

CURRICULUM VITAE

Company	Arcus GIBB
Name	Reuben HEYDENRYCH
Nationality	South African
Date of Birth	27.10.1969
Profession	Environmental Assessment Practitioner
Position	Senior Environmental Scientist/Associate
Specialisation	Project management, integrated environmental management including feasibility assessments, environmental impact assessments, environmental management programmes, public facilitation, strategic environmental assessments, environmental management frameworks, environmental auditing, environmental law, environmental policy and guideline development, environmental management systems (ISO 14001)
Start date with Arcus GIBB	2008 – Permanent full-time staff member

Key experience

An environmental assessment practitioner with 16 years of experience, Reuben Heydenrych specialises in various environmental disciplines.

His key experience includes:

- **Project management** of various medium and large-scale infrastructural and environmental projects
- **Environmental Impact Assessment (EIA)** processes as required by the Environment Conservation Act, 1989 (Act No. 73 of 1989), the National Environmental Management Act, 1998 (Act No. 107 of 1998) and in terms of international requirements as team leader and team member on projects. Projects include exemption, scoping and full EIAs: rezoning, filling stations, water and sewage pipelines, roads (national, provincial and municipal), residential developments, game lodges, telecommunications structures, infrastructure in sensitive environments and industrial processes
- **Environmental advisory services and strategic environmental management** including Strategic Environmental Assessments (SEAs), environmental scans, environmental feasibility studies and Environmental Management Frameworks (EMFs)
- **Environmental management programmes (EMP)** for the construction and operational phases of infrastructure developments
- **Environmental auditing** including due-diligence, ISO 14001, legal compliance and waste audits

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Qualifications

Bachelor in Landscape. (Landscape Architecture): University of Pretoria, 1991

Master in Philosophy (Environmental Management): University of Cape Town, 1993

Short courses:

- Introduction to Public Participation: Environmental Evaluation Unit, 1993
 - Environmental Management System: Potchefstroom University, 1996
 - Environmental Law: Potchefstroom University, 1996
 - Environmental Auditing: Potchefstroom University, 1996
 - Waste Management: Pretoria Technikon, 1998
 - Certification Body Assessor Workshop: SA National Accreditation System, 12 – 14, Oct 2005
 - Workshop on the implementation of ISO 17021 (Conformity Assessment: Requirements for bodies performing audit and certification management system) – SA National Accreditation System, 24 Jan 2007
 - Intermediate Course in Photography: National College of Photography, 2005
 - Expressive Course in Photography: National College of Photography, 2007
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Career summary

June 2008 to
date

Arcus GIBB – Senior Environmental Scientist/Associate

Projects include:

- Environmental Auditor for Eskom Generation power stations for 2nd party ISO 14001 Environmental Management Systems audits (2008-2009): 3-day comprehensive Environmental Management System audits of eight coal-fired power stations in Mpumalanga and one pumped storage scheme in KwaZulu-Natal
- Senior Scientist for the Basic Assessment processes for nine proposed Cogeneration Power Plants for the Promethium-Exxaro Joint Venture. This project includes nine cogeneration power plants to be installed at mines and industrial facilities across South Africa, for the generation of electricity from waste gas. The projects will enable the project initiator to earn Carbon Credits through the Clean Development Mechanism in terms of the Kyoto Protocol under the United Nations Framework Convention on Climate Change
- Senior scientist for the Strategic Environmental Assessment (SEA) for the Greater Port Harcourt, Nigeria
- Senior scientist as part of the Strategic Environmental Technical Support Team to the Gauteng Provincial Government for the R20 million Gautrain Project. Technical support will be provided during the construction and operational phases of this flagship transport service
- Senior scientist as part of the Strategic Advisory Team to the Airports Company South Africa for the proposed Midfield Development at OR Tambo International Airport
- Senior reviewer for the Strategic Process Review of the EIA to be undertaken for the Medupi Landfill Site Project in the Limpopo Province for Envirolution Consulting
- Senior reviewer for the Strategic Process Review of the EIA to be undertaken for the Medupi Integration Project in the Limpopo Province including transmission lines and substations for Savannah Environmental
- Senior scientist for the EIA and EMP for the proposed construction, operation and decommissioning of the Pebble Bed Modular Reactor and associated infrastructure in the Western Cape. The project proponent is the Generation Division of Eskom Holdings Limited. The EIA includes a detailed environmental impact assessment. The project includes detailed specialist studies, including social and biophysical, EIA process, public consultation, legal and nuclear technology studies
- Senior scientist for the EIA and EMP for the proposed construction, operation and decommissioning of a conventional nuclear power station and associated infrastructure in the Western Cape (Nuclear 1). The project proponent is the Generation Division of Eskom Holdings Limited. The EIA includes the screening and selection of a suitable site for the nuclear plant, as well as a scoping process and detailed environmental impact assessment. The project includes 20 detailed specialist studies, including social and biophysical, EIA process, public consultation, legal and nuclear technology studies

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- Senior scientist for the EIA and EMP for the proposed expansion of the Morupule Power Station, Botswana. The EIA includes a detailed environmental impact assessment. The project includes detailed specialist studies, including social, air quality, noise impact studies and public consultation
- Senior scientist for the EIA for the proposed reclamation and treatment of Gaborone (Botswana) wastewater for potable use. This study involved a number of specialist studies and extensive public consultation
- Senior scientist for the compilation of an Environmental Management Plan (EMP) for the construction and operational phases of the Perseus-Gamma, and Hydra-Gamma 765kV transmission power lines, extension to the Hydra Substation, turn-ins of the Beta-Hydra 765 kV transmission power line to Perseus and upgrading of the Perseus Substation

March 2004 to May 2008 **Strategic Environmental Focus** - Senior Project Manager, Unit Manager and Project Leader

Responsibilities include

- Project management at various scales
- Management and co-ordination of unit staff
- Interfacing with government officials
- Unit time, budget and staff management
- Compilation of proposals and tenders
- Participation in strategic decision-making and company management

Aug 2003 to Feb 2004 **Strategic Environmental Focus** - Senior Environmental Manager

Responsibilities included:

- Environmental impact assessment and scoping processes
- Environmental feasibility assessments
- Environmental management plans and auditing
- Environmental policy and guideline development
- Environmental auditing and implementation of environmental management systems
- GIS-based environmental management frameworks and other decision-support systems

Dec 1999 to Aug 2003 **Environomics cc** - Senior Consultant

Responsibilities included:

- Environmental impact assessment
- Environmental management plans and environmental control officer
- Environmental policy and guideline development
- Environmental auditing and implementation of environmental management systems including ISO 14001 systems
- GIS-based environmental management frameworks and other decision-support systems
- Legislation development

May 1998 to 30 Nov 1999 **Nissan South Africa** - Group Environmental Manager

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Responsibilities included:

- Implementation and maintenance of an ISO 14001 compliant environmental management system (EMS) throughout 20 functional departments
- Coordinating three ISO 14001 certifications, comprising the main assembly plant, truck plant and engine plant
- Duties at Nissan included monthly environmental performance auditing
- Environmental management system auditing
- Development of EMS procedures
- Environmental training
- Review of the entire EMS through advice to top management

Jan 1996 to
31 Apr 1998

Department of Environmental Affairs & Tourism - Landscape Architect

Responsibilities included:

- Development of government policy for self-regulatory tools of environmental management
- Promotion of self-regulatory tools of environmental management amongst industry and other government departments
- Auditing and development of the environmental management system for the SANAE IV base in Antarctica
- Development of integrated environmental management guidelines
- Environmental impact assessment of possible tourism to Marion Island

1 July 1993
31 Dec 1995

Cave Klapwijk and Associates - Landscape Architect

Responsibilities included:

- Landscape design of commercial and residential landscapes
- Compilation of environmental impact assessments
- Rehabilitation planning

Projects include:

Management of EIAs:

- Project manager Scoping and EIA process for the installation of a Crude Acrylic Acid (CAA) tank at the Sasol site in Sasolburg : Sasol. 2008
- Project manager. EIA for the proposed Hendrina-Prairie-Marathon 400 kV 185 km transmission line between Hendrina and Nelspruit in Mpumalanga : Sebenzile Vilakazi (Eskom Transmission). May 2007 – June 2008
- Project manager. EIA process in terms of NEMA EIA regulations for the proposed 2 300 ha K'Shani Golf and Nature Reserve near Nelspruit : K'Shani Golf & Nature Reserve. 2006 - 2007
- Project manager. Environmental Impact Assessment for a proposed 115 km, 1.9 m diameter water pipeline between the Vaal Dam and Secunda (Vaal River Eastern Subsystem Augmentation project) for the TCTA, March to July 2005
- Project manager. Scoping and Environmental Impact Assessment for the proposed Eskom Komati Water Scheme pipeline and power line project, Mpumalanga : Eskom. 2008

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- Project manager. Environmental Impact Assessment for the Menlyn Roads Project upgrading of municipal roads and the N1 highway in the eastern part of Pretoria : City of Tshwane Metropolitan Municipality and SA National Roads Agency. 2005-2006
- Environmental Impact Assessment for the Eskom Kudu Integration project, a proposed 400 km, 400 kV electricity transmission line from Oranjemund (Namibia) to Vredendal (Western Cape) : Eskom, 2006 – 2007
- Project manager. Environmental Impact Assessment for the proposed hotel, residential golf estate and game farm development at Viking Bay adjacent to the Vaal Dam : Tribid Investments
- Project manager. Environmental Impact Assessment for the proposed residential golf estate at Huddle Park, Johannesburg : Tiyani Consortium. 2005 – 2008
- Project manager. Environmental Scoping for the proposed Orlando Dam Intersection, a mixed use redevelopment of the Orlando Power Station Site in Soweto : Joburg Property Company
- Project manager. Scoping and Environmental Impact Assessment for the proposed Millsite Development, Krugersdorp : Rand Leases
- Project manager. Scoping and Environmental Impact Assessment for the proposed Comet Extension eight commercial and light industrial development, Boksburg : Urban Dynamics
- Project manager. Environmental Impact Report for Brick Making Plant at Ispat Iscor site : Clay Fusion Technologies
- Project manager. Environmental scoping for proposed upgrading of the galvanising plant at Ispat Iscor in Vanderbijlpark : Iscor
- Project manager. Environmental scoping for proposed flood control berms in the Apies River Floodplain between Wonderboompoort and the Bon Accord Dam. BKS
- Project manager. Environmental scoping for the widening of 14th Avenue in Johannesburg : Arup
- Project manager. Environmental scoping for the widening of Addo Road (Road MR 450) in Port Elizabeth : PD Naidoo & Associates
- Environmental manager. Environmental scoping and environmental management plan for the proposed desilting of the Alberton Dam : SRK
- Environmental manager. Environmental scoping for the development of a proposed shopping centre on Holdings 34 & 35, Kempton Park Agricultural Holding : AJP Group
- Environmental manager. Environmental scoping for the installation of proposed electricity supply cables between Pretoria North Substation and the proposed Annlin Ext 19
- Environmental manager. Environmental scoping for the access road to the Innovation Hub in Pretoria : Arup

