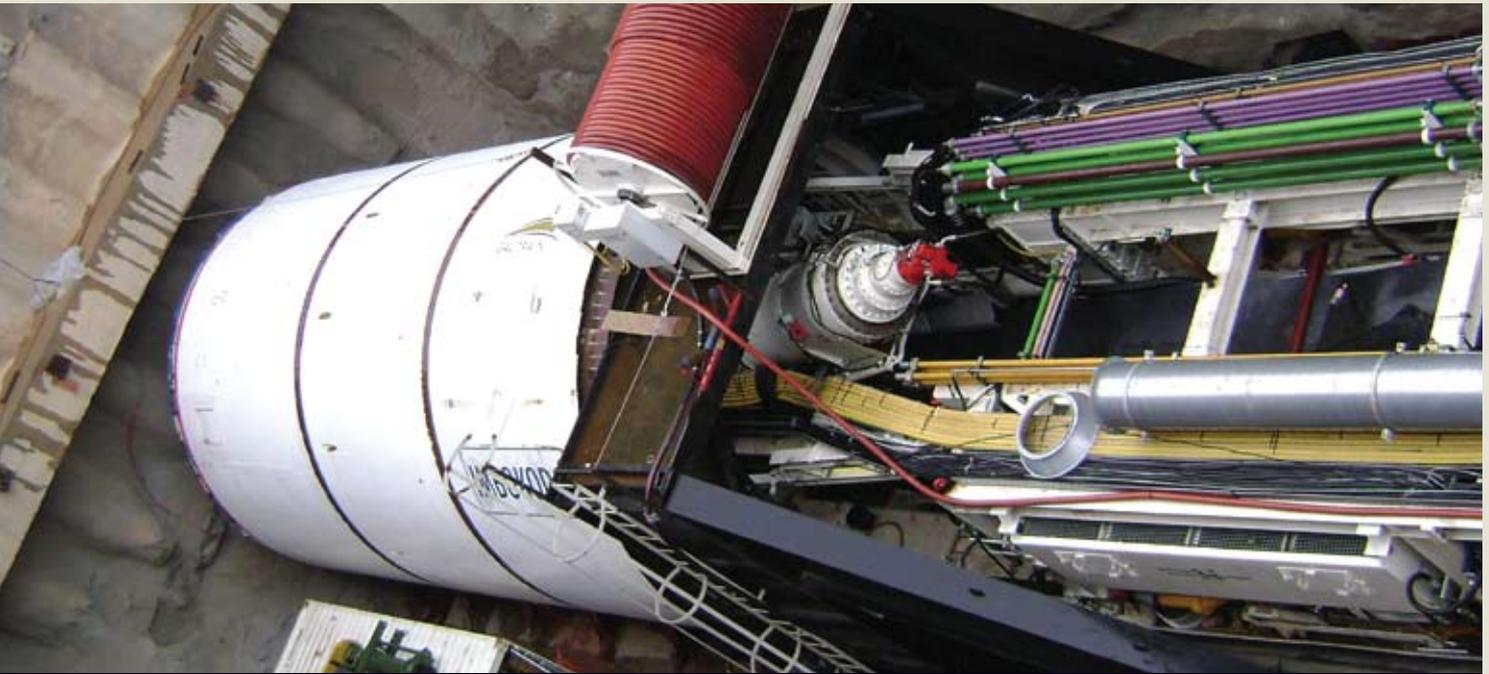
with a combined value of \$3 billion in the Middle East. ○

■ Artist's impression of Trump International Hotel & Tower



PROJECT UPDATE

GAUTRAIN



■ Imbokodo, the high-tech tunnel boring machine imported from Germany, operates between Rosebank and Park Station

Since the commencement of the Gautrain Project in September 2006, the first year was spent finalising the civil engineering designs, Geotech Surveys and conducting initial works which included the removal of underground services from the future Gautrain construction sites.

2008 will be characterised by civil construction works, while the detailed designs for electrical and mechanical systems such as trackwork, electrical supply, overhead catenary, telecommunication, signaling, rolling stock and ticketing systems will be completed.

In 2007, the construction focus was largely on the Midrand Depot and southern section of the route between Park Station, Rosebank Station, Sandton Station, Mushroom Farm Park and OR Tambo International Airport. This year, construction of the northern section of the

route between the Midrand Depot and Hatfield Station will be in full swing.

The northern construction works will include intensive pre-loading testing or testing for ground sinkage as a result of the dolomite rocks found in the north which make it difficult to construct safely on the ground structures for Gautrain. South Africa will also witness the construction of the first ever viaduct bridges for the train to travel on and an elevated station (in Centurion). The viaducts will be constructed using world class launching girders to erect the 15 viaduct decks that will become visible at many locations along the route with a total length of about 10,5 kilometres of viaducts.

The high-tech tunnel boring machine, Imbokodo, acquired from Germany, will be used for a portion of the tunneling work (approximately 3 kilometres) in a southerly direction from Rosebank towards Park Station.

A highlight of 2008 will be the expected meeting of two tunnels that are being excavated from Marlboro Portal and Mushroom Farm Park. In total, nearly 10 kilometres of tunneling will be excavated during the year.

The first unit of rolling stock will complete its static and dynamic testing in the UK before the end of 2008, and the first shipment of rolling stock components will be assembled by Murray & Roberts subsidiary, Union Carriage & Wagon.

IMPACT OF LOAD SHEDDING

Construction on the Gautrain Project has not come to a complete standstill due to the current spate of load shedding activities in Gauteng. Gautrain's 43 construction sites obtain power from 19 different substations to continue building over its 80 kilometres route between Johannesburg, Tshwane and Ekurhuleni. »

» Gautrain has been assured of continuous power supply to some of its critical areas of operation during load shedding.

As Gautrain spans a vast geographical area, different construction sites will be without electricity at different times, depending on the load shedding schedule. Construction sites are also not completely reliant on electricity. Therefore, some form of construction will always be functional whenever there is a power outage.

However, an area of special concern is Rosebank. Imbokodo, Gautrain's tunnel boring machine operates on electricity and a constant supply of electricity is needed to operate this machine 24 hours a day. Ongoing load

shedding in this area will directly affect Imbokodo's operations.

– INFORMATION SOURCED FROM BOMBELA CONSORTIUM

A MATTER OF CONCERN

In a recent report on the status of major projects, group CE Brian Bruce cautioned that the Gautrain Project had experienced many delays brought about by the late handover of land and the right-of-way, extended environmental impact approval processes and major scope changes.

"Even with all program float donated by Bombela, completion of Phase 1 in time for the 2010 World Cup will require acceleration by the client," he said. ○

Managing Project Risk

The Engineering & Construction Risk Institute recently held its inaugural South African Project Risk Forum and Workshop in Johannesburg.

The Engineering & Construction Risk Institute (ECRI) was established in 2005 as an initiative of the World Economic Forum and is now an independent legal entity based in the United States. ECRI was created by some of the world's leading engineering & construction (E&C) contractors, including Murray & Roberts, to provide focus on the awareness, identification and management of risk in the global E&C industry.

The inaugural meeting, which was planned by Murray & Roberts, addressed the challenges and opportunities of the South African construction boom.

Speaking at the meeting, Rod Kyle, London based ECRI president and MD explained: "Our mission is to lead transformation of the E&C industry through its sponsors – in the whole area of project, portfolio and enterprise risk management.

"ECRI selected South Africa for its first outreach conference in Africa for several reasons; as Africa's economic giant and engine room, there is an unprecedented level of engineering and construction taking place across a wide spectrum of industrial sectors – from basic infrastructure and power generation, through to petroleum & chemicals, and mining and minerals.

"South Africa also has the continent's most mature E&C industry, with four of the countries' largest E&C companies on-board as sponsors of ECRI; Bateman Engineering, Group Five, Murray & Roberts and The Aveng Group," Rod concluded. ○



■ 15 viaduct decks will become visible at many locations along the Gautrain route

NEW PROSPECTS

Commercial buildings

Murray & Roberts is negotiating some major building projects, including the ABSA head office in Johannesburg and Cape Town's 47 floor Portside Tower, both valued at about R800 million. The latter will be the tallest building in Africa after the Carlton Centre, built by Murray & Roberts in the late 1960s.

Piping

Murray & Roberts is confident that Hall Longmore will secure the order to supply most, if not all, of the specialist pipe for Transnet's multi-

product fuel pipeline between Durban and Johannesburg at a value of more than R1 billion.

Roads & Earthworks

There are a number of major roads and earthworks contracts under tender and construction, with Concor now well established as a leader in this sector. One worth mentioning is the upgrade and widening of the N2 through pristine natural forest either side of Storms River Bridge in the Cape. This bridge was built by Concor in 1954 and strengthened in 1988. ○

Achievements

SIGNIFICANT BEE PROGRESS

Much Asphalt has improved its rating in the Department of Trade & Industry's BBBEE scorecard, rising from a Level 8 contributor in 2006 to a Level 3 contributor at the end of 2007. Clients can now claim 110% BEE procurement recognition.

In the direct empowerment category of the BBBEE codes, Much meets the criteria for a Level 2 contributor in equity ownership based on its status as a wholly owned subsidiary of Murray & Roberts, which currently has 25,42% black ownership.

In HR development and employment equity, Much scores Level 6 in skills development. 83% of staff comprise previously disadvantaged groups, with management representation at 60%.

Much is ranked at Level 2 for indirect empowerment, with 90% for preferential procurement and 100% for enterprise development.

The company also scored 100% for socio-economic development, with facilities around the country involved in various social upgrading programs.

CANADIAN TOP 100 EMPLOYER

Murray & Roberts company, Cementation Canada has recently been named one of Canada's Top 100 Employers in an annual competition conducted by MediCorp Canada, a company that specialises in human resource tracking.

Cementation Canada is responsible for the North American mining market. This is the second year in a row that the company has received this accolade.

MediCorp reviewed almost 72 000 Canadian employers for the 2008 list, using criteria such as physical workplace; work atmosphere; health, financial & family benefits; vacation & time off; communications; performance management; and training & skills development. ○

FAREWELL KIRSTEN



Kirsten Brown passed away in January following a short but courageous battle for her life. Kirsten was just 27 years old and had been with Murray & Roberts since May 2005.

Kirsten made an indelible mark on Murray & Roberts. She was known to thousands of our people, clients and business partners as the beautiful woman with the wonderful intelligent smile on the back cover of *Robust* magazine, representing the Group's Client Service facility and team she managed.

Kirsten graduated from Rhodes University in 2002 with a BA in Psychology and Linguistics. She had matriculated at Jeppe High School for Girls with Full Colours in Hockey, and was a School Prefect and House Captain.

"I am confident that Kirsten had the potential to reach great heights in all aspects of her life," Brian Bruce said. "Her innovation was apparent and shortly before she suffered her aneurism, we tasked her with the challenge to prepare for a greater role in the broader management of communications in Murray & Roberts."

Murray & Roberts extends its deepest sympathies to her mother Joyce and family and her partner Graham. ○

New appointments

Dave Athey was appointed MD of Murray & Roberts Engineering Solutions from 1 October 2007. Dave joined the Group at Murray & Roberts Cementation in 2005 where he was responsible for contract mining operations. He has extensive experience in engineering services and process equipment in the industrial and quarrying sector and was previously MD of Ingersoll Rand in South Africa.

Malose Chaba was appointed CE of the Group's Engineering Contracting business cluster, comprising Murray & Roberts Engineering Solutions, Murray & Roberts MEI and Wade Walker, from 1 October 2007. Malose will also lead the Group's engagement of the developing power generation market in South Africa.

Jerome Arendse was appointed MD of Murray & Roberts MEI from 1 February 2008. Jerome has enhanced his mechanical and civil engineering and project management tertiary education with extensive practical and management experience over more than 20 years in structural steel fabrication and mechanical construction in the power sector and more recently as MD of infrastructure operations company Tolcon.

Simon Mordecai-Jones, has transferred to a key role in the high-level corporate executive team being assembled for Group involvement in the long-term thermal and nuclear power generation construction program. Simon was previously MD of Murray & Roberts MEI.

TAPPING INTO A GROWING PIPELINE

Concessions are long-term projects that offer contractors an investment and a combined construction opportunity. They normally involve partnerships in which the public and private sectors contract to deliver national infrastructure assets.



■ Toll road

Murray & Roberts has been a key player in the concessions market since the first toll roads were introduced in South Africa. It began with roads in the 1980s – the N1 and N3 – and has since spread to prisons, offices and maybe even power stations.

The Group's motivation for engaging this market was to maintain a leading position in its core business of major projects in the resources and industrial sector, says Murray & Roberts executive director Sean Flanagan.

Recognising that concessions could not be addressed in the same manner as normal construction projects, Murray & Roberts established a dedicated concessions business unit in 2001, headed initially by Charles Henwood and now by Vaneshree Naidoo.

"Our initial concession project was the Koppies/Kroonstad section of the N1. Since then, the unit has been remarkably successful in winning bids, and similarly successful in completing projects to specifications," says Charles.

However, Murray & Roberts has found that the valuable potential offered by concessions can easily be eroded if they are not managed with extreme care. While the Bloemfontein prison project was a success in every respect, the N3 was successful as an investment but not as a construction project. Lessons learned from these earlier concessions have become embedded in the ongoing management of these complex and challenging projects.

An important early lesson was that the construction and investment components should be viewed as independent projects and that each should be viable in its own right. "We have to put a lot of our own money and guarantees into a project, and therefore must ensure that the return is commensurate with the investment," says Sean. "By managing

the investment separately from the design and construction, we can make a proper return on both.”

Gautrain is the largest concession secured by Murray & Roberts with domestic and international partners. While the project is proceeding reasonably well, it has highlighted major constraints which make projects of this nature unfeasible for smaller players. One of these is the extraordinary length of time it takes from the initial mooted of a project to the selection of the preferred bidder, and from there to completion of the project. Each of those steps rarely takes less than 18 months, and in the case of Gautrain, the first step alone took five years.

Concessions take a long time to finalise because all costing and financial calculations have to be done up-front and be accurate. A small mistake at the preliminary stage may become enormous when multiplied over 20 to 30 years.

Murray & Roberts has tended to focus on major transport infrastructure and

industrial concession bids that it has a good chance of winning, and has taken a decision not to bid for Government accommodation projects, having lost three bids in this market.

“We are not unhappy to have lost these bids. In our experience, the internal rate of return for a successful bidder is low and the cost to the client high. Competitors who have not fully appreciated the compounding effects of small mistakes in the tender stage often underbid and then destroy any future relationship with the client,” says Sean.

With the large number of parties in this form of public private partnership, each of whom aims to make a return, the risk profile of concessions is high, and in some cases ultimately unaffordable.

Concessions also tie up large amounts of capital, as they require an equity investment. The Murray & Roberts policy is to be flexible on retaining such investments. In the case of the Bloemfontein prison, once the project was running smoothly, the Group sold its stake to a pension fund

which sought long-term investments with stable annuity income streams.

“Once we’d handled all the project risks, and the risks in the capital markets were at the right levels, we decided to sell. Our strategy is to liquidate some investments to make way for the ever growing pipeline of new projects,” adds Charles.

Murray & Roberts is currently bidding for a further six prisons, and though at present there are few other concessions up for tender, Sean believes the concept offers significant opportunity to address South Africa’s growing infrastructure needs.

“There’s enormous scope for rail concessions, both in terms of system and hardware, and there is sufficient passenger traffic to make them viable. But there’s reluctance in Government for concessions, partially due to the long gestation period from concept to fruition. It needs to become a lot shorter and that, in turn, requires Government to dedicate more resources to the process,” says Sean. EAMONN RYANN 



■ Gautrain tunneling

Sticks **DOWN**



■ The winners receiving their award from South African rugby player, Pierre Spies. From left to right – Pierre Spies, Gary Dolley, Jeremy Mambalu and Mziwandile Jack

Murray & Roberts Jack Cheetham Memorial Award goes to Kwanobuhle Hockey

The 2007 Murray & Roberts Jack Cheetham Memorial Award was presented to the Kwanobuhle Hockey development program from the Eastern Cape at a gala event in Sandton on 25 September 2007.

In partnership with the South African Sports Confederation and Olympic Committee (SASCOC) and Sowetan newspaper, Murray & Roberts selected the Kwanobuhle Hockey development

program in recognition of its excellence and significant community impact.

The Kwanobuhle Hockey development program operates from the impoverished area of Kwanobuhle near Port Elizabeth. Under the visionary leadership of teacher Gary Dolley and a team of dedicated volunteers, the program has revived the once dormant Kwanobuhle multi-purpose sports facility into a thriving hub of sports development and community participation. It has

THE JACK CHEETHAM MEMORIAL AWARD

The Jack Cheetham Memorial Award was initiated by Murray & Roberts 26 years ago in recognition of the special qualities of Jack Cheetham, a former director of the company and the inspirational captain of the South African cricket team in the 1950s who was able to instill in young people the belief that they could win. In recent years, the award has targeted sports development projects, focusing on individuals or teams that have the potential to be champions.

developed partnerships with 25 primary schools in the area enabling 750 children to receive professional hockey coaching and participate in regional leagues. High schools have also been targeted for inclusion.

Coaching is provided by Jeremy Mambalu, a product of the program and an excellent role model and mentor for younger players. To ensure sustainability, the Under 16 players coach younger players and provide umpiring services. Ex-provincial players work as volunteers. Dolley recently returned from a visit to Holland where he studied advanced coaching methods and he has introduced a coaching leadership certificate course for teachers in the community to strengthen their capacity.

Six teams participate in the Eastern Province schools league where they compete against more privileged schools – the Girls Under 11 team is currently unbeaten and the Boys Under 13 team is unbeaten in the local LoveLife Games. Fifty of the top performers are in a high performance program where they receive intensive coaching and mentoring.

Unemployment in Kwanobuhle is estimated to be 50% and the community has a high incidence of HIV/Aids. To ensure that the boys and girls who participate in the program receive emotional, academic and social support, the program has developed partnerships between participating schools and various life skills organisations, and is considering an arrangement with a school in Port Elizabeth which offers the potential of educational bursaries.

The Kwanobuhle development program is achieving excellence in the sport of hockey and is also using hockey as a vehicle to transform the lives of hundreds of young people in the community. With additional resources, the program will have an even greater impact.

The award includes a floating trophy and prize money of R500 000 over a period of five years. This arrangement was introduced with effect from 2005 and is currently benefiting two other sports development programs – Giants Gymnastics (2005 winner) and Nelson Mandela Township Rowing Club (2006 winner). ○

2006 WINNER EXCELS

On Saturday 2 February 2008 Nemato Rowing Club participated in the Eastern Cape Championships.

For the first time ever the club won provincial championships medals:

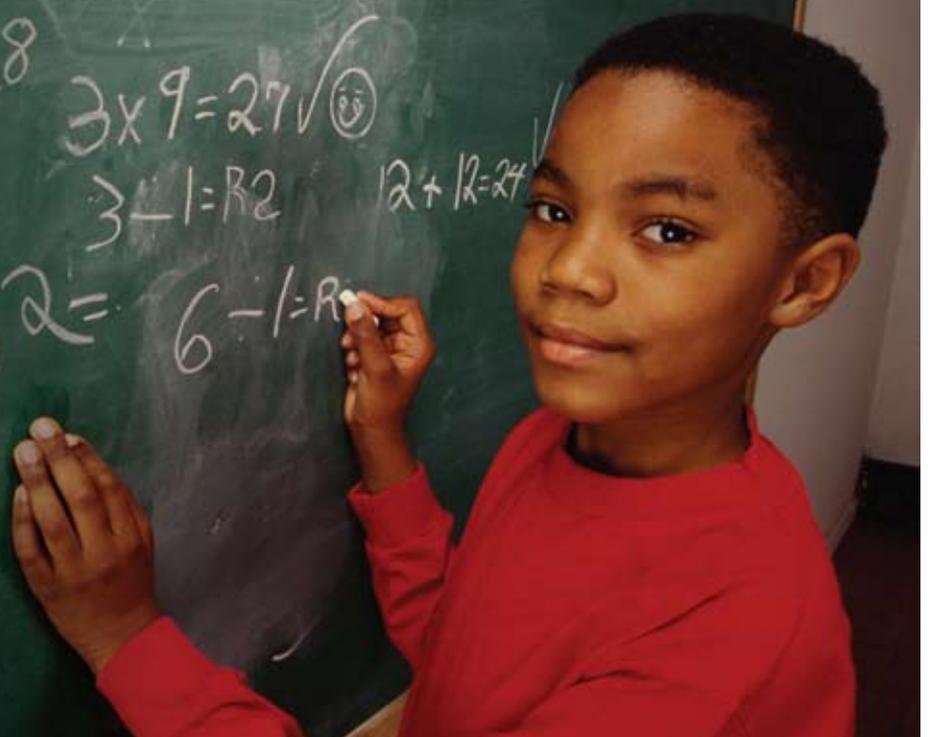
- **Nolufefe Ngotsha is the Eastern Cape Champion in the under 16 girl's single scull**
- **Athenkosi Hlekani is the Eastern Cape Champion in the boy's single scull**



