



Charles Norman

Environmental Specialist

Summary

Charles is a principal environmental practitioner with three decades' experience in environmental services. His technical proficiency and strategic thinking, along with his international environmental experience, place him in a strong position to advise environmental impact assessment (EIA) teams on the integration of technical pragmatism and due environmental processes. His extensive review experience has placed him in a key role mentoring environmental assessment practitioners within Zutari and coordinating the advisory and delivery functions of projects.

He has worked in a number of countries on a variety of environmental assessments and environmental planning assignments for a range of local and internationally funded public and private sector projects. His experience is predominantly related to mining, energy, large infrastructure and manufacturing projects in Australia and Southern and East Africa.

Charles holds a Master's degree in Environmental Law from the University of Cape Town in South Africa. He also obtained a Bachelor of Technology in Forestry from the Nelson Mandela University in Port Elizabeth in 1999. He is a registered member of the Environmental Assessment Practitioners Association of South Africa (EAPASA) and of the International Association for Impact Assessment South Africa (IAIASa).

Relevant experience

Mossel Bay Upgrading of Informal Settlements Programme (UISP), South Africa, Western Cape, Mossel Bay Local Municipality, 01/2017 - 08/2028, Phase Leader

The project is an integrated multi-year, phased, and incremental upgrading and formalisation program of the living conditions of all informal settlements within the Mossel Bay municipal area, utilising various appropriate national, provincial and municipal funding mechanisms. Zutari is appointed as the implementing agent for all the required professional services and has engaged a multidisciplinary team of experienced sub-consultants for those disciplines not catered for in-house. Responsible as phase leader for the environmental impact assessment component, including coordinating and managing specialist input and internal practitioners, as well as liaising with the competent authority to facilitate environmental authorisations.

Welmoed Estate Phase 1, South Africa, Western Cape, Western Cape Provincial Government Department of Human Settlements, 09/2019 - 09/2024, Project Leader

The Western Cape Department of Human Settlements proposed an 8,000 unit mixed-use housing development in Eerste Rivier in Cape Town. This is the largest greenfield housing development in Cape Town and forms part of the Southern Corridor Integrated Human Settlement Programme. Phase 1, the Southern Precinct, is in the process of being developed and will involve four separate contractors. Zutari was contracted to provide environmental services on the project. Responsible for project management, client and stakeholder liaison.

Kokerboom 3 and 4 environmental authorisation amendments, South Africa, Northern Cape, Africa Clean Energy Developments (Pty) Ltd, 02/2020 - 04/2022, Project Leader

Africa Clean Energy Developments (Pty) Ltd (ACED), through various SPVs, propose to develop wind energy facilities near Loeriesfontein in the Northern Cape. The project comprises separate EIAs for the two wind farms and separate Basic Assessment processes for the associated transmission lines and substations. It specifically relates to the application to amend the environmental authorisation for Kokerboom 3 wind farm to change the turbine specifications and layout, as well as dividing the wind farm into two facilities, namely Kokerboom 3 and Kokerboom 4. Services included

Qualifications

BTech Forestry
MPhil: Environmental Law
NDip Forestry

Professional registrations

Member, Environmental Assessment Practitioners Association of South Africa (EAPASA)
Member, International Association for Impact Assessment South Africa (IAIASa)

Specialisation

Environmental planning and permitting

Years in industry

34

undertaking and managing the EIA process, specialist studies, preparing the EMPr and additional tasks related to ensuring compliance with the requirements of REIPPPP Bid Round 5. Responsible for project management, client and authority liaison, coordination of technical information and specialist's inputs, management of public processes, Scoping and EIA, as well as compilation of an environmental management programme (EMPr).

Aga Khan Hospital Kampala, Uganda, Kampala, Aga Khan University Hospital (AKUH), 09/2016 - 12/2021, Reviewer

Aga Khan University Hospital (AKUH) intends to develop a 600-bed hospital on a 60 acre site at the junction of Jinja and New Port Bell Rd in Nakawa, Kampala. The initial phase of the project known as the "Launch Phase" will be developed on a 7 – 10 acre portion of the site and will consist of a 50-bed hospital with an estimated 14 300 m² gross building area. In terms of the scope of works, the launch phase will consist of acute bed units; intensive care units; high-dependency units; surgical suites; imaging suites; cardiac catheterization ("cath") laboratory; as well as labour and delivery suites. Zutari will be providing full engineering services including geotechnical; civil; structural; wet services; fire safety and protection; mechanical; electrical; electronic (ICT, fire detection, audio visual and security) and acoustics; environmentally sustainable design (ESD) monitoring and management, provision of cost estimates and BOQs. Responsible for review of project reporting and liaison with sub-consultants.

Botswana-South Africa (BOSA) Transmission Project, South Africa and Botswana, Southern African Power Pool (SAPP), 04/2016 - 12/2021, Environmental and Social Analyst

The Botswana-South Africa (BOSA) Transmission Interconnector Project entails the construction of approximately 560 km of 400 kV transmission line between Botswana and South Africa to alleviate congestion on the Matimba-Phokojé-Insukamini line, increase the power transfers within the Southern African Power Pool (SAPP) network, increase stability in the power pool and improve system control, adequacy and reliability. Zutari was appointed to provide transaction advisory services, including a scoping study and a feasibility study up to the project implementation phase, which included procurement of an engineering, procurement and construction (EPC) firm and project financial close. Zutari's services focussed on the collection of data and information, techno-economic and financial analysis, market review and analysis, evaluation of analytical results, advice on institutional and legal framework, reporting and liaising with client and sponsor management committees. Responsible for compilation of final EIR for South Africa and review of final EIR for Botswana.