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- Environmental manager. Environmental scoping for a water pipeline from Driefontein Dam to Duvha Power Station, Mpumalanga : Eskom
- Environmental manager. Environmental scoping for a proposed filling station in Dunkeld West, Johannesburg : Seedprop Consolidated Investments
- Environmental manager. Environmental scoping for the proposed upgrading of the Sinter Plant, Iscor Vanderbijlpark : Iscor Flat Steel
- Environmental scoping for the proposed Clover Hill Extensions 1-4 adjacent to the Bronkhorstspruit Dam : Clover Hill Developments (Pty) Ltd
- Environmental assistant. Environmental Impact Assessment of the proposed Midrand Estates development : Subconsultants to Eco Assessments
- Environmental manager. Environmental feasibility/risk assessment for the proposed Statue of Freedom in Port Elizabeth : KPMG Consortium – GAPP Architects
- Environmental manager. Environmental considerations for the proposed lodge development at the Automotive Supplier Park, Rosslyn : PD Naidoo & Associates
- Environmental manager. Site assessments – exemption applications of ±300 cellphone mast sites for the Cell C network : Subconsultants to Africon Engineering
- Fieldwork, public participation, EMP development. Environmental scoping of proposed roads and bulk water supply system at Madikwe Game Reserve, North West Province : Subconsultants to Eco Assessments. 2002
- Environmental manager. Environmental scoping for the proposed Alberton Waterfront Development : Odyssey Developments
- Environmental manager. Proposed development of a filling station on the corner of Brits Road and Doreen Road, Akasia for Gerneke & Potgieter : Attorneys – Mr Eugene Gerneke
- Environmental manager. Environmental scoping of a water pipeline at Makgabetlwane, North West Province : Munayi Malaka Engineers
- Environmental assistant, public participation, EMP development. Environmental scoping for the proposed research base on Marion Island : Department of Environmental Affairs and Tourism (DEAT)
- Environmental manager. Environmental impact assessment of proposed tourism to Marion Island : Department of Environmental Affairs and Tourism (DEAT)
- Environmental assistant. Environmental Impact Assessment of the proposed Letsibogo Dam on the Motloutse River in northeastern Botswana : Cave Klapwijk & Associates
- Environmental control officer. Environmental Management Plan for the construction of a 40 m tall concrete microwave telecommunications tower at the CSIR, Pretoria : Telkom

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Independent review of Environmental Impact Assessments

- Reviewer. Pico Diamonds Environmental Management Plan for Alluvial Diamond Prospecting in the Richtersveld National Park, Northern Cape : SA National Parks through Cameron Cross Inc
- Reviewer. Scoping report for the proposed Kliprivier Nature Estate on Portions 4 and 8 of the farm Kliprivier 464 KQ & Portion 10 of the farm Rhenosterfontein 465 KQ, Limpopo Province : Dabchick Consultancy Limited
- Reviewer. Scoping report for the proposed Limpopo Wildlife Estate on Portions of the Farms Modena 13, MS, Parma 40 MS and Pontdrift 12 MS, Limpopo Province : SA National Parks, through Cameron Cross Associates
- Reviewer. Scoping and EIA reports for the proposed Dome Paradise Township on Portions 19 and 37 of the Farm Rietpoort 518 IQ, North West Province : Adv Jaco Venter. October 2007
- Reviewer. Backlog of EIA, scoping and exemption applications in terms of the Environment Conservation Act, 1989 on behalf of the Limpopo Dept of Economic Development Environment and Tourism (MDALA) : LEDET. 2007 – 2008.
- Reviewer. Backlog of EIA, scoping and exemption applications in terms of the Environment Conservation Act, 1989 on behalf of the Mpumalanga Dept. of Agriculture and Land Affairs (MDALA) : DEAT. 2007-2008.
- Reviewer. Scoping and EIA application for a proposed shopping centre and residential development on the Farm Klipriviersdal 371, Meyerton : Rand Merchant Bank Properties. 2007
- Reviewer. EIA process for the proposed Mmamabula – Delta 4 x 400 kV transmission lines : Haygon Safaris. May 2007
- Reviewer. Several EIA reports and the environmental management plan for the proposed Variant Alignment of the Gautrain through the Centurion area : Centurion Association for a Reasonable Environment/weCARE. 2006

