

Rob Gardiner

Principal Environmental Scientist



Profession Principal Environmental Scientist

Education MBA, Port Elizabeth Technikon, 2004

MSc, Chemistry – Industrial, University of Leeds, 1993 BSc (Hons), Chemistry, University of Cape Town, 1989

Registrations/ Pr Sci Nat, Environmental Scientist (South Africa) 400079/03

Member, International Association of Impact Assessors

Specialisation

Environmental impact assessments, environmental management systems, ISO 14001, environmental management plans, environmental monitoring, and environmental auditing.

Expertise

Rob Gardiner has been involved in the field of environmental consulting for over 22 years. His expertise includes:

- environmental impact assessments (EIA);
- environmental management systems (EMS) and management plans (EMP);
- · water quality monitoring; and
- environmental due diligence and environmental auditing.

His experience in the development, mining, manufacturing and public sectors has been gained in projects within South Africa, Lesotho, Botswana, Angola, Zambia, Zimbabwe, Democratic Republic of Congo, and Suriname.

Employment

2001 - present

SRK Consulting (Pty) Ltd, Principal Environmental Scientist and responsible for the Eastern Cape Environmental Department, Port Elizabeth

1998 - 2001

Gardiner Associates, Sole Proprietor and Environmental Consultant, Port Elizabeth. Assisted numerous clients in implementation, and aspects of, ISO 14001. This included conducting Initial Reviews, implementing environmental monitoring and management programmes, conducting third party audits of suppliers and contractors, and identifying and assessing compliance with legal and other requirements.

1991 - 1998

CSIR, Division of Textile Technology, Port Elizabeth. Responsible for the Division's environmental management offerings to the South African textile industry, including ISO 14001 awareness and eco-labelling. Also responsible for the CSIR's environmental impact assessment offerings in the Eastern Cape Region.

Languages

English – read, write, speak Afrikaans – read, write, speak

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: coastal management

Location: St Francis Bay, Eastern Cape, South Africa Project duration & year: 2002 to 2007 (including discontinuities)

Client:

Kouga Municipality

Name of Project: St Francis Bay Beach Remediation Project Description: Environmental Impact Assessment

Job Title and Duties: Project Co-ordinator for initial EIA, Project Manager for revision of EIR

Value of Project: ± R 500,000

Location: Nelson Mandela Metropolitan Municipality, Eastern Cape, South Africa

Project duration & year: 6 months, 2005

Client: Nelson Mandela Metropolitan Municipality
Name of Project: Integrated Beach Development Plan

Project Description: Strategic Environment Assessment
Job Title and Duties: Environmental Assessor

Value of Project: ± R 100,000

Key Experience: Environmental assessment: linear projects

Location: St Marks to Sabalele village, Eastern Cape, South Africa

Project duration & year: 9 months, 2014

Client: South African National Roads Agency SOC Limited

Name of Project: Upgrade of the DR 08376 from the R61 at St Marks to Sabalele Village Project Description: Environmental Assessment of the widening and surfacing of the R61 at

St Marks to Sabalele Village (19 km), including assessment of borrow pits and

river crossings

Job Title and Duties: Environmental Assessment Practitioner, Project Director

Value of Project: ± R 300,000

Location: Cradock to Middleburg, Eastern Cape, South Africa

Project duration & year: 9 months, 2012

Client: South African National Roads Agency SOC Limited

Name of Project: Upgrade of National Route 10, Section 4, Cradock to Knutsford

Project Description: Environmental Assessment Services

Job Title and Duties: Project Director Value of Project: ± R 250,000

Location: Ngcobo, Eastern Cape, South Africa

Project duration & year: 9 months, 2012

Client: South African National Roads Agency SOC Limited

Name of Project: Upgrade of Route 61, Section 6 from Qumanco River to Ngcobo Town