Nuweveld Wind Farm Projects, South Africa, Western Cape, Red Cap Nuweland North (Pty) Ltd, 03/2019 - 12/2021, Project Leader

Red Cap Energy (Pty) Ltd is proposing three wind energy facilities (wind farms) approximately 65 km north of Beaufort West and 30 km south of Loxton along the R381 in the Beaufort West Local and Central Karoo District Municipalities, in the Western Cape. The project includes the development of an approximately ~120 km 132 kV or 400 kV (132/400 kV) transmission line (gridline) which will connect the proposed wind farms to the Eskom Droërvier substation located south west of Beaufort West. Zutari has been appointed as the independent environmental assessment practitioner (EAP) to facilitate the requisite scoping and environmental impact reporting (S&EIR) processes for all four applications in accordance with the NEMA and associated legislation. Responsible as Phase Manager for review of deliverables.

Prefeasibility study for the closure of Rietspruit Mine, South Africa, Mpumalanga, South32 Coal Holdings, 06/2020 - 07/2021, Team Member

Zutari was awarded a contract to complete the pre-feasibility Study (PFS) for the Rietspruit Mine Closure Project; Rietspruit Colliery completed mining activities in 2002 after a 27-year lifespan. The decommissioned mine is undergoing land rehabilitation as part of a greater asset transformation initiative by the asset owners. Services included contributing to a gap analysis and the development of an Environmental Risk Register. Responsible for report compilation.

Tallawarra-B Power Station, Australia, EnergyAustralia, 11/2019 - 01/2021, Team Member

Aurecon was appointed by Energy Australia which owns the Tallawarra Power Station to undertake a modification to an approval granted on 21 November 2010. The modification involved a change to the description in a Condition of Approval to allow for a range of open cycle gas turbine (OCGT) units to be utilised at the time of development. Responsible for compilation of a post-approval modification report to change the project specifications.

Wallerawang Closure Project, Australia, EnergyAustralia, 09/2016 - 04/2020, Phase Leader

Energy Australia's Wallerawang Closure Project went underway to decommission, deconstruct and rehabilitate the site which formerly housed the Wallerawang Power Station, an ash disposal area and associated infrastructure. Aurecon was engaged in an Owner's Engineer role for management and advisory services; and for providing necessary engineering support required for the closure project. The key objective was to prepare the site for future industrial use. Specifically, Aurecon was responsible for managing all DDR activities; preparing all documentation required for regulatory compliance, approvals, project control, reporting and project execution; planning and scheduling project and contractor activities; and developing a continuous review and upkeep of a controlled project risk register. Responsible as Coordinator of RSA team, which included collation and review of report components for specialist's inputs.

Coleambally Solar Farm, Australia, Neoen Australia (Pty) Ltd, 11/2019 - 12/2019, Team Member

Aurecon was appointed by Neoen, which owns the Coleambally Solar Farm, to address annual reporting requirements mandated under its Syndicated Facility Agreement (SFA). The assignment required the review of the Environmental Impact Statement (EIS), the Conditions of Consent issued for Modification 1 (Mod 1), relevant management plans and licences, and the Equator Principles to identify compliance against each. This included a review of site specific environmental and approvals documentation and an interview with staff. Responsible for review of compliance with the conditions of approval, management plans and Equator Principles.

Prefeasibility environmental and social screening for Luapula River Hydroelectric Scheme, Zambia and Congo, South African Power Pool (SAPP), 06/2019 - 11/2019, Environmental Leader

The client identified the Luapula River Hydroelectric Scheme as one of the initiatives to reduce electricity supply constraints in the Southern African region. Société Nationale d'Electricité of the DRC (SNEL) and Zambia Electricity Supply Corporation (ZESCO) will be the beneficiaries of the project. Zutari, with AF-Consult, were appointed to undertake the Prefeasibility Environmental and Social Screening for a number of components of a cascading series of hydro power plants on the Luapula River between Zambia and the DRC. Responsible for coordination of site inputs and review of reporting.

Impofu Wind Farms, South Africa, Eastern Cape, Red Cap Impofu, 08/2017 - 09/2019, Project Leader and EAP

The project entailed environmental impact assessments (EIAs) for three wind farms for the proposed Impofu Wind Energy Facility (WEF). A basic assessment report (BAR) was undertaken for the associated grid connection infrastructure to connect the wind farms to one of two existing substations in the Nelson Mandela Bay Municipality. A basic assessment (BA) associated with a public participation process was undertaken. Responsible for oversight of report compilation and submission.

Newcastle Power Station Project environmental impact statement, Australia, AGL Energy Limited, 06/2019 - 08/2019, Team Member

Aurecon was appointed by AGL Energy Limited which owns and operates the Newcastle Power Station to compile an environmental impact statement to meet the requirements of a SEAR issued to AGL in accordance with Section 5.16 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The proposal was declared a controlled action and was thus assessed under Section the accredited process of Division 5.2 of the EP&A Act. Responsible as Coordinator of RSA team for collation and review of report components for specialist's inputs.

Closure and Rehabilitation of Kerosene Vale Ash Repository (KVAR) Stage 2, Australia, EnergyAustralia, 06/2018 - 07/2018, Phase Leader

Aurecon was appointed by EnergyAustralia which owns and operates Kerosene Vale Ash Repository (KVAR) Stage 2 to undertake an Environmental Assessment to support an application under the former Section 75W of the Environmental Planning and Assessment Act 1979 (EP&A Act) to modify PA 07_0005 to allow for the proposed closure and rehabilitation of KVAR Stage 2. This would occur as part of the rehabilitation of the wider Wallerawang Ash Repository. Responsible for the development of noise and vibration, visual, traffic and air quality desktop studies.

Environmental impact assessment for Penhill greenfields development project, South Africa, Western Cape, Provincial Government of the Western Cape (PGWC): Department of Human Settlements, 12/2016 - 06/2018, Project Leader

The Department of Human Settlements is establishing a housing development to cater for approximately 8 000 units as part of the Southern Corridor initiative to upgrade informal settlements within the City of Cape Town. Zutari was appointed to undertake an environmental impact assessment (EIA) for this greenfields housing development. Responsible as project leader.

Design of Mizingani seawall and promenade, Phase IIA, Zanzibar, Tanzania Ministry of Finance, 12/2013 - 05/2018, Environmental Control Officer (ECO)

The Revolutionary Government of Zanzibar (RGoZ), through its Zanzibar Urban Services Project (ZUSP), appointed Zutari to lead a consortium of six consultancy companies for the design of the 340 m-long vertical seawall, with a 5 m-wide sea reclamation, along Mizingani Road. Based on design work completed under the Aga Khan Trust for Culture's (AKTC's) technical support, Zutari's scope of work included detailed design of the seawall and promenade; the preparation of construction drawings, specifications, contract packages and tender documents; building condition assessment and review of the environmental and social management plan (ESMP). Responsible for auditing the site to ensure adequate implementation of environmental controls.

Upgrading of DR1609 and portion of DR01625, South Africa, Western Cape, Provincial Government of the Western Cape (PGWC): Department of Transport and Public Works, 12/2005 - 12/2017, Environmental Specialist

Zutari was appointed to undertake design and authorisation services for the upgrading of the DR1609 and a portion of DR01625 in Rondevlei, Western Cape, which is adjacent to the Garden Route National Park and crosses within a Ramsar protected wetland. The scope of works included the preparation of an environmental impact assessment (EIA). Responsible as project leader for the EIA component, including leading the compilation of the EIA and

coordinating specialist inputs.

Mossel Bay NUSP participatory based planning support, South Africa, Western Cape, Department of Human Settlement (DHS), 08/2015 - 11/2017, Environmental Specialist

The National Department of Human Settlements appointed Zutari to provide participatory based planning support for informal settlement upgrading in Mossel Bay Local Municipality via the National Upgrading Support Programme (NUSP). Zutari's scope of works included the production of an assignment implementation plan, upgrading plans and sustainable livelihoods programmes for 18 settlements, community capacity building programme, and a skills transfer report. Responsible as project leader for the screening of environmental constraints and preparation of applicability checklists for the competent environmental authority.

Upgrading of Plettenberg Bay Airport, South Africa, Western Cape, Bitou Local Municipality, 09/2016 - 06/2017, Environmental Specialist

Bitou Municipality intends to upgrade the Plettenberg Bay Airport in the Western Cape Province, including adding additional infrastructure and hangars to comply with Civil Aviation Authority (CAA) regulations. Responsible for compilation of an environmental constraints analysis.

Riemvasmaak Hydropower Station and associated infrastructure, South Africa, Northern Cape, Mulilo Renewable Energy (MRE), 12/2011 - 06/2017, Technical Advisor

The project entailed an environmental impact assessment (EIA) for the proposed construction of a hydropower station on the Orange River, 2-4 km north of Augrabies. The proposed project is on Riemvasmaak Farm north of Augrabies Falls National Park on the braided river north of the main Augrabies Falls channel. An EIA authorisation is required in terms of Section 24 of the National Environmental Management Act (No. 107 of 1998) (NEMA) (as amended) EIA regulations. The client required an environmental assessment practitioner to undertake the requisite NEMA process. The EIA team effectively integrated the diversity of environmental considerations related to the proposed project within the timeframe agreed upon. Responsible for providing advice to the EAP team on legal procedure and technical project aspects

Perdekraal East Wind Farm environmental and social due diligence (ESDD), South Africa, Western Cape, African Infrastructure Investment Managers (AIIM), 11/2016 - 04/2017, Project Leader

In order to consider providing funding for the development of the Perdekraal East Wind Farm, the client required the undertaking of an environmental and social due diligence (ESDD) study, including an environmental and social action plan (ESAP), to ensure that environmental authorisations in place were compliant with the requirements of the IFC. Responsible for the compilation of the ESDD and ESAP and coordination of specialist inputs.