Environmental Decision Support Systems

- Data gathering, fieldwork and report writing for the following environmental decision-support systems
- Environmental manager. Gauteng Communication Network Strategy (GAUCONS), a decision-support and administration system for the authorisation of telecommunications masts : Gauteng Department of Agriculture Conservation Environment and Land Affairs (GDACEL)
- Environmental manager, report writing, fieldwork - Buffer zone projects : Phase 1 and 2 Buffer Zone projects for GDACEL, which provide guidelines for the authorisation of developments in proximity to activities that cause pollution (including landfill sites, sewage treatment plants, industries and mine dumps)
- Environmental assistant. Data gathering and database population of the National Forest Inventory : Department of Water Affairs and Forestry

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Environmental Management Frameworks and Strategic Environmental Assessments

- Data acquisition, ground truthing and compilation of the following GIS-based Environmental Management Frameworks
- Report on Environmental Management Framework for the Alexandra Renewal Project : Gauteng Department of Agriculture Conservation Environment and Land Affairs (GDACEL)
- Report on data gathering and fieldwork - Environmental Management Framework for Centurion Municipality : Subconsultants to Africon Engineering
- Project assistant. Environmental Management Framework for the Loch Vaal region, Gauteng : Gauteng Department of Agriculture Conservation Environment and Land Affairs (GDACEL)
- Strategic Environmental Assessment for the proposed Senqu Sources protected area : Maloti Drakensberg Transfrontier Project. 2006 – 2008.

Environmental Management Systems, Policy and Auditing

- Development and implementation of ISO 14001 certified environmental management systems (EMSs) and in the auditing of these systems
- Technical expert on ISO 14001 auditing for the South African National Accreditation System (SANAS) – witnessing of the conduct of ISO 14001 Certification Body auditors during audits and assessment of certification body management systems and documentation. Assessments completed include:
 - SABS (September 2005, June 2006, May 2007 and March 2008 – 72 hours total);
 - Price Waterhouse Coopers (Sept 2005, May 2006, Nov 2006 and July 2007– 40 hours total)
 - EQCSA (Nov 2005, Dec 2006 and Sep 2007 – 24 hours total)
 - SGS (Dec 2005, Oct 2006 and Sep 2007– 32 hours total)
 - AFAQ EAQA (Feb 2006 – 32 hours total) – in this instance SANAS was contracted to perform the witnessing on behalf of the United Kingdom Accreditation System (UKAS)
 - I-Cert (May 2006; Sep 2007 and Nov 2007– 24 hours total)
 - Standards Association of Zimbabwe (Jul 2006 and Jul 2007 – 28 hours total)
 - KPMG (Aug 2006 – 8 hours)
 - SANCERT (Jan and Aug 2007 – 24 hours total)
- Auditing of legal compliance for the Emalahleni Local Municipality's Integrated Municipal Environmental Programme (IMEP) : Emalahleni Local Municipality. 2007
- Project manager. Development of 2nd edition Environmental Implementation Plan (in terms of the National Environmental Management Act, 1998) : Department of Trade and Industry. 2006
- Environmental manager. Environmental Management System : Mbombela (Nelspruit) Local Municipality. 2003
- Environmental manager. Development of an environmental policy : Mbombela Local Municipality. 2003

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- Group environmental manager. Implementation and certification of ISO 14001 compliant Environmental Management Systems : Nissan South Africa. 1998 – 1999
- Project assistant. Development of an Information Management System "Directorate: Forest Regulation of the Department of Water Affairs and Forestry, 1998
- Environmental manager. Development of an ISO 14001 Environmental Management System for Debtech (De Beers research and development company). 1998
- Environmental auditor. Environmental Management System of the SANAE IV base in Antarctica for the Department of Environmental Affairs and Tourism (DEAT). 1995
- Environmental auditor. ISO 14001 certification and surveillance audits of four companies : South African Bureau of Standards (SABS). 1997 - 1998