Project Description: Environmental Assessment Services

Job Title and Duties: Project Director Value of Project: ± R 250,000

Location: Orange Free State, South Africa

Project duration & year: 9 months, 2012

Client: South African National Roads Agency SOC Limited

Name of Project: Upgrade of National Route 1, Section 14, between Trompsburg Interchange

and Fonteintije

Project Description: Environmental Assessment Services

Job Title and Duties: Project Director Value of Project: ± R 250,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: linear projects

Location: Graaff-Reinet to Cradock, Eastern Cape, South Africa

Project duration & year: 9 months, 2011

Client: South African National Roads Agency SOC Limited

Name of Project: Upgrade of Route 61, Section 2: Draairivier to Elinus Farm between Graaff-

Reinet and Cradock

Project Description: Environmental Assessment Services

Job Title and Duties: Project Director Value of Project: ± R 250,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 24 months 2009 to 2011

Client: Nelson Mandela Metropolitan Municipality

Name of Project: 132 kV Overhead Powerline from Bloemendal to Tembani T-off

Project Description: Environmental Impact Assessment

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 300,000

Location: Uitenhage, Eastern Cape, South Africa

Project duration & year: 24 months 2009 to 2011

Client: Nelson Mandela Metropolitan Municipality

Name of Project: 132 kV Overhead Powerline from Sans Souci Substation to the new Nivens

Drift substation

Project Description: Environmental Impact Assessment

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 300,000

Location: Cradock to Middleburg, Eastern Cape, South Africa

Project duration & year: 7 months, 2010

Client: South African National Roads Agency SOC Limited

Name of Project: Upgrade of National Route 10, Section 4 (± 24 km) Tafelberg to Middelburg

Project Description: Environmental Assessment Services

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

Value of Project: $\pm R 100,000$

Location: Cradock to Middelburg, Eastern Cape, South Africa

Project duration & year: 7 months, 2010

Client: South African National Roads Agency SOC Limited

Name of Project: Upgrade of National Route 10, Section 4 (±24 km) Tafelberg to Middelburg

Project Description: Environmental Assessment Services

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

Value of Project: ± R 100,000

Location: Seaview, Eastern Cape, South Africa
Project duration & year: 8 months, 2009, and reassessed in 2016

Client: Nelson Mandela Bay Municipality
Name of Project: Seaview Bulk Water Supply

Project Description: Environmental Assessment for a bulk water infrastructure, including two 2.5 ML

clear water reservoirs, one in the Island Nature Reserve, and 10 km of new pipelines, ranging from 200 mm to 700 mm diameter, near Seaview, Port

Elizabeth

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: ± R 150,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: linear projects

Addo to Motherwell, Eastern Cape, South Africa Location:

36 months, 2007 to 2010 Project duration & year:

Client: Nelson Mandela Metropolitan Municipality

Name of Project: Nooitgedagt/Coega Low Level Scheme water supply pipeline

Project Description: **Environmental Impact Assessment**

Job Title and Duties: Project Director / Environmental Assessment Practitioner

± R 500,000 Value of Project:

Location: Gonubie, East London, Eastern Cape

Project duration & year: 9 months, 2008

Client: Eastern Cape Department of Roads and Public Works

East Coast Resorts Road Upgrade Name of Project:

Project Description: **Basic Assessment**

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 150,000

St Francis Bay, Eastern Cape, South Africa Location:

Project duration & year: 9 months 2003 Client: Kouga Municipality

Name of Project: St Francis Bay Bulk Water Supply (16 km) Pipeline

Project Description: **Environmental Scoping Study**

Job Title and Duties: Project Manager ± R 60,000 Value of Project:

Location: Matatiele to Mount Frere, Eastern Cape, South Africa

Project duration & year: 4 months, 2003

Client: Eastern Cape Department of Roads and Public Works

Environmental Assessment and Environmental Management Plan, Trunk Road Name of Project:

08015 (± 22 km), between Mount Frere and the R 56 between Matatiele and

Mount Fletcher.