■ **Athenkosi winning a race at the Eastern Cape Junior Championships**

Shaping our future now

Murray & Roberts aligns corporate social investment with its business strategy, supporting mathematics, science and technology education, numerical education in early childhood development and environmental education. ROBUST explores three CSI projects undertaken by the Group



MATHS, SCIENCE AND TECHNOLOGY IN ENGINEERING

Developed by the Maths Centre for Primary School Teachers (Maths Centre), this initiative aims to inspire primary and high school learners to pursue a career in engineering through an integrated program of maths, science and technology performance. The program comprises four components:

Mini Technology Olympiads

These will be undertaken in Gauteng and will be conducted and monitored by the Maths Centre which has designed a program to ensure that the tasks and

technological processes of the mini olympiads are understood and to enable previously disadvantaged learners to enter the mini olympiads and the Technology Olympiad, a Murray & Roberts project in association with SAIMechE.

Murray & Roberts Maths Centre Technology Lab

The Maths Centre has designed a program of workshops, seminars and lectures for teachers to begin to understand the exciting world of technology. The new curriculum is process oriented. Maths and science can be integrated into these technological concepts.

Together with the Sci-Bono science centre in Newtown, Johannesburg, where Murray & Roberts has sponsored the Building Africa display, the Maths Centre's program will enhance the learning and understanding of maths, science and technology as well as the engineering principles applied in using gears, levers, pulleys, sound, electricity, conveyer belts, robots and bridges and using computer as an interactive tool to design technology models and make personalised models.

Maths Centre MST in Engineering Kit

The new Revised National Curriculum and Technology has been used to identify technological concepts that teachers and learners find difficult, science concepts that connect to engineering in many fields and maths concepts that are essential to learning science and technology. The kit contains 15 activities for each discipline, attractively packaged in a tool box for each phase of the curriculum. The items used are easily available.

Engineering Ambassadors Program

This program aims to encourage engineers to become ambassadors and role models for schools as part of their learnership program. The Maths Centre has compiled a guide for their involvement in schools, including visits and talks, demonstration of engineering activities and challenges, visits to engineering industry sites and career displays.

NBI EDUCATION QUALITY IMPROVEMENT PARTNERSHIPS

The National Business Initiative (NBI) and the Department of Education have joined forces to implement the Education Quality Improvement Partnerships (EQUIP) program in schools.

Murray & Roberts has provided support to the program for over

four years, assisting with its implementation and additional support in maths in five schools in the Gauteng Province, namely Phumlani, Sijabulile, Alafang, Fumana and Buhlebuzile, all secondary schools in Thokoza and Katlehong.

livelihoods in rural communities. The Biodiversity Environmental Education Project (BEEP) identifies priority areas of potential biodiversity loss and offers community leaders and educators the knowledge and skills to address the problem.

“Through the EQUIP program, business supports schools in a way that is responsive to their own development goals... Parallel to teacher development, the program includes the development of the whole school, so that teachers return to a conducive and supportive environment.”