Legislation and Guideline Development

- Project manager. Abattoir Waste Management Guidelines Document and Standard Environmental Management Plan : Gauteng Department of Agriculture Conservation and Environment
- Development of a presentation for a series of Information Seminars on EIA Regulations in terms of the National Environmental Management Act : National Department of Environmental Affairs and Tourism
- Editor and project manager. Integrated Environmental Management Information Series Documents "Risk Management" and "Socio-economic Assessment" : Department of Environmental Affairs and Tourism
- Co-author: (together with James Cross). Integrated Environmental Management Information Series Document "Environmental Assessment Requirements of International Agreements" : Department of Environmental Affairs and Tourism
- Assistant. Development of a Discussion Document: "National Strategy for the *Development of Integrated Environmental Management*" : Department of Environmental Affairs and Tourism, Directorate: Environmental Impact Management
- Assistant. Revision of Chapter 5 of the National Environmental Management Act (Act No. 107 of 1998) dealing with environmental impact assessment and integrated environmental management procedures : Department of Environmental Affairs and Tourism
- Assistant and report writing - costing of the promulgation of a series of six National Environmental Management Bills (including the Air Quality Bill, Biodiversity Bill, Protected Areas Bill & NEMA 1st & 2nd Amendment Bills) : Department of Environmental Affairs and Tourism
- Assistant. Development of a South African Code of Practice: "*Environmental considerations for the planning and management of telecommunications structures*" : South African Bureau of Standards

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Miscellaneous

- Project manager. Supplemental field studies and beneficiary analysis related to a proposed rehabilitation and conservation strategy for wetlands in the highlands of Lesotho : Lesotho Dept of Water Affairs. 2007
 - Environmental manager. Motivation report for the declaration of the Prince Edward Islands as a World Heritage Site : Department of Environmental Affairs and Tourism
 - Rehabilitation of cutting at the house of Mr Naas Grimbeek at Hartebeespoort Dam
 - Fieldwork for opencast coal mining rehabilitation: vegetation monitoring and soil compaction monitoring on Amcoal opencast coal mines. November 1991 to January 1992
-

Publications

Lessons learnt in the implementation of the new EIA regulations. Paper presented at Assessing Environmental Impacts Conference. 5 March 2007. The Business Zone

Editor for three Integrated Environmental Management (IEM) Information Series Documents

- **Cross, J. 2005.** *Environmental Assessment for International Agreements.* Department of Environmental Affairs and Tourism: Pretoria
- **Bennett, L. 2006.** *Risk Management and Assessment.* Department of Environmental Affairs and Tourism: Pretoria
- **Aucamp, I. 2006.** *Socio-economic Impact Assessment.* Department of Environmental Affairs and Tourism: Pretoria

The role of Geographical Information Systems (GIS) In EIAs under the new regulations (Co-authored with Marilene Heunis) Paper at IQPC Conference "Successfully conducting Environmental Impact Assessments". 30-31 January 2006

A National Strategy for Integrated Environmental Management in South Africa - Discussion Document (Co-authored with Paul Claassen). 1998. Pretoria: Department of Environmental Affairs and Tourism. 57p

Assistant author to Paul Claassen: *SABS 0262-0: Draft Code of Practice - Environmental considerations for the planning and management of telecommunications structures*

EMS in the Automotive Industry. Paper at SAATCA Auditors Conference. 24 August 1999

Using an internationally recognised EMS to open doors to global market opportunities and promote a chain of environmentally conscious business partnership. Paper at Environmental Management Conference. 3 February 1999. AIC Conferences

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Current environmental policy framework and strategy for Environmental Management Systems in South Africa. Joint paper with Ingrid Coetzee. South African Quality Institute Convention on Quality and the Environment. November 1997

Do the right thing - an introduction to environmental auditing. 1997. *Conserva*, 12 (1): 20-21

ISO 14001 Environmental Management System Standard. 1996. *Conserva*. 11(4): 24-25

Language capability

	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

Signature

Date