Project Description: Environmental Scoping Study and Environmental Management Plan

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

± R 50,000 Value of Project:

Location: Port Elizabeth, Eastern Cape

Project duration & year:

Client: Airports Company South Africa

Name of Project: Port Elizabeth Airport Runway End Safety Area and Strip Compliance

Environmental Assessment for the Extension of the Runway End Safety Area Project Description:

to comply with the recommendations of the International Civil Aviation Authority

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: R 140,000

Key Experience: Environmental assessment: energy

Coega Industrial Development Zone Location:

12 months, 2016 Project duration & year:

Coega Development Corporation Client: Coega Gas to Power Project Name of Project:

Environmental Impact Assessment and Air Emission License application for **Project Description:**

4500 MW Combined Cycle Gas Turbine Project, including regasification unit.

Environmental Assessment Practitioner, Project Review Job Title and Duties:

R 800,000 Value of Project:

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: energy

Location: Groot Winterhoek Mountains, Kirkwood, Eastern Cape, South Africa

Project duration & year: 18 months, 2014 (on going)
Client: Vulisango Holdings (Pty) Ltd

Name of Project: Inyanda – Roodeplaat 150 MW Wind Energy Facility

Project Description: Environmental Assessment for the Invanda-Roodplaat 150 MW Wind Energy

Facility in the Groot Winterberg Mountains, Kirkwood, Eastern Cape

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: R 1,200,000

Location: Hopetown, Northern Cape, South Africa

Project duration & year: April 2015 - current (on going)
Client: Afri-Coast Energy (Pty) Ltd

Name of Project: Kloofsig 450 MW photovoltaic solar energy facility

Project Description: Environmental Assessment for the 450 MW Kloofsig photovoltaic (PV) solar

energy facility, Hopetown, Northern Cape

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: R 1,000,000

Location: Humansdorp, Eastern Cape

Project duration & year: 2 months, 2013

Client: Rushmere Noach Incorporated

Name of Project: Banna Ba Pifhu 50 MW Wind Energy Project

Project Description: External review of the Environmental Assessment for the 50 MW Wind Energy

Project (17 turbines, ranging from 1.2 MW to 3.2 MW)

Job Title and Duties: External Review

Value of Project: R 50,000

Location: Molteno, Eastern Cape, South Africa

Project duration & year: 24 months, 2015 (on going)
Client: Afri-Coast Energy (Pty) Ltd

Name of Project: Molteno 840 MW Wind Energy Facility

Project Description: Environmental Impact Assessment (currently in planning stages)

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: R 5,000,000 (current estimate)

Location: Port Elizabeth Eastern Cape, South Africa

Project duration & year: 6 months, 2015

Client: Afri-Coast Energy (Pty) Ltd

Name of Project: Hopewell Conservation Estate, 9 MW photovoltaic solar energy facility

Project Description: Basic Assessment

Job Title and Duties: Environmental Assessment Practitioner / Project Director

Value of Project: ±R 100,000

Location: Cradock, Eastern Cape, South Africa

Project duration & year: 12 months, 2012 Client: Af-Rom (Pty) Ltd

Name of Project: Dobbin 75 MW photovoltaic solar energy facility

Project Description: Environmental Impact assessment

Job Title and Duties: Environmental Assessment Practitioner / Project Manager

Value of Project: R 600,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: energy

Location: Victoria West, Northern Cape, South Africa

Project duration & year: 12 months, 2012 Client: Af-Rom (Pty) Ltd

Name of Project: Brakpoort 75 MW photovoltaic solar energy facility

Project Description: Environmental Impact assessment

Job Title and Duties: Environmental Assessment Practitioner / Project Manager

Value of Project: R 600,000

Location: Uitenhage, Eastern Cape, South Africa

Project duration & year: 5 months, 2011

Client: Afri-Coast Engineers (Pty) Ltd
Name of Project: Ranger Wind Energy Facility
Project Description: Environmental Screening