Environmental and social impact assessment (ESIA) for the Makambako Wind Farm, Tanzania, Njombe, Windlab Limited, 11/2015 - 03/2017, Project Leader

Windlab Tanzania SPV 1 Limited (Windlab) want to construct a wind farm and associated infrastructure, including a transmission line (project referred to as the Miombo Hewani Wind Farm) with a generation capacity of between 100 MW and 300 MW north of Makambako in the Njombe Region, Tanzania. Zutari was appointed to undertake the requisite environmental process on behalf of Windlab as required in terms of the Environmental Management Act (Act 20 of 2004) (EMA). Responsible for leading the team of specialists and sub-consultants to develop an IFC compliant ESIA.

Working for Wetlands Plan 2014 - 2017, South Africa, South African National Biodiversity Institute (SANBI), 06/2013 - 09/2016, Environmental Advisor

Zutari was appointed in 2010 for a three year cycle for the design, planning, environmental, project and risk management of the South African Government's Working for Wetlands Programme, which is a nationally run initiative by the South African National Biodiversity Institute (SANBI). The programme's objective is to rehabilitate damaged wetlands and to protect wetlands throughout South Africa, with an emphasis on complying with the with an emphasis on complying with the principles of the expanded public works programme (EPWP) through employing only local small, medium and micro enterprises (SMMEs). Responsible for a review and giving advice on legal process requirements.

Curepipe Point wind farm assessment, Mauritius, Southern Energy Holdings, 05/2016 - 06/2016, Environmental Specialist

Zutari was appointed to undertake a fatal flaw review of a 29 MW wind energy development near the town of Curepipe in Mauritius. Responsible for the review of an environmental impact assessment (EIA) study as well as the identification and evaluation of environmental risks.

Kinangop Wind Farm Phase 1A status review and risk assessment, Kenya, Nakuru, Kinangop Wind Park, 11/2015 - 03/2016, Environmental Specialist

Following termination of the engineering, procurement and construction (EPC) contract, Zutari was appointed to assess the project status and risks associated with remobilising the Kinangop Wind Farm project. Responsible for environmental review.

Environmental impact assessment (EIA) for the construction of the AfriSam cement factory, South Africa, Western Cape, AfriSam South Africa (Pty) Ltd, 02/2011 - 09/2015, Project Leader

AfriSam was looking to enter the Western Cape market, and consequently decided to fund the construction of a cement factory and associated infrastructure. Zutari was appointed to undertake an environmental impact assessment (EIA) process for the cement plant, mine and associated infrastructure located on Farm 1139 in the Saldanha industrial area. Services involved undertaking and managing the EIA process, traffic impact study (TIS), surface water investigation and social impact assessment (SIA). Responsible for project management, client and authority liaison, coordination of technical information and specialists inputs, management of public processes, EIA and compilation of an environmental management plan (EMP) report.

Project information memoranda (PIM) for Mtwara Port and the Mtwara/Mikindani municipal master plan, Tanzania, Mtwara, Development Bank of Southern Africa (DBSA), 08/2014 - 09/2015, Environmental Process Advisor

The project entailed the development of project information memoranda (PIM) for Mtwara Port, which entailed a review of the Mtwara Port feasibility study of 2012 and other related material that would assist in the preparation of a bankable PIM. The project also involved the development of the Mtwara/Mikindani detailed municipal land use master plan to collect baseline spatial data that can assist in understanding the growth projections for the city and proposing suitable physical and social infrastructure and land uses to accommodate the growth. Responsible for liaising with the authority, coordination of sub-consultants and review.

Pre-feasibility study for Rukwa coal-to-power project, Tanzania, Mbeya, Rukwa Development Company, 11/2014 - 09/2015, Team Member

Zutari was engaged by Kibo Mining to carry out a pre-feasibility study for a coal-fired power station to be located adjacent to an opencast coal mine in the Rukwa region of Tanzania. The study included preliminary environmental assessments of the power station and the mine, power evacuation assessment, power station design and modelling of various configurations, reporting and technical input to the project financial model. Responsible for contributing to the drafting of an environmental and social prefeasibility study.

Environmental screening of a potential wind energy site, Tanzania, Windlab Limited, 02/2015 - 04/2015, Project Leader/Technical Coordinator

Zutari was appointed to determine the feasibility of establishing a wind energy facility (WEF) in Tanzania. As part of evaluation Zutari was appointed to undertake a comparative environmental constraints analysis, including the biophysical, social and heritage aspects of the identified sites. Responsible for the identification and assessment of environmental constraints.

Western Cape road materials supply strategy, South Africa, Western Cape, Provincial Government of the Western Cape (PGWC): Department of Transport and Public Works (DTPW), 06/2008 - 03/2015, Principal Environmental Practitioner

Increasing pressures from tightened environmental legislation have resulted in lengthy waiting periods (about 18 months) for identifying required material sources. The wait is also caused by investigation phases, getting approval from the Mineral Resources and Petroleum Development Act (DMR), the Department of Environmental Affairs and Development Planning (DEADP), the National Environmental Management Act (NEMA) and the Land Use Planning Ordinance (LUPO). Zutari was responsible for prospecting suitable road making materials, sampling, testing, and identifying technically suitable sources to be used for both identified projects and as strategic pits, as well as for getting all the required approvals. Responsible for planning of authorisation processes and review of submissions. Also responsible for liaison with authorities and partner consultants.

Upgrading of Distillery Road in Wellington, South Africa, Western Cape, Drakenstein Local Municipality, 10/2013 - 02/2015, Project Manager

The project entailed a basic environmental impact assessment (EIA) for the proposed upgrading of Distillery Road in Wellington, including a heritage assessment. Responsible for project management, client and authority liaison, coordination of specialist input and review of final reports.

George mobility strategy for the improvement of public transport, South Africa, Western Cape, Provincial Government of the Western Cape (PGWC): Department of Transport and Public Works (DTPW), 09/2003 - 02/2015, Consulting Team Member

This broad based mobility strategy project, which is centred on the improvement of public transport in the George municipal area, is one of many national interventions to upgrade public transport in South Africa. The objective is the transformation of the existing bus and minibus taxi industry into a single entity contracted to the local authority to provide scheduled, subsidised public transport services. Work has included detailed operational design and costing; contract development as well as planning for the upgrading of road and other infrastructure, including a bus stop, a temporary bus depot, and an inter-urban bus station. The project has also comprised a considerable amount of engagement with the local bus and minibus industry representatives as well as broad based public consultation. Responsible for the advisory role on environmental constraints for implementation of public transport initiative.

Feasibility study for the Knysna-Bitou water supply scheme, South Africa, Western Cape, Eden District

Municipality, 01/2013 - 12/2014, Project Member

The project involved the identification of the water resource and bulk water requirements of the local municipalities of Knysna and Bitou for the next 20 years and exploring the technical and economic viability of integrating the bulk water supply systems serving the towns of Knysna and Plettenberg Bay. Responsible for the identification and evaluation of environmental constraints for the screening of options exercise.

Environmental constraints analysis of potential wind energy sites near Aberdeen, South Africa, Eastern Cape, Juwi Renewable Energies (Pty) Ltd, 06/2013 - 08/2014, Project Leader/Technical Coordinator

The client wished to determine the feasibility of establishing a wind energy facility at Aberdeen in the Eastern Cape. As part of evaluation Zutari was appointed to undertake a comparative environmental constraints analysis, including the biophysical, social and heritage aspects of the identified sites. Responsible for contributing to identification and assessment of environmental constraints. Also responsible for constraints identification and evaluation as well as a review.

Water augmentation study for the Bitou Local Municipality, South Africa, Western Cape, Bitou Local Municipality, 10/2009 - 03/2014, Environmental Scientist

The Wadriif 1E Dam scheme was for the augmentation of the bulk water supply to the Plettenberg Bay area. Zutari's project scope focused on the Wadriif 1E off-channel dam and included a basic assessment process for an emergency pipeline and the remainder of the pipeline in terms of the relevant environmental legislation. An application for a licence to store was made in terms of the National Water Act, 1997 (NWA) and a forestry permit application for a drilling site investigation for the Wadriif 1E Dam site and for dam construction. Responsible for the management of specialist environmental impact assessment (EIA) consultant and review of all reports.

Independent review of environmental impact assessment (EIA) applications, South Africa, Western Cape, Department of Environmental Affairs and Development Planning (DEA&DP), 03/2011 - 12/2013, Task Leader

The purpose of the project was to review contentious environmental impact assessment (EIA) applications in terms of the National Environmental Management Act 107 of 1998 (NEMA) to support authority decision making. Responsible for project management, client liaison, advisory role to team members and review and coordination of final products.

Pilot catchment management plan: Kyoga water management zone, Uganda, Kampala, The World Bank, 12/2012 - 12/2013, Co-author of report

Zutari was appointed to prepare a pilot catchment management plan (CMP) for the Awoja Catchment. Major social and environmental issues within the catchment area were identified early in the process as critical informants to catchment management planning so these can be integrated into the planning process at an early stage. The rapid strategic environmental assessment (RSEA) focussed on identifying the issues and conditions in the catchment related to water and natural resources that are likely to be a major influence and that might represent important risks, as linked to potential water resource development options. Responsible for contributing to the coordination of and reporting on implementation options.

Update to rapid strategic environmental assessment (RSEA): development of a pilot catchment management plan (CMP), Uganda, Kampala, Ministry of Water and Environment (Uganda), 12/2012 - 11/2013, Project Member

This water management and development project (WMDP) for Uganda comprised the development of a pilot catchment management plan (CMP) in the Kyoga water management zone (WMZ). The CMP outlines the changes required and the benefits of these changes towards ensuring sustainable development and the equitable distribution of the resulting benefits. The integrated water resources management-based (IWRM-based) CMP provides an integrated strategy for the sustainable water resource management in the pilot Kyoga WMZ catchment. Responsible for the coordination of and reporting on implementation options.

Operational environmental management plan (EMP) for Shoprite Checkers, South Africa, Western Cape, Shoprite Checkers, 04/2010 - 07/2013, Task Leader

The project included the compilation of an operational environmental management plan (EMP) to meet the local municipality's requirements for the new shopping centre at Sandown Road in Cape Town. Responsible for project management, client and authority liaison and the compilation of EMP report.

Exploratory drilling environmental management plan (EMP), Mozambique, Tete, Coal India Africana Limitada (CIAL), 02/2012 - 04/2013, Project Leader

The project entailed the compilation of an environmental management plan (EMP) for exploratory drilling operations for coal prospecting in Moatize. Responsible for client liaison, project management, coordination of team members and review of final products.

Environmental management plans (EMPs) for coal bed methane prospecting activities, Mozambique, Tete, Rio Tinto Coal Mozambique (RTCM), 07/2012 - 02/2013, Project Member

Zutari was appointed by Rio Tinto to compile the environmental management plan (EMP) for the coal bed methane

(CBM) prospecting activities in each of the lease areas, ensuring the necessary licensing of the activities. Responsible for project management, coordination of information and team inputs.

Social and environmental impact assessment (SEIA) for the Rössing Uranium Mine expansion project, Namibia, Erongo Region, Rössing Uranium Mine, 09/2009 - 08/2012, Project Member

Rössing Uranium wanted to obtain environmental authorisations for the expansion of the mine to increase production and extend the life of the mine. Zutari undertook a social and environmental impact assessment (SEIA) to determine the environmental impacts brought about by the proposed activities, proposed measures to minimise detrimental impacts or enhance positive impacts and presented the findings to the Namibian authorities. The SEIA included two primary product deliverables, namely the environmental scoping report (ESR) and the subsequent SEIA report. Responsible for providing support to the team appointed to facilitate the required environmental authorisations for the expansion of the Rössing Uranium Mine, including the review of legislative requirements and specialist reports.

Bankable feasibility study (BFS) for a Zuma Energy project, Nigeria, Niger, Zuma Energy Nigeria Limited, 10/2011 - 01/2012, Project Leader

Zuma Energy Nigeria Ltd was planning to construct and operate a 1 200 MW coal-fired power station along the Niger River. Zutari prepared a bankable feasibility study (BFS) using a gap analysis of all existing documents and work already done by Zuma Energy. The study included a review of the environmental and social issues by conducting an environmental and social impact assessment (ESIA) to determine adequacy and compliance to the Nigerian Statutory requirements and the World Bank's standard Equator Principles (EPs) and to a level suitable for financial closure. Responsible for the review of final report against World Bank standards and EPs.

Independent review of environmental impact assessment (EIA) for report, South Africa, KwaZulu-Natal, Knight Piésold, 11/2011 - 12/2011, Consulting Team Member

The purpose of the project was to review the environmental impact assessment (EIA) process undertaken by Knight Piésold for a bulk water supply pipeline in KwaZulu-Natal. Responsible for the review of impact assessment methodology.

Pre-feasibility study on the Great Lakes Railway, Uganda, Zambia, Tanzania and Burundi, Common Market for Eastern and Southern Africa (COMESA), 03/2010 - 12/2011, Consulting Team Member

The project entailed a pre-feasibility study to improve port, inland waterway and rail inter-connectivity in the Great Lakes Region (Lake Kivu, Lake Edward, Lake Tanganyika, Lake Victoria and Lake Albert) based on several transportation constraints experienced. The primary objective was reduced transportation costs for the provision of rail links to connect existing rail networks with each other, and the development of the inland water transport services across lakes within the region. The work included a pre-feasibility study that consisted of resource mapping, traffic forecasts, alignment surveys, engineering cost estimates, an environmental impact assessment (EIA), institutional review, financing mechanisms review and economic evaluation and feasibility study. Responsible for authority consultation, site inspection and review of proposed rail alignments and reporting on environmental constraints.

Application for an atmospheric emissions licence (AEL) in Albertinia, South Africa, Western Cape, South Cape Poles, 03/2007 - 11/2011, Task Leader

The project entailed facilitating an application for an atmospheric emissions licence (AEL) in terms of the National Environment Management (NEM): Air Quality Act (No 39 of 2004) for the operation of a creosote treatment facility in Albertinia. Responsible for project management, client and authority liaison, coordination of specialist inputs and final report compilation.

Environmental impact assessment (EIA) for the Moatize Coal Mine expansion, Mozambique, Tete, Vale Moçambique Limitada, 03/2010 - 09/2011, Assistant Project Leader

The aim of the project was to expand operations at Moatize Coal Mine due to the favourable global market for coal. Zutari was appointed to undertake separate environmental impact assessments (EIAs) for each of the proposed components of the project. The particular work plan addressed EIA Package 1, which was for the proposed expansion of the mine at Moatize and related infrastructure. Responsible for client and specialist liaison, coordination of technical information and review of final reporting.

Environmental impact assessment (EIA) for the Nacala Rail Corridor, Malawi and Mozambique, Vale Moçambique Limitada, 03/2010 - 09/2011, Project Member

The project entailed the completion of four environmental impact assessments (EIAs) for the upgrading of existing and the construction of new railway sections along the Nacala Corridor from the Moatize Coal Mine in Mozambique, through Malawi, to the Port of Nacala, and a new coal handling terminal. This particular work plan addressed Packages 2 to 5, which were for the components of the Nacala Logistics Corridor. Responsible for client and specialist liaison, coordination of technical information and review of final reporting.

Decommissioning of the Sonae Novobord board manufacturing plant in George, South Africa, Western Cape, Sonae Novobord, 07/2009 - 07/2011, Project Leader/Manager

Zutari was appointed to prepare an environmental management plan (EMP) for the decommissioning of Sonae Novobord's board manufacturing and veneering plant in George. Responsible for project management, client and authority liaison and review of the final EMP report.

Upgrading of Merweville wastewater treatment works (WWTW), South Africa, Western Cape, Beaufort West Local Municipality, 02/2007 - 06/2011, Project Manager

The project entailed the facilitation of the required environmental authorisation and waste licence for the upgrading of the wastewater treatment works (WWTW) in Merweville. Responsible for project management, review of final reports.

Emergency desalination plant for Mossel Bay, South Africa, Western Cape, Mossel Bay Local Municipality, 05/2010 - 01/2011, Environmental Assessment Practitioner

The Mossel Bay Local Municipality appointed Aurecon to undertake an environmental impact assessment (EIA), which is required by Act 107 of 1998 of the National Environmental Management Act (NEMA), to assess the potential impacts related to the construction and operation of a 15ML/day emergency desalination plant in the Voorbaai area. Zutari was responsible for consultation with the authorities throughout the EIA to confirm that all potential issues were identified; for the compilation of a report that provided a detailed description of the potential impacts associated with the development, and the findings; an evaluation of the potential impacts; and recommendations regarding mitigation and the way forward. Responsible for project management, review of EIA and environmental management plan (EMP) reports.

Environmental impact assessment (EIA) for infrastructure upgrades at the Etosha National Park, Namibia, Oshikoto Region, Millennium Challenge Account (MCA), 04/2010 - 11/2010, Consulting Team Member

The project entailed the completion of two environmental impact assessments (EIAs), including environmental management plans (EMPs), for the construction of staff housing and management centres at the Ombika and Galton gates as well as the Okaukuejo and Otjovasandu villages in the Etosha National Park. The aim was to improve the quality of infrastructure to attract senior management to the park to ensure that the park retains its status as a premier tourist destination. Responsible for the review of specialist reports and final reporting.

Pre-feasibility (FEL 2) social and environmental screening of rail corridor alternatives through Malawi, Malawi, Vale Moçambique Limitada, 09/2009 - 09/2010, Principal Environmental Practitioner

The project involved a pre-feasibility (FEL 2) level investigation into alternative routes for the proposed railway alignment section between Moatize in Mozambique and the Nkaya Junction in Malawi. Zutari prepared the social and environmental screening report, which provided a background to the methodology for environmental (social and biophysical) screening. A high-level impact study and comparative assessment of alternative alignments were undertaken to determine the most environmentally responsible and sustainable options. Responsible for gathering field data and contribution to the screening report.

Upgrading of the Outeniqua effluent pump station and pipeline, South Africa, Western Cape, George Local Municipality, 09/2009 - 08/2010, Project Member

The growth of the residential sectors in George necessitated the upgrading of the existing regional wastewater treatment works (WWTW). Zutari was appointed for the design, tender compilation and contract supervision for the upgrading of the plant from a capacity of 9.3 ML/day to 15 ML/day. The upgrade included the addition of more aerators to the bioreactor, a dissolved air flotation (DAF) unit and a sludge digester. Responsible for managing an application for amendment to an existing authorisation and facilitating the public process.

Independent review of environmental impact assessment (EIA) applications for the Department of Economic Development, Environment and Tourism, South Africa, Eastern Cape, Department of Economic Development, Environmental Affairs and Tourism, 02/2007 - 07/2010, Project Manager

The project entailed the review of environmental impact assessment (EIA) applications to assist with the processing of backlog applications in terms of the Environment Conservation Act (Act 73 of 1989) (Cacadu Region). Responsible for project management, liaison with authorities and applicants, advising authorities on fatal flaws and policy conflicts, drafting environmental authorisations and training authority staff.

Relocation of the Sedgefield water treatment works (WTW) and associated infrastructure, South Africa, Western Cape, Knysna Local Municipality, 12/2004 - 06/2010, Project Manager

The purpose of the project was to undertake an environmental impact assessment (EIA) to facilitate the relocation of the Sedgefield water treatment works (WTW) out of a floodplain. Responsible for managing the basic assessment reporting procedure for the relocation. Also responsible for project management, client liaison and the identification and assessment of impacts.

Independent review of environmental impact assessment (EIA) applications for the Department of Environmental Affairs and Development Planning (DEA&DP), South Africa, Western Cape, Department of Environmental Affairs and Development Planning (DEA&DP), 04/2009 - 05/2010, Project Leader

The project entailed the review of environmental impact assessment (EIA) applications and appeals to assist the competent authority with the processing of backlog applications in terms of the Environment Conservation Act (Act

73 of 1989) and the National Environmental Management Act 107 of 1998 (NEMA). Responsible for project management, client liaison, staff advisory and review of all final submissions.

Decommissioning of creosote treatment facility at Tergniet, South Africa, Western Cape, Outeniqua Pale (Pty) Ltd, 06/2007 - 04/2010, Project Manager

Zutari was appointed to facilitate the relocation of Outeniqua Pale's timber treatment works, including a waste licence for the decommissioning of a site contaminated with hazardous waste and the drafting of an environmental and health impact assessment (EHIA) on instruction from the Environmental Management Inspectorate (EMI). Responsible for project management, client and authority liaison, advising legal representatives, managing public process and the compilation of the final EHIA and environmental management plan (EMP) reports.

Environmental management plan (EMP) for Garden Route Casino, South Africa, Western Cape, Garden Route Casino (Pty) Ltd, 12/2008 - 04/2010, Project Leader

Zutari was appointed to update the environmental management plan (EMP) to accommodate various proposed upgrades to the casino and associated facilities. Responsible for project management, client and authority liaison and review of the final report.

Upgrading of creosote treatment facility at Albertinia, South Africa, Western Cape, Outeniqua Pale (Pty) Ltd, 05/2008 - 02/2010, Project Leader

The purpose of the project was to facilitate the upgrading of an unlicensed timber treatment works, including the formulation of environmental management plans (EMPs), at Albertinia, Western Cape. Responsible for project management, client and authority liaison, coordination of specialist input, impact assessment and, advising the client's legal representatives.

Upgrading of Hartenbos wastewater treatment works (WWTW), South Africa, Western Cape, Mossel Bay Local Municipality, 04/2009 - 07/2009, Project Leader

Zutari was appointed to facilitate the requisite environmental process for the upgrading of the wastewater treatment works (WWTW) in Hartenbos. Responsible for project management, client and authority liaison and review of the final reports.

Environmental processes for the Beaufort West wastewater reclamation plant, South Africa, Western Cape, Water & Wastewater Engineering, 10/2008 - 07/2009, Project Manager

The purpose of the project was to facilitate the requisite environmental processes for the implementation of a wastewater reclamation plant for Beaufort West Municipality, inclusive of a waste licence and environmental authorisation. Responsible for project management, client and authority liaison, management of specialists and public processes and the compilation of final reports.

Additional units at the open cycle gas turbine (OCGT) plant in Mossel Bay, South Africa, Western Cape, Eskom, 01/2005 - 01/2006, Consulting Team Member

The project entailed the management of a comprehensive and multi-disciplinary environmental impact assessment (EIA) process for three additional gas turbine units at the peaking generation power plant in Mossel Bay. Responsible for project management assistance, liaison with specialists and report review.

Review of environmental impact assessment (EIA) applications and appeals, South Africa, Provincial Department of Environmental Affairs and Development Planning (DEA&DP), 01/2004 - 01/2006, Principal Environmental Officer

The project entailed reviewing environmental impact assessment (EIA) applications and appeals and drafting environmental authorisations. Responsible for reviewing EIA applications, advisory role to competent authority and the drafting of environmental authorisations.

Proprietor of Southern Cape environmental services, South Africa, Western Cape, , 01/1992 - 01/2004, Consultant

The project entailed the compilation of a number of environmental management plans (EMPs) and environmental assessments and evaluations for a variety of developments in the Southern Cape. This included the mapping of soils of various Southern Cape forestry plantations and indigenous forests for the Council for Scientific and Industrial Research (CSIR), South African Forestry Company Ltd (SAFCOL), the Department of Water and Sanitation (DWS) and private companies, for productivity and planning purposes as well as the sampling of river water for analysis by Stellenbosch University: Department of Soil Science. Responsible for financial management, project management, report compilation and client liaison.

Alien vegetation mapping, South Africa, Western Cape, EnviroGIS, 01/2001 - 01/2003, Consulting Team Member

Appointed to map and quantify alien vegetation status in the Barrydale, Botvlei, Kamanassi and Karatara catchments.

Mapping of soils for forest planning, South Africa, Western Cape, Department of Water and Sanitation

(DWS), 01/1988 - 01/1992, Consulting Team Member

As part of a function while employed at the Council for Scientific and Industrial Research (CSIR), mapped extensive soil bodies within the Southern Cape catchments for productivity evaluation and species choice. Responsible for mapping soil bodies.

Alien vegetation eradication and rehabilitation, Fancourt Estate, George, South Africa, Western Cape, Fancourt Golf and Country Estate, 01/2008 - [Click or tap to enter a date.](#), Project Manager

The project entailed the formulation of an alien vegetation eradication and rehabilitation plan for the Fancourt landholding on the Malgas River. Responsible for project management, client liaison and report compilation.

Review of the biodiversity components of municipal spatial development frameworks (SDFs) in the C.A.P.E. domain, South Africa, Western Cape, South African National Biodiversity Institute (SANBI), 01/2008 - [Click or tap to enter a date.](#), Consulting Team Member

The aim of the project was to provide an overview of the requirements for biodiversity in spatial development frameworks (SDFs), and an assessment of the current status of biodiversity in these SDFs. Responsible for the review of SDFs and final reports.

Western Cape forestry land use study, South Africa, Western Cape, Department of Water and Sanitation (DWS), 01/2001 - [Click or tap to enter a date.](#), Project Manager

Appointed and commissioned by Department of International Development (DFID) as project leader and co-author to conduct a study on the Western Cape land forestry land use.

Assessment of plantation plans, George, South Africa, Western Cape, Woodifield Farm, 01/2004 - [Click or tap to enter a date.](#), Consultant

The project entailed the evaluation of Woodifield Farm's existing management plans and making recommendations for optimising forestry operations.

Plantation environmental auditing, South Africa, Western Cape, NCT Forestry Co-operative Limited (NCT), 01/2003 - [Click or tap to enter a date.](#), Consultant

The project entailed the auditing of Van Reenen plantations for compliance with Forestry Stewardship Council (FSC) requirements. Responsible for environmental auditing.

**Environmental Assessment
Practitioners Association
of South Africa**



Registration No. 2019/1510

Herewith certifies that

Charles William Norman

is registered as an

Environmental Assessment Practitioner

***Registered in accordance with the prescribed criteria of Regulation 15. (1)
of the Section 24H Registration Authority Regulations
(Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the
National Environmental Management Act (NEMA), Act No. 107 of 1998, as
amended).***

Effective: 01 March 2023

Expires: 29 February 2024

Chairperson

Registrar

