

CONTACT DETAILS

Name of Company	CES – Environmental and Social Advisory Services
Designation	Executive - East London and Port Elizabeth branches of CES
Profession	Environmental consultant and financial accountant
Years with firm	20 (twenty) + years
E-mail	a.carter@cesnet.co.za
Office number	+27 (0) 43 726-7809
Mobile	+27 (0) 83 379-9861
Nationality	South African
Professional Body	<ul style="list-style-type: none">➤ SACNASP: South African Council for Natural Scientific Profession➤ EAPASA: Environmental Assessment Practitioners Association of South Africa➤ IWMSA: Institute Waste Management Southern Africa➤ TSBCPA: Texas State Board of Certified Public Accountants (USA)➤ AICPA: American Institute of Certified Public Accountants (USA)➤ Exemplar Global: Environmental Management Systems Auditor
Key areas of expertise	<ul style="list-style-type: none">➤ Environmental Impact Assessment➤ Marine Ecology➤ Environmental and coastal management➤ Waste management➤ Climate change and emissions inventories➤ Financial accounting and project feasibility studies➤ Environmental management systems, auditing and due-diligence

PROFILE

Alan has extensive training and experience in both financial accounting and environmental science disciplines with CES over the past 20 years and prior to that, with international accounting firms in South Africa and the USA. He holds a PhD in marine ecology and BCom Honours degree in financial accounting and auditing. He is also a member of the American Institute of Certified Public Accountants (licensed in Texas) and is a certified ISO14001 EMS auditor with Exemplar Global (formerly the American National Standards Institute). Alan has been responsible for leading and managing numerous and varied environmental and financial consulting projects over the past 30 years.

**EMPLOYMENT
EXPERIENCE**

- January 2001 – Present: Executive (Coastal & Environmental Services, East London, South Africa)
- January 1999 – December 2001: Manager (Arthur Andersen LLP, Public Accounting Firm, Chicago, Illinois USA)
- December 1996 – December 1998: Senior Accountant/Auditor (Ernst & Young LLP, Public Accounting Firm, Austin, Texas, USA.)
- January 1994 – December 1996: Senior Accountant/Auditor (Ernst & Young, Charteris & Barnes, Chartered Accountants, East London, South Africa)
- July 1991 – December 1994: Associate Consultant (Coastal & Environmental Services, East London, South Africa)
- March 1989 – June 1990: Data Investigator (London Stock Exchange, London, England, United Kingdom)

**ACADEMIC
QUALIFICATIONS**

- Ph.D. Plant Science (Marine) - Rhodes University 1987
- B. Compt. Hons. Accounting Science - University of South Africa 1997
- B. Com. Financial Accounting - Rhodes University 1995
- B.Sc. Hons. Plant Science - Rhodes University 1983
- B.Sc. Plant Science & Zoology - Rhodes University 1982

COURSES

- Environmental Management Systems Lead Auditor Training Course - American National Standards Institute and British Standards Institute (2000) .
- ISO 14001:2015 Implementing Changes - British Standards Institute (2015)
- Numerous other workshops and training courses.

**CONSULTING
EXPERIENCE**

Environmental Impact Assessment

- Managed numerous environmental impact assessment (EIA) projects (estimated at over 200 EIAs) and prepared EIA reports in terms of relevant EIA legislation and regulations (including World Bank and IFC Standards) for development proposals including: bulk water and waste water, roads, electrical, mining, ports, aquaculture, renewable energy (over 20 solar facilities and over 20 wind farms), industrial processes, housing developments, golf estates and resorts, etc. (2002 – present).
- Projects have also included preparation of applications in terms of other statutory requirements, such as water-use and mining licence /permit applications.
- Assisted City of Johannesburg in the process to proclaim four nature reserves in terms of relevant legislation (2015-2016).

Feasibility and Pre-feasibility Assