



ENVIRONMENTAL MANAGEMENT GROUP

Specialists in Environmental Management
Integrating Industry and Infrastructure with the Environment

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Fax: +27 51 412 6351
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Postal Address:
P.O.Box 37473,
Langenhoven Park 9330



COMPANY PROFILE

EMG

Environmental Management Group Pty (Ltd) Reg. No. 2017/077689/07 VAT Reg No: 4350278778
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General Information

Corporation Name: Environmental Management Group (PTY) Ltd.
Registered Address: 41 Laan Sonder Naam,
Groenvlei,
Bloemfontein, 9301
Tel: +27 51 412 6350
Fax: +27 51 415 6351
Website: www.envmgrp.com

Company Registration: 2017/077689/07
Tax Clearance Certificate Nr: 0700/2/2017/A000989222
Income Tax Number: 9681968161
VAT Number: 4350278778

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Background

Environmental Management Group (PTY) Ltd., is an active company working in conjunction with other private companies, Government Departments, Municipalities and Parastatals to promote sustainable development and sound environmental management principles.

Driven by the needs of the Southern African people, Environmental Management Group strives to be a successful company with a sound environmental ethos. By investing in a sound technical infrastructure, Environmental Management Group is able to attain competence and efficiency in all aspects of the environmental management sector. This can all be attributed to the dedication and expertise of Environmental Management Group as a company as well as its associated personnel.

The pressing need of managing crucial environmental resources in a sustainable fashion is recognized globally. To this end Environmental Management group has proudly contributed through various environmental projects towards a sustainable society by means of ensuring the necessary implementation of Integrated Environmental Management Procedures where future developments are concerned.

The Company

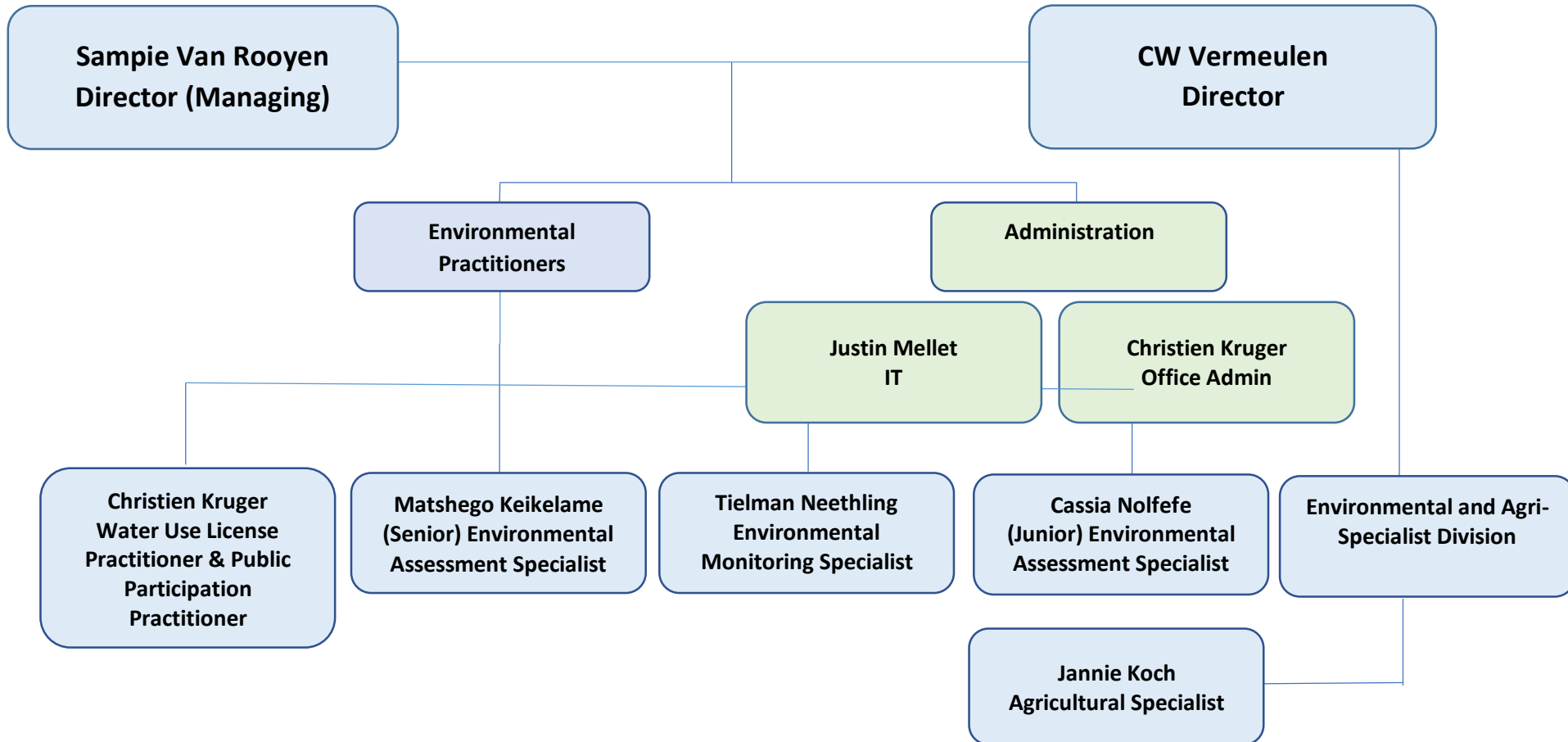
The company is actively engaged in activities that promote sustainable development. It is engaged in the use, development, and improvement of the mapping sciences. Coupled to a worldwide growth in environmental concern, Environmental Management Group successfully engaged in the provision of expert environmental management services to its clients. Therefore, the structure of the company comprises of three specialist divisions:

- Environmental Management
- Consulting and Project Management
- Biophysical Specialist Investigations

The integration of services rendered is evident from numerous successfully completed projects.

EMG

Environmental Management Group Organizational Structure





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COMPANY VALUES AND POLICIES

Honesty, justice, and courtesy from a moral philosophy which, associated with mutual interest among people, should be the principles on which ethics are founded. Accordingly, the company shall have full regard for achieving excellence in the practice of the profession and the essentially of maintaining the highest standards of ethical conduct in responsibilities and work for, all clients, colleagues and associates, and society at large.

Environmental Management Group believes in creating circumstances, which allow personnel opportunities for self-actualization. For this reason, it places a high premium on career opportunities, development, commitment to service, achievement, communication, adaptability and a continued drive towards improvement and excellence.

Environmental Management Group actively strives towards the continued delivery of a cost-effective and efficient service. We believe in the principle of management through measurement and offer to deliver our services on measurable service levels. This allows the client the opportunity to determine the efficiency of our service whilst the process clearly shows service trends to Environmental Management Group's management.

The increasing tendency towards international joint ventures calls for cooperative efforts. It is Environmental Management Group's conviction that only innovative thinking can maintain high and quality standards.

The Environmental Management Division

The company is self-sufficient and independent in all the aspects of environmental management and technology, and assures its clients of its broad knowledge base and ability to provide a continuous service in all aspects. The company is prepared to contribute its full infrastructure to support its clients. The following summary focuses on areas to which the company's expert input could provide valuable environmental data for various purposes as determined by the client's needs:

1. Environmental aspects of planning

From an economic perspective, it is vital that the environmental considerations are procured in the initial project plan. Professional advice can be given on how to design the project to minimize impacts and how to reduce the subsequent cost of mitigation. It must be noted that environmental considerations are considered during every phase of the project's life cycle.

2. Environmentally related permit applications & environmental information

Certain developments require applications for licenses, permits and authorizations to be available before the development can be established. These applications cover a variety of industries from mining, establishment of townships, agricultural industries, applications for domestic waste disposal sites, the siting of discard dumps, slimes dams and any mining or reclamation facility and many more. Environmental Management Group prides itself in having expertise to carry out a large variety of these applications. Environmental Management Group is involved in the following application processes:

- 2.1 Environmental Authorizations for Environmental Impact Assessments and Basic Assessments
- 2.2 Environmental Management Plans
- 2.3 Due Diligence Reporting
- 2.4 Waste Management License Applications
- 2.5 Water Use License Application and General Authorizations



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- 2.6 Prospecting and Mining Permit and Closure Applications and Authorizations
- 2.7 Atmospheric Emissions License Applications
- 2.8 Environmental Control Audits and Inspections
- 2.9 Environmental Induction Training
- 2.10 Specialist assessments including; Heritage, Geohydrology and Ecological

To ensure that our advice and recommendations are pro-active, we monitor overseas, regional and local environmental trends, with focus on the legal aspects that govern the permitting process

3. Environmental Management Programs and Plans

Detailed Environmental Management Program Reports (EMPRs) can be compiled, which includes negotiations with the Authorities and consultation with Interested and Affected Parties. Impact assessment and prediction can be performed for all impacts arising from mining operations.

Once the EMPR has been approved, it needs to be implemented. Practical recommendations can be made for necessary changes to the management system, for example an environmental management system (EMS), adapted from the ISO standard to suit a mine.

4. Natural resource surveys & impact assessments

4.1 Surface & groundwater

The quality of surface water is determined by adequate sampling and subsequent analysis in a reputable laboratory. The interpretation of results is performed according to your needs - may it be for drinking, irrigation, industrial or ecological uses or for assessing discharge requirements.

Surface water hydrology is determined through the use of conventional hydrological models with field verification if possible and where necessary.

The status of groundwater is determined using non-intrusive electromagnetic techniques to demarcate the presence of near surface water or pollution plumes, with calibration and verification done by borehole sampling. All groundwater work will consider the geology of the site.

4.2 Plants & Animals

Vegetation surveys of virgin and disturbed land are performed by registered SACNASP scientists, giving rare or endangered species, dominant species, species composition, biomass and groundcover percentage for meeting erosion prevention objectives. Detailed faunal assessments are conducted by registered SACNASP field specialists whereby threatened and near-threatened species are identified and given specific buffer zones if necessary. A formal report on the over fauna and habitat of a specified site including habitat preferences, habitat availability, faunal species present as well as species deduced to occur is the end product. Faunal assessments are conducted for Mammals, Avifauna, Amphibians and Herpetofauna.



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4.3 Soils

We can perform soil surveys from a reconnaissance scale down to the soil series and phases of series scale. Other soil materials such as gravel, for road construction and building sand, can be investigated, should the need exist. The information obtained can be used to assess the soil's suitability for irrigation, cropping or for rehabilitation. Prior to land disturbance for mining or other development purposes, the agricultural and engineering potential of the soil can be assessed to provide advice concerning the soil management during, or after development.

5. Dump siting, construction, management & rehabilitation

Residue disposal sites for mines are often one of the largest and most prolonged environmental liabilities. Advice can be given on dump siting, dump design, construction method, management, rehabilitation and eventual closure. Modelling can be done through the use of computer software to present conceptual and detailed designs for the purposes of costing. The company also applies for the environmental authorizations, waste and water use licenses required.

6. GIS, landform modelling & surface rehabilitation

A locally developed and supported geographical information system (GIS) software package (an international award winner) is used to record and model spatially related environmental data such as water, soil and air information. A sub-routine, using a built-in three-dimensional CAD system, is used to model landforms for open cast mines, dumps, water pollution control measures and land management options. The objectives would be to minimize earth movement costs and negative environmental impacts.

Information can be generated from databases provided by the client or generated by us. Support for compiling your company's own GIS can also be given.

The control of water is probably the single most important aspect of rehabilitation, be it the rehabilitation of mined

land, dumps or any other disturbed area. Slope angle, length, shape, aspect and soil cover material will be considered. Erosion prevention measures must be designed and constructed such as contour banks, down drains and energy dissipating structures. Planting vegetation, getting it to grow and maintaining it is the final step in water control. A part of successful re-vegetation depends on the correct tillage, fertilizer applications and subsequent management.

7. Water pollution control, management & treatment

Predictions can be made for industrial and mining sites as to their potential water pollution problems such as acid mine drainage, salt loads, heavy metals or silt. Sulphate removal processes can be investigated for their technical and financial feasibility. The production process can also be assessed so as to minimize effluent generation. The objective will be to avoid end-of-pipe solutions, and instead to modify the process to generate less waste.

The management of surface water is a dynamic and ongoing process. Site assessments can be conducted and advice given on specific sites, or for broader management philosophies. Recommendations can be made as to the best method of managing surface water so as to achieve the least negative environmental impact and also to maximize the re-use of the resource. If excess water has to be discharged, the quality standards that have to be met will be negotiated with the authorities.

Water treatment systems can be designed to handle the pollution emanating from various sites. This water treatment design might be a low maintenance system such as an anoxic limestone drain or wetlands or energy intensive operations such as aeration and liming, reverse osmosis, ion exchange, chemical treatment, flocculation, settling or electro-dialysis reversal.



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8. River diversions

We have successfully applied on separate occasions, to move or change rivers so that the coal in the river's flood plain could be mined. The rehabilitated end product in each case was a wetland. A number of minor streams have also been diverted.

These diversions were done from conceptual design, through detailed civil design, permitting, and control of earthworks to final land forming and rehabilitation.

9. Environmental Control Work, Audits & liability assessments

Environmental Management Group provides environmental monitoring and environmental control services for projects that are still undergoing construction or rehabilitation to ensure that they comply with the required environmental legislations. Environmental control responsibilities through a well-established control Performa have been conducted for various activity types. Environmental Management Group has therefore acted as Environmental Control Officers (ECO) for several projects

Audits have been done at corporate level, using for example the Environmental Self-Appraisal Programme method which has been adapted to suit South African business, mine management level and site level and it may be compliance or management systems orientated.

Liability assessments have been conducted on mining and industrial sites to determine the short and long-term environmental cost of establishing or acquiring business there. These costs will be determined in close co-operation with the authorities and will be dependent on current and pending legislation. Mine or site closure cost estimates is included in these liability assessments.

10. Environmental project management

Teams required to conduct large environmental projects can be managed. These may involve investigations in committee form, research projects or extensive environmental impact assessments.

11. Environmental training

We can provide training at two levels, a general awareness programme for all employees or more specific courses related to job responsibility. Guidance can also be given to employees who wish to make environmental management a career.

12. Document review, policy formulation & setting standards

Busy management often does not have time to study, digest and comment on environmental documents especially those of a legal, policy or global nature. We do this by compiling an executive summary of such documents and making recommendations about the most favorable position your company can take.

We have been providing, and can continue to provide, input into corporate and government environmental policy. The same applies to setting standards. Our aim is to guide the policy or a standard towards something that is practical, that can be cost-effectively implemented and that is appropriate to Southern Africa's need for environmentally sound development.



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The Agri-Business Division

Rural Development is managed in a sustainable manner by building on the development potential of rural economies, infrastructure and agricultural growth potential. EMG offers support in agricultural beneficiation, agro-economics and smallholder farmer development. Our capabilities include land-use assessments, evaluation of agricultural resources and development potential, agricultural value-chain development and agricultural programme.

EMG specialises in the identification of agricultural development opportunities, development in the rural context, and the development of a sustainable business plan or model to address the needs derived from the local rural agricultural sector.

Geographical Areas of services rendered in South Africa

South Africa:

- Free State Province
- Eastern Cape Province
- Northern Cape Province
- North West Province
- KwaZulu Natal Province
- Western Cape
- Mpumalanga

Africa:

- SADC Countries

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CURRENT PROJECTS

Environmental Management Group has done extensive work in the area of environmental authorisations, waste license applications, prospecting & mining permit applications and water use license applications. Listed below are a number of **current projects**:

	Client	Project
Waste	Metsimaholo Local Municipality	Scoping/EIA application for the development of a new landfill site in Sasolburg
Mining Permits/Rights	Danoher Contracting (PTY) Ltd	Mining Permit/EMPR/BAR application for a gravel BP in Bloemfontein
	KMSD (PTY) Ltd	Mining Permits Kuruman District 11 Gravel Borrowpits
	SMEC South Africa (Pty) Ltd	EMPR/BAR application for a sandstone BP in Zastron
Roads	Molpro Consulting (Pty) Ltd	BAR/IWUL/ applications for the Deneysville - Jim Fouché road rehabilitation
	Molpro Consulting (Pty) Ltd	BAR/IWUL/ applications for the Deneysville - Heilbron road upgrading
	Molpro Consulting (Pty) Ltd	BAR/IWUL/ applications for the Schonkenville - Koppies road upgrading
	SANRAL	BAR/IWUL/BP/Quarry applications for the N1 Section 16 road upgrade
	SANRAL	ECO Periodic Maintenance on National Route N6 Sec 8 from Reddersburg (km 0.00) to Rustfontein (km37.8)
	SMEC South Africa (Pty) Ltd	BAR/IWUL/BP/Quarry applications for the MR 938 Mamatwan road upgrade



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Infrastructure	SMEC South Africa (PTY) Ltd	Scoping EIA, WULA and AEL for the development of a Brick factory in Thaba-Nchu
	Umfundu Professional Services CC.	WULA and EIA for the Mmamahabane cemetery establishment, Free State
	LMV (PTY) LTD.	Environmental Screening for the school development in Maokeng (Kroonstad) - Erwe 1500 & 24628, Free State Province
Residential Developments	BVI and Tswela Tsweu (Pty) Ltd	Environmental Screening, EMP, WULA and ECO for Kameelputs rural water supply project
	BVI and Tswela Tsweu (Pty) Ltd	Environmental Screening, EMP, WULA and ECO for Madipelesa rural water supply project
	BVI and Tswela Tsweu (Pty) Ltd	Environmental Screening, EMP, WULA and ECO for Shaleng rural water supply project
	BVI and Tswela Tsweu (Pty) Ltd	Environmental Screening, EMP, WULA and ECO for Reivilo rural water supply project
	BVI and Tswela Tsweu (Pty) Ltd	Environmental Screening, EMP, WULA and ECO for Lykso rural water supply project
	BVI and Tswela Tsweu (Pty) Ltd	Environmental Screening, EMP, WULA and ECO for Broedersput rural water supply project



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Agriculture	SMEC South Africa (Pty) Ltd	Environmental Screening, EMP, WULA and ECO for Schweizer-Reneke rural water supply project
	SMEC South Africa (Pty) Ltd	Environmental Screening, EMP, WULA and ECO for Piet Plessis rural water supply project
	SMEC South Africa (Pty) Ltd	Environmental Screening, BAR and WULA application for the development of an Agri-Park in Parys, Free State
	SMEC South Africa (Pty) Ltd	Environmental Screening, BAR, AEL and WULA application for the development of an Agri-Park in Springfontein, Free State
	SMEC South Africa (Pty) Ltd	S24G, Waste License, AEL and WULA application for the development of an Agri-Park in Thaba-Nchu, Free State
	SMEC South Africa (Pty) Ltd	Environmental Screening, BAR and WULA application for the development of an Agri-Park in Tsiame, Free State
	SMEC South Africa (Pty) Ltd	Environmental Screening, BAR and WULA application for the development of an Agri-Park in Wesselsbron, Free State
	SMEC South Africa (Pty) Ltd	Environmental Screening, BAR and WULA application for the development of an Farmer Production Support Unit in Koffiefontein, Free State
	SMEC South Africa (Pty) Ltd	Environmental Screening, BAR and WULA application for the development of an Farmer Production Support Unit in Odendalsrus, Free State



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	SMEC South Africa (Pty) Ltd	Environmental Screening, BAR and WULA application for the development of an Farmer Production Support Unit in Sediba, Free State
	SMEC South Africa (Pty) Ltd	Environmental Screening, BAR and WULA application for the development of an Farmer Production Support Unit in Kroonstad, Free State



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