Job Title and Duties: Environmental Assessment Practitioner / Project Manager

Value of Project: ± R 100,000

Location: Uitenhage, Eastern Cape, South Africa

Project duration & year: 1 month, 2014

Client: Afri-Coast Engineers (Pty) Ltd
Name of Project: Ranger Wind Energy Facility

Project Description: Preparation of an Environmental Management Plan for 3 x 1 MW wind turbines

on the Ranger game farm, adjacent to the Groendal Nature Reserve

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: ± R 50,000

Location: Blue Horizon Bay, Eastern Cape, South Africa

Project duration & year: 1 month, 2014

Client: Afri-Coast Engineers (Pty) Ltd
Name of Project: Betshanger Wind Energy Facility

Project Description: Preparation of an Environmental Management Plan for 3 x 1 MW wind turbines

on the farm Betshanger, Blue Horizon Bay

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: ± R 50,000

Location: Upington, Northern Cape, South Africa

Project duration & year: 11 months, 2009 / 2010
Client: Fluopro Investments (Pty) Ltd

Name of Project: Upington 1.5 MW photovoltaic solar energy facility

Project Description: Environmental Assessment

Job Title and Duties: Environmental Assessment Practitioner / Project Manager

Value of Project: ± R 100,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 8 months, 2012

Client: Orion Engineered Carbons

Name of Project: Orion 19.5 MW Cogeneration Plant

Project Description: Environmental Assessment and Air Emission License amendment, for the

development of a 19.5 MW electrical power cogeneration plant

Job Title and Duties: Environmental Assessment Practitioner, Project Manager

Value of Project: ± R 180,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: energy

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 18 months, 2009 to 2010

Client: Nelson Mandela Metropolitan Municipality
Name of Project: NMBM / CEF 27 MW Wind Energy Facility EIA

Project Description: Environmental Assessment for a 27 MW Wind Energy Facility on three

potential sites within the Nelson Mandela Bay Municipal area

Job Title and Duties: Environmental Assessment Practitioner / Project Review

Value of Project: $\pm R 1,600,000$

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 24 months, 2012 to 2013

Client: Nelson Mandela Metropolitan Municipality
Name of Project: 27 MW van Stadens Wind Energy Facility

Project Description: Environmental consulting services for the construction of the 27 MW van

Stadens Wind Energy Facility

Job Title and Duties: Environmental Assessment Practitioner / Project Review

Value of Project: $\pm R 1,400,000$

Key Experience: Environmental assessment: mining & industrial

Location: Bas Congo Province, Democratic Republic of Congo

Project duration & year: May 2013 - August 2013
Client: Nyumba Ya Akiba sarl

Name of Project: Nyumba Ya Akiba 3,000 tpd Cement Project Project Description: Environmental & Social Impact Assessment

Job Title and Duties: Client Liaison, Environmental Assessment Practitioner

Value of Project: ± USD 350,000

Location: Coega Industrial Development Zone, Eastern Cape, South Africa

Project duration & year: 12 months, 2012/13 Client: Afrisam (Pty) Ltd

Name of Project: Coega 3,000 tpd Cementitous Material Grinding & Blending Plant

Project Description: Environmental Impact Assessment

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

Value of Project: ± R 700,000

Location: Great Dyke (Selous to Ngezi), Zimbabwe

Project duration & year: 12 months, 2012

Client: Zimplats

Name of Project: Phase 3 Expansion: Consolidated Environmental Impact Assessment

Project Description: Environmental & Social Impact Assessment

Job Title and Duties: Project Manager Value of Project: ± R 2,500,000

Location: Selous Metallurgical Complex, Zimbabwe

Project duration & year: 3 months, 2012

Client: Zimplats

Name of Project: Sulfur Dioxide Abatement Installation at Selous Metallurgical Complex (SMC)

Project Description: Environmental & Social Impact assessment
Job Title and Duties: Environmental Assessment Practitioner

Value of Project: ± R 1,500,000

Location: Coega Industrial Development Zone, Eastern Cape, South Africa

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: mining & industrial

Project duration & year: 18 months, 2006/2007 Client: Straits Chemicals

Name of Project: Straits Chemicals Chlor-Alkali Plant EIA
Project Description: Environmental Impact Assessment

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

Value of Project: ± R 1,000,000

Location: Hankey, Eastern Cape, South Africa

Project duration & year: 4 months, 2009
Client: Nkari Mining
Name of Project: Prospecting EMP

Project Description: Environmental Management Programme

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 100,000

Location: Paterson, Eastern Cape, South Africa

Project duration & year: 6 months, 2010

Client: Vulani Coronation Mining

Name of Project: Prospecting permit application for silica mine

Project Description: Environmental Management Plan for Prospecting Right

Job Title and Duties: Project Director Value of Project: ± R 100,000

Key Experience: Environmental assessment: housing / change in land use

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 9 months, 2014

Client: Nelson Mandela Bay Municipality
Name of Project: Walmer erf 1948 Housing Development

Project Description: Basic Assessment

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: ± R 150,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 24 months, 2014 (on going)
Client: Nelson Mandela Bay Municipality

Name of Project: Walmer erf 11305 Housing Development
Project Description: Environmental Impact Assessment

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: ± R 1,200,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 2009 – 2016

Client: Nelson Mandela Bay Municipality
Name of Project: Seaview Low Cost Housing

Project Description: Environmental Impact Assessment for the development of a Low Cost Housing

and associated wastewater treatment works

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: ± R 470,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: housing / change in land use

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 36 months, 2012 – 2015

Client: Nelson Mandela Bay Municipality

Name of Project: Jachtvlake Integrated Human Settlement EIA

Project Description: Environmental Impact Assessment

Job Title and Duties: Environmental Assessment Practitioner, Project Review

Value of Project: ± R 1 000,000

Location: Motherwell, Eastern Cape, South Africa

Project duration & year: 36 months (2009 to 2012)

Client: NuWay Housing

Name of Project: Coega Ridge Integrated Housing Development

Project Description: Environmental Impact Assessment

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: $\pm R 1 000,000$

Location: Ggebera, Walmer, Eastern Cape, South Africa

Project duration & year: 12 months, 2010

Client: Nelson Mandela Metropolitan Municipality
Name of Project: Walmer/Gqebera Low Cost Housing EIA

Project Description: Environmental Assessment

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 250,000

Location: Rosedale, Uitenhage, Eastern Cape, South Africa

Project duration & year: 9 months, 2009

Client: Nelson Mandela Metropolitan Municipality

Name of Project: Rosedale Low Cost Housing EIA
Project Description: Environmental Impact Assessment

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 200,000

Location: St Albans, Eastern Cape, South Africa

Project duration & year: 9 months, 2009

Client: Nelson Mandela Metropolitan Municipality

Name of Project: St Albans Low Cost Housing EIA
Project Description: Environmental Impact Assessment

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 300,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 12 months, 2006

Client: Nelson Mandela Metropolitan Municipality
Name of Project: SEA of the Greater Happy Valley area
Project Description: Strategic Environmental Assessment

Job Title and Duties: Project Manager Value of Project: ± R 150,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: housing / change in land use

Location: St Francis Bay, Eastern Cape, South Africa

Project duration & year: 9 months 2006

Client: Watersplash Investments (Pty) Ltd

Name of Project: Change in Land Use Application for Part 2 of Farm 707, Osbosch 707

Project Description: Environmental Scoping Study

Job Title and Duties: Project Manager Value of Project: ± R 150,000

Location: Coega Industrial Development Zone, Eastern Cape, South Africa

Project duration & year: 18 months, 2005/2006

Client: Coega Development Corporation

Name of Project: Change in Land use of the Remainder of the Coega IDZ (± 7200 Hectares)

