

### Malcolme Ronald Ruxton Logie

Pr. Sci. Nat. - Environmental Scientist, Certified Environmental Assessment Practitioner WSP Environmental (Pty) Ltd

#### **Career Summary**

Malcolme is Director – Environmental Services and has 23 years of experience in environmental and social management consulting. His experience covers environmental and social impact assessments and planning; environmental, safety and health management and systems; due diligence, systems auditing and contaminated site assessments. He is a graduate of Rhodes University with a PhD in Biotechnology and an MSc in Botany; is a registered Professional Natural Scientist (Environmental Scientist) and a Certified Environmental Assessment Practitioner. Malcolme has worked in the industrial, brown- and greenfield environments, marine and terrestrial environments. His experience covers an extensive range of industrial sectors - from pharmaceutical, automotive, pulp and paper, beverage, mining, metals processing, manufacturing to oil and gas.

Malcolme is regarded as a leading Environmental Management Advisor and has guided public listed companies on their environmental strategies and liabilities. As a recognised authority in Environmental Management he has lead multi-disciplinary teams on projects in South Africa, Angola, Botswana, Democratic Republic of Congo, Egypt, Ethiopia, Ghana, Mozambique, Namibia, Nigeria, Uganda, Tanzania, Zambia, Czech Republic, Slovak Republic, Hungary, Poland and Romania.

Malcolme has accrued more than 14 000 hours of auditing time in the following industrial sectors: Aerospace, Agriculture, Forestry, Fisheries, Automotive and Rail Transport, Beverage and Foodstuff Industries, Chemicals and Chemical Products, Constructions, Education, Electricity Supply, Explosive and Munitions, Gas Supply, Glass Ceramics, Processing of Minerals and Ores, Leather and Leather Products, Manufacture of Coke and Refined Petroleum Products, Manufacturing and Mechanical Engineering, Metals Refining and Processing and Production of Metals, Mining and Quarrying, Oil and Gas, Pharmaceuticals, Production of Cement/Lime/Gypsum and Concrete, Pulp/Paper and Paper Products, Research and Development, Rubber and Plastic Goods, Ship Building, Textile Industries, Transport and Communication, Waste and Recycling, Water Supply and Wood Industries.

Malcolme's environmental technical skills include:

- Environmental & Social Impact Assessments;
- Environmental, Safety and Health Performance Assurance Audits;
- IFC Performance Standards Assessments:
- Environmental, Safety and Health Management Systems (ISO 14001 and OHSAS 18001);
- Environmental/Contaminated Site Assessments, Due Diligence, Risk Assessments; and
- Legal Compliance Assessments.



Malcolme was a member on the South African committee SABS:TC207 which formed part of the global committee that wrote the original ISO 14001 Environmental Management Systems specifications standard. Malcolme was also responsible for the development of the SAATCA requirements for the registration of Environmental Auditors and was elected (under a Grandfather clause) as the first Environmental Verification Auditor in South Africa.

During the period 2000-2008 Malcolme served on the Education Review Board for the South African Council for Natural Scientific Professions (SACNASP) where his role was to review the suitability of education and experience of individuals applying for registration as Professional Natural Scientists.

#### **Professional Qualifications**

#### **Education and Training**

- PhD (Biotechnology), Rhodes University, South Africa, 1995
- MSc (Botany), Rhodes University, South Africa, 1992
- BSc Honours (Botany), Rhodes University, South Africa 1990
- BSc (Plant Science & Biochemistry), Rhodes University, South Africa, 1989
- ISO 14001 Lead Auditors Course, Bureau Veritas, 1997
- ISO 9001 Lead Auditors Course, South African Bureau of Standards, 1996
- Business & Client Development, ERM, 2012
- IFC Performance Standards, ERM, 2012

#### **Professional Memberships**

- Registered as a Professional Natural Scientist (Environmental Scientist) with the South African Council of Natural Scientific Professions (SACNASP – 400102/95)
- Certified as an Environmental Assessment Practitioner by the Certification Board of Environmental Assessment Practitioners of South Africa (EAPSA)
- Professional Member of the South African Institute of Ecologists and Environmental Scientists (SAIE&ES)
- Member of the International Association of Impact Assessors (IAIA-SA)
- Member of the Royal Society of South Africa

#### Awards, Publications & Lecturing

 First recipient of the Schonland Botanical Award for the Top Honours Student 1989 (Rhodes University)



- Published three papers from his PhD in the Journal of Plant Physiology (1992-1993);
- Numerous presentations at academic conferences based on his post graduate studies;
- Lectured the Environmental Health & Safety course for the MSc (Biotechnology) at Rhodes University (2000-2003);
- Lectured the Industrial Environmental Management component of the MBA at the Rhodes University Investec School of Business (2006-2010).

#### Selected Project Experience

#### **ENVIRONMENTAL & SOCIAL ASSESSMENTS**

#### MARINE & INFRASTRUCTURE

#### 2012/3, IFC Performance Standards Assessment, Lagos Rail, Nigeria, Project Director

Environmental and social assessment of the high-speed Lagos Rail Passenger Railway, against the IFC Performance Standards requirements. The scope of works included all construction, operation and maintenance activities and processes.

### 2010, Aurecon, Environmental Management Programme N2 National Route, South Africa, Executive/Project Director

Development and monitoring of the Environmental management for the realignment of the N2 National Route from Elliotdale interchange to Mthatha (50km)

# 2008-2009, Environmental & Social Impact Assessment for Several Bulk Liquid Tank Farms located at Three Major South African Ports, South Africa, Executive & Review Consultant

Oversee and manage the various Environmental Impact and Social Assessments for upgrading and/or changes to bulk liquid storage depots that are situated in three major ports in South Africa (Richards Bay, Durban & Cape Town).

#### 2008, Bigen Africa, Albany Regional Water Supply Scheme, South Africa, Executive/Project Director

Environmental and Social Impact Assessment of the Albany Bulk Water Supply pipeline (300km) from Grahamstown to Port Alfred, Fish River, Canon Rocks and Alexandria.

# 2007, Rakel, Preliminary Environmental Impact Assessment – Desalination Plant, Kidds Beach, South Africa, Executive/Project Director

The project included a preliminary terrestrial and marine assessment of impacts of the placement of a desalination plant beneath the Kids Beach beachfront parking area.

# 2003, Cameron (Cooper Cameron), Environmental Impact Review – Port of Luanda, Angola, Executive/Project Director

The project entailed the review of the construction and operational environmental risks of the Cameron service facility situated at the port of Luanda oil base.

# 2002-2006, BHP Billiton/MOZAL, Environmental Impact Review & Annual Auditing MOZAL - Port of Maputo, Moçambique, Executive/Project Director

The project initially entailed the review of the construction and operational environmental risks of the MOZAL Aluminium shipping and storage facility in Port of Maputo. Thereafter an ISO 14001 Environmental Management System for the facility was developed with annual audits of compliance.

2000-2010, Eskom, Environmental Impact Assessment, South Africa, Executive/Project Director



Preparation of Environmental Impact Assessment reports for more than twenty transmission lines. Identification of Operational Environmental Risks at three hydropower plants in the Eastern Cape.

#### OIL & GAS

### 2014, IFC Social Baseline Assessment – Oil Exploration Area 2, Albertine Graben, Uganda, Tullow Oil, Project Director

Environmental Baseline Assessment undertaken for Tullow Oil and their joint venture partners, Total and CNOOC, in oil Exploration Area 2 located in Lake Albert and on the eastern shore of Lake Albert in Uganda.

# 2014, IFC Environmental Risk Assessment of the Land-based Transportation of Fracking Fluids, Mossel Bay, South Africa, Project Director

Environmental Risk Assessment of the Land-based Transportation of fracking fluids from storage to the port in Mossel Bay.

# 2013/4, IFC Environmental & Social Impact Assessment - Offshore Hydraulic Fracking of F-O Gas Field, Mossel, South Africa, Project Director

Environmental & Social Impact Assessment of the Hydraulic Fracking of the F-O Gas Field 110km offshore of Mossel Bay. The scope of the impact assessment includes all land-based, port, marine traffic and sub-sea hydraulic fracking processes.

#### 2012, Environmental Impact Assessment for Major Fuel provider, South Africa, Project Director

The project entailed the preparation of environmental and social impact assessments, and water use licenses for new waste water treatment works at twelve fuel stations in South Africa.

#### MINING & MINERALS

## 2011, Mining permitting of Mining Pits in the Eastern Cape Province, South Africa, Provincial Department of Public Works and Roads, Executive/Project Director

The project entailed the permitting through the submission of Environmental Management Reports for some 400 mining pits throughout the Eastern Cape Province. The project involved detailed environmental assessments, archaeological and paleontological assessments, public facilitation and preparation of borrow pit development and mining plans.

## 2009, IFC Environmental & Social Impact Assessment for Copper-Cobalt Mine, Africo Resources Plc, Democratic Republic of Congo, Executive & Review Consultant

The project was a comprehensive Environmental & Social Impact Assessment (ESIA) undertaken in accordance with specifications of the International Finance Corporation for the proposed establishment and development of a Copper-Cobalt Mine at Kalakundi, in The Democratic Republic of Congo. As Senior Review Environmental Consultant, Malcolme was responsible for the planning of the ESIA and for managing the various specialist consultants. As the Review Consultant, Malcolme was responsible for assessing the quality and technical detail of the various specialist reports as well as approving the finalise ESIA Report.

#### OTHER

### 2011, Environmental, Health & Safety & Social Consultancy at a Sugar Mill, Tanzania, Executive/Project Director

Environmental, health & safety and social consultancy to identify management improvement opportunities and mechanisms at a sugar mill situated in Tanzania.

2006-2008, IFC Environmental and Social Impact Assessment for three Landfill Gas Extraction and Electricity Generation projects at three landfill sites in Buffalo City, East London South Africa, Executive/Project Director



Facilitate all aspects of the environmental and social impact assessment including specialist sub-consultants and public facilitation for three gas extraction and electricity generation projects at three landfill sites (Second Creek, Roundhill and King William's Town).

#### CONTAMINATED SITE ASSESSMENT/MANAGEMENT

### 2011, Contaminated Site Assessment in a Major South Africa Port, South Africa, Executive/Project Director

Environmental Site Assessment (Phase I and Phase II) of historic pollution within the port complex. The project included soil sampling and analysis of areas of historic pollution and mapping the pollution in these areas in the port using GIS.

2010, Environmental Risk Assessment and Contaminated Site Assessment (Phase I) for an International Food Company, Johannesburg South Africa, Executive/Project Director

The project scope of work was firstly to undertake an Environmental Site Assessment (Phase I) of all onsite operations and secondly to prepare a comprehensive environmental risk assessment at the production facility.

2010, Environmental Due Diligence for an International Beverage Company, Johannesburg South Africa, Executive/Project Director

The project scope of work was to prepare a comprehensive environmental due diligence at the production facility, as part of a property acquisition.

2006-2008, Contamination Assessment, Client Confidential, Executive/Project Director

The scope of work was focussed on pesticide contamination of water supply - Confidential

2006-2008, Environmental Site Assessment/Contaminated Site Assessments, Client Confidential, Executive/Project Director

The scope of work included Phase I and Phase II contaminated site assessments for lead, salt/brine and heavy fuel oils - Confidential

1998-2006, Environmental Site Assessment/Contaminated Site Assessments, Motor Industry, Clients all Confidential, South Africa, Executive/Project Director

In excess of twenty Phase I and Phase II contaminated site assessment projects within the motor industry in South Africa. Contaminants included; hydrocarbons, halogenated hydrocarbon, and heavy metals.

#### MANAGEMENT SYSTEMS & AUDITING

2015, Governance, Environmental & Social Due Diligence, Client Confidential, Project Director Acquisition Due Diligence - Confidential

2014, Environmental Management Systems Review, Anglo American Platinum, Project Director

Comprehensive Review of the Environmental Management System at Twickenham Mine, Anglo Platinum, South Africa.

2013/4, Twelve African Breweries, Diageo Plc, Environmental, Safety, Health and Food Safety – Performance Assurance Audits, Project Director and Lead Assessor

Performance Assurance Audits were undertaken at three Diageo Plc breweries through Africa. The scope of the Audits included all activities at the breweries relating to environment, safety, health, and society and food safety.



#### 2012, Compliance Assurance Programme, Oil & Gas Sector, Angola, Project Director

The project entailed the compilation of a Compliance Assurance register based on Angolan Legislation for a major international Oil and Gas company. The scope of work included all environmental, health & safety and social legislation applicable to off-shore and on-shore upstream activities and processes.

### 2012, Proparco, IFC Performance Standards Assessment on Aquaculture Farms- South Africa, Project Director

Environmental and social compliance assessment of three aquaculture farms (Zimbabwe, Zambia and Malawi) for a major French Financier (Proparco). The scope of work included all land based nursery operations, lake based activities, fish processing and distribution.

#### 2012, Compliance Systems Auditing at Xstrata Coal, South Africa, Project Director

Lead Auditor for the Environmental, Health & Safety and social compliance audits of Goedgevonden Mine, iMpunzi Mine Complex and Tweefontein Mine Complex.

### 2012, Agri-Pharmaceutical Industries Compliance Assessment, Client Confidential, South Africa, Project Director

Environmental and social Lead Auditor for an Agri-Pharmaceutical ingredients manufacturer in South Africa.

# 2011, Environmental and Social Due Diligence of two Copper-Cobalt Mines for the Purpose of Acquisition, Client Confidential, Democratic Republic of Congo, Executive Environmental and Review Consultant

The project was a comprehensive Due Diligence for the potential investment by an International Mining House, where Malcolme's role was to deal specifically with the environmental and social management component of the Due Diligence.

# 2011, Environmental Due Diligence for an International Automotive Component manufacturer, Client Confidential, South Africa, Executive/Project Director

Lead assessor for an Environmental Due Diligence at a major automotive component manufacturer situated in Port Elizabeth, South Africa.

# 2007-2009, Dreher Sörgyárak Zrt (SAB Miller), Establishment & Implementation of Integrated Environmental, Safety & Health and Social Management System, Hungary, Executive/Project Director

The project included the design, establishment, and implementation of an integrated environmental safety and health management system in accordance with the requirements of ISO 14001, OHSAS 18001, and the internal SAB Miller standards at a brewery in Budapest. Also the development of country, and site specific operational risk assessments, operational and monitoring procedures and standards, training and compliance and systems auditing. In addition, providing strategic guidance to the client on matters relating to environment, health and safety and society

# 2007-2009, Plzeňský Prazdroj (SAB Miller), Establishment & Implementation of Integrated Environmental, Safety & Health and Social Management System, Czech Republic, Executive/Project Director

The project included the design, establishment and implementation of an integrated environmental safety and health and social management system in accordance with the requirements of ISO 14001, OHSAS 18001 and the internal SAB Miller standards at three breweries (Pilsen, Velke Popovice & Radegast). Also the development of country and site specific operational risk assessments, operational and monitoring procedures and standards, training and compliance and systems auditing. In addition, providing strategic guidance to the client on matters relating to environment, health and safety and society.

### 2004, Transnet National Ports Authority, ISO 14001 Certification Assessment – Port of Port Elizabeth, South Africa, Lead Auditor

Lead Auditor, for BVQi, for the ISO 14001 Certification Audit of the Environmental Management System at the Port of Port Elizabeth. The scope of the audit included all port operations.

2002-2009, Ursus Breweries (SAB Miller), Establishment & Implementation of Integrated Environmental, Safety & Health and Social Management System, Romania, Executive/Project Director



The project included the design, establishment and implementation of an integrated environmental safety and health and social management system in accordance with the requirements of ISO 14001, OHSAS 18001 and the internal SAB Miller standards at four breweries (Buzau, Brasov, Cluj-Napoca & Timisoara) and a depot (Bucuresti). Also the development of country and site specific operational risk assessments, operational and monitoring procedures and standards, training and compliance and systems auditing. In addition, providing strategic guidance to the client on matters relating to environment, health and safety and society.

2002, Charmarel Shipping, ISO 14001 Certification Assessment of the Mauritian registered Cable Vessel "Chamarel" operational out of Port of Cape Town, South Africa, Lead Auditor

Lead Auditor, for BVQi, for the ISO 14001 Certification Audit of Mauritian registered Cable Vessel "Chamarel" operational out of Port of Cape Town. The scope of the audit included all operations on board the vessel.

2002, Transnet Port Authority, Strategic Environmental Review – Acquisition of Ngqura Salt Works, Port of Ngqura, South Africa, Executive/Project Director

Due diligence of the acquisition of land occupied by the Cerebos Salt works situated on the Ngqura River and the salt production facility situated adjacent to the Sundays River.

2002, SDV, Operational, Environmental and Quality Risk Assessment – Port of Takoradi, Ghana, Executive/Project Director

The project included an operational, environmental and quality risk assessment of all quayside operations at the Port of Takoradi, Ghana.

2002, SDV, Operational, Environmental and Quality Risk Assessment – Port of Tema, Ghana, Executive/Project Director

The project included an operational and environmental risk assessment of all quayside operations at the Port of Tema. Ghana.

2002, SONILS-SONANGOL, Operational and Environmental Risk Assessment – Port of Luanda, Angola, Executive/Project Director

The project included an operational and environmental risk assessment of all quayside operations at the oil services base at the Port of Luanda.