NALEDI PANDOR, MINISTER OF EDUCATION, AT THE GRADUATION CEREMONY FOR EQUIP MATHS AND SCIENCE TEACHERS.

Murray & Roberts agreed to provide further support for the implementation of the program in five participating secondary schools, namely Umquele and Oracle Ponelepele in Ivory Park and Bokomoso, Ikusasa and Jiyane in Tembisa.

The program aims to improve the educational performance of schools and learners and Murray & Roberts will support the following elements of the program:

- providing training and support in school management, governance and curriculum delivery in line with an initial baseline study and school development plans;
- co-operating with the Maths Centre to support and assist implementation of the Technology Olympiad project in the participating schools.

THE BIODIVERSITY ENVIRONMENTAL EDUCATION PROJECT

Biodiversity loss and ecosystem degradation is a major threat to

The BEEP has been implemented by the Conservation Leadership Group, a working group of the Endangered Wildlife Trust and a leading conservation training and environmental education group for previously disadvantaged youth.

The BEEP has two primary elements:

- training workshops on biodiversity for community leaders and school educators at disadvantaged schools, and
- the Mini Summit, an annual regional symposium in each province where communities or learners present, and receive recognition for, their involvement in biodiversity conservation issues.

Based on the successful implementation of the project for two years in KwaZulu Natal, an effective blue print has been developed, enabling the Conservation Leadership Group to expand the project into other provinces. ○

Experience of a lifetime

One lucky couple can win two nights at Imbali Safari Lodge, inclusive of three meals and two game activities daily



Imbali Safari Lodge offers top-class accommodation, African hospitality and personal service themed on the luxury and style of a traditional African safari, promising guests an extraordinarily 'special' safari experience. Set in its own 10 000 hectare concession area and part of the world-famous Kruger National Park, it abounds with heritage and traditions.

Accommodating 24 guests in luxury individual suites, each with their own private

jacuzzi, it features large expanses of glass and magnificent wooden decks for better game-viewing. This stylish lodge has been carefully designed and built, in keeping with eco-sensitive policies, to ensure that there is little impact on the natural environment. The construction of the main lodge had to be delayed due to the discovery of an archaeological site, which has now become part of the lodge itself.

Five-star suites with either king-size or twin beds offer only the finest furniture



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and imported linen, and en-suite bathrooms with antique baths. Spacious wooden decks provide guests with stunning views over the river bed and onto the plains beyond.

Experience magnificent cuisine, freshly prepared to guests' satisfaction by the lodge chefs, from a menu as extensive as the African wilderness. In conjunction with Mangwanani African Day Spa, guests can enjoy relaxing treatments (from foot, head and full body massages to facials) in the privacy of their suites, on expansive decks, or around the swimming pool. With an air of opulence befitting royalty, Imbali Safari Lodge is the perfect African utopia where guests will find serenity. ○



Winner of the getaway to Kedar Country Hotel, Conference Centre & Spa: **Nicholaas Nortje**

RULES OF THE COMPETITION:

1. The prize will be awarded to the first correct entry drawn.
2. The judges' decision is final and no correspondence will be entered into.
3. The prize is valid for six months starting 25 April 2008.
4. All extras are to be settled direct.
5. Transport to the destination is not included.



Answer the easy question, complete the entry form and send to Murray & Roberts Competition, PO Box 1148, JHB 2000 – to reach us before 25 April 2008. You can also fax to (011) 646-6040 or e-mail competitions@profpart.com (remember to put Murray & Roberts competition in the subject line).

ENTRY FORM: MARCH 2008 COMPETITION

Name: _____

Phone number: _____

Question: What power program could change the very nature of Murray & Roberts? _____

* Strictly one entry per person

$$E=mc^2$$



Your community is our community.

Every year Murray & Roberts invests millions of rands into Corporate Social Investment projects.

Our focus is:
Mathematics, Science & Technology Education
Environmental Education
& Early Childhood Development

If you know of deserving projects that you are willing to champion, contact us.

Call 011 456 1144 or fax 011 879 0050 or email clientservice@murrob.com