Project Description: Environmental Impact Assessment

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

Value of Project: ± R 500,000

Location: Motherwell, Eastern Cape, South Africa

Project duration & year: 6 months, 2005

Client: Motherwell Urban Renewal Project

Name of Project: Motherwell Golf Course
Project Description: Environmental Scoping Study

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

Value of Project: ± R 100,000

Location: Uitenhage, Eastern Cape, South Africa

Project duration & year: 8 months, 2004/2005

Client: Nelson Mandela Metropolitan Municipality

Name of Project: Nelson Mandela Bay Logistics Park Scoping Study

Project Description: Environmental Scoping Study

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

Value of Project: ± R 100,000

Location: St Francis Bay, Eastern Cape, South Africa

Project duration & year: 9 months, 2003 Client: Golf Data

Name of Project: St Francis Golf Links EIA

Project Description: Environmental Impact Assessment

Job Title and Duties: Project Manager, Environmental Assessment Practitioner

Value of Project: ± R 300,000

Key Experience: Environmental auditing & due diligence

Location: Coega Industrial Development Zone, Eastern Cape, South Africa

Project duration & year: 6 months, 2012

Client: Coega Development Corporation

Name of Project: Environmental Due Diligence study for Zones 12 of the Coega Industrial

Development Zone

Project Description: Phase 1 & 2 Environmental Due Diligence Study
Job Title and Duties: Project Manager, Environmental Scientist

Value of Project: ± R 250,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental auditing & due diligence

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 2 months, 2014 Client: SAB Miller

Name of Project: Water Vulnerability Assessment for iBhayi Brewery, Perseverance, Port

Elizabeth

Project Description: Assess vulnerability to changes in quality and availability of water supply

Job Title and Duties: Environmental Scientist

Value of Project: ± R 150,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 2 months, 2009 Client: SAB Miller

Name of Project: Water Vulnerability Assessment for iBhayi Brewery, Perseverance, Port

Elizabeth

Project Description: Assess vulnerability to changes in quality and availability of water supply

Job Title and Duties: Environmental Scientist

Value of Project: ± R 100,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 2 months, 2009

Client: Coca Cola Fortune (Pty) Ltd

Name of Project: Water Vulnerability Assessment for Lakeside Plant, North End, Port Elizabeth Project Description: Assess vulnerability to changes in quality and availability of water supply

Job Title and Duties: Environmental Scientist

Value of Project: ± R 100,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 2 months, 2010

Client: Environ, on behalf of Evonik

Name of Project: Project Casablanca – Phase I Environmental Due Diligence of Algorax

Project Description: Phase 1 Environmental Due Diligence Study

Job Title and Duties: Environmental Scientist

Value of Project: $\pm R 150,000$

Location: Coega Industrial Development Zone, Eastern Cape, South Africa

Project duration & year: 6 months, 2008

Client: Coega Development Corporation

Name of Project: Environmental Due Diligence study for Zones 6 & 7 of the Coega Industrial

Development Zone

Project Description: Phase 1 & 2 Environmental Due Diligence Study

Job Title and Duties: Project Manager, Environmental Scientist

Value of Project: $\pm R 250,000$

Location: Coega Industrial Development Zone, Eastern Cape, South Africa

Project duration & year: 6 months, 2004

Client: Coega Development Corporation

Name of Project: Environmental Due Diligence study for Zones 1, 2 and 3 of the Coega Industrial

Development Zone

Project Description: Environmental Due Diligence Study

Job Title and Duties: Project Manager, Environmental Scientist

Value of Project: ± R 250,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental auditing & due diligence

Location: Luanda, Angola Project duration & year: 2 months, 2002

Client: BP

Name of Project: BP Waste Management Audits
Project Description: Third party waste contractor audits

Job Title and Duties: Lead Auditor Value of Project: ± R 50,000

Key Experience: Environmental monitoring & remediation

Location: Paranam, Suriname
Project duration & year: 6 months, 2011 / 2012

Client: Suriname Aluminum Company, LLC

Name of Project: Geochemical assessment of pit lake water and sediment

Project Description: Water quality monitoring
Job Title and Duties: Environmental Scientist

Value of Project: R 300,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 2004 to present

Client: Nelson Mandela Bay Municipality

Name of Project: Landfill Monitoring

Project Description: Monitoring of groundwater, surface water and landfill gas at the Koedoeskloof,

Arlington, KwaNobuhle, and iBhayi Landfill Sites

Job Title and Duties: Environmental Scientist, Project Reviewer

Value of Project: R 3,500,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 6 months, 2009

Client: Nelson Mandela Bay Municipality

Name of Project: North End Lake Water Quality Management Plan

Project Description: Water Quality Management Plan

Job Title and Duties: Project Manager, Environmental Scientist

Value of Project: R 150,000

Location: Struandale, Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 6 months, 2009

Client: Nelson Mandela Metropolitan Municipality
Name of Project: Decommissioning of the NMBM Gas Works

Project Description: Basic Assessment

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 150,000

Location: North End, Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 6 months, 2009

Client: Transnet Capital Projects

Name of Project: Decommissioning of Transnet's North End Ash Deposit
Project Description: Site Contamination Assessment & Basic Assessment
Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 150,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental monitoring & remediation

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 2 years, 2005/2007

Client: Confidential

Name of Project: Groundwater Contamination Assessment at manufacturing concern

Project Description: Delineation and monitoring of chlorinated hydrocarbon plume in groundwater

Job Title and Duties: Project Manager, Environmental Scientist

Value of Project: ± R 600,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 2 years, 2003/2004 Client: Client confidential

Name of Project: In-Situ Chemical Oxidation of Chlorinated Hydrocarbon Contamination

Project Description: In-situ chemical oxidation with potassium permanganate

Job Title and Duties: Project Manager, Environmental Scientist

Value of Project: ± R 500,000

Location: Port of Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 3 months, 2003

Client: Transnet National Port Authority

Name of Project: Water Quality Monitoring Programme for the Port of Port Elizabeth

Project Description: Development of a water quality monitoring programme

Job Title and Duties: Project Manager, Environmental Scientist

Value of Project: ± R 50,000

Key Experience: Environmental assessment: waste management

Location: Port of Port Elizabeth and Port of Ngqura, Eastern Cape, South Africa

Project duration & year: 12 months, 2009/2010

Client: Transnet National Ports Authority

Name of Project: Waste Management Plans for the Ports of Port Elizabeth and Nggura

Project Description: Waste Management Plan

Job Title and Duties: Project Director Value of Project: ± R 500,000

Location: Nelson Mandela Bay Municipality, Eastern Cape, South Africa

Project duration & year: 24 months, 2008 to 2009

Client: Nelson Mandela Metropolitan Municipality

Name of Project: NMBM Waste Transfer Sites: Environmental Screening

Project Description: Environmental Screening / Site selection

Job Title and Duties: Project Director Value of Project: ± R 300,000

Location: Cacadu District Municipality, Eastern Cape, South Africa

Project duration & year: 2 months, 2008

Client: Cacadu District Municipality

Name of Project: Cacadu District Municipality: Integrated Waste Management Plan

Project Description: Status Quo Assessment of Waste Management Facilities

Job Title and Duties: Project Manager Value of Project: ± R 60,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental assessment: waste management

Location: Graaff Reinet, Eastern Cape, South Africa

Project duration & year: 24 months, 2007 to 2008
Client: Camdeboo Local Municipality

Name of Project: Establishment of new landfill site for Graaff Reinet

Project Description: Environmental Impact Assessment

Job Title and Duties: Project Director / Environmental Assessment Practitioner

Value of Project: ± R 250,000

Location: Walmer, Eastern Cape, South Africa

Project duration & year: 6 months, 2004

Client: Nelson Mandela Metropolitan Municipality

Name of Project: Walmer Qebera Landfill Site: Landfill Gas Risk Assessment

Project Description: Qualitative Environmental Risk Assessment

Job Title and Duties: Environmental Assessor

Value of Project: ± R 100,000

Location: iBhayi, Eastern Cape, South Africa

Project duration & year: 9 months, 2002

Client: Nelson Mandela Metropolitan Municipality

Name of Project: iBhayi Landfill Site: Application for Buffer Zone Relaxation

Project Description: Quantitative Environmental Risk Assessment

Job Title and Duties: Project Manager Value of Project: ± R 150,000

Key Experience: Environmental management systems

Location: Nelson Mandela Metropolitan Municipality, Eastern Cape, South Africa

Project duration & year: 3 years, 2002 to 2005

Client: Nelson Mandela Metropolitan Municipality

Name of Project: Environmental Management System implementation
Project Description: Environmental Management System (ISO 14001 based)

Job Title and Duties: Project Manager, Environmental Consultant

Value of Project: $\pm R 1,200,000$

Location: Cato Ridge, KwaZulu Natal, South Africa

Project duration & year: 5 months, 2003 Client: Assmand

Silent. Assinang

Name of Project: ISO 14001 Implementation

Project Description: Environmental Management System (ISO 14001 compliant)

Job Title and Duties: Project Review Value of Project: ± R 200,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 9 months, 2002
Client: Delphi Catalysts
Name of Project: 14001 implementation

Project Description: Environmental Management System (ISO 14001 certified)

Job Title and Duties: Environmental Consultant

Value of Project: ± R 150,000

Rob Gardiner

Principal Environmental Scientist

Key Experience: Environmental management systems

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 4 months, 2000

Client: PPC

Name of Project: PPC Grassridge Quarry: ISO 14001 implementation
Project Description: Environmental Management System (ISO 14001 certified)

Job Title and Duties: Technical advisor Value of Project: ± R 50,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 4 months, 1999

Client: CSIR, Division of Textile Technology

Name of Project: ISO 14001 implementation

Project Description: Environmental Management System (ISO 14001 certified)

Job Title and Duties: Technical advisor Value of Project: ± R 50,000

Location: Port Elizabeth, Eastern Cape, South Africa

Project duration & year: 9 months, 1998/1999
Client: Duracell Eveready

Name of Project: Duracell Eveready: ISO 14001 implementation

Project Description: Environmental Management System (ISO 14001 certified)

Job Title and Duties: Environmental Consultant

Value of Project: ± R 150,000

Key Experience: External Review

Location: Graaff-Reinet, Eastern Cape

Project duration & year: 4 months, 2015

Client: Richardt van Rensburg Inc

Name of Project: Irharfu Minerals, erf 1814, Graaff-Reinet

Project Description: Review of the Draft EIA & EMP for the mining of hard rock aggregate on erf

1814, Graaff-Reinet, adjacent to the Camdeboo National Park

Job Title and Duties: External reviewer Value of Project: ± R 200,000

Location: Port Elizabeth, Eastern Cape

Project duration & year: 1 Month, 2015

Client: Nelson Mandela Bay Municipality
Name of Project: Kabega Road low level bridge review

Project Description: Review of the environmental assessment and EMP for repair works to the

Kabega Road low level bridge

Job Title and Duties: External reviewer
Value of Project: ± R 20,000

Location: Port Elizabeth, Eastern Cape

Project duration & year: 2 months, 2014 Client: Chlor Alkali Holdings

Name of Project: Cerebos Closure Liability Assessment

Project Description: External review of mine closure costs for Cerebos' Coega River, Sundays

River, Swartkops River, and Berg River saltpans.

Job Title and Duties: External reviewer

Value of Project: R 200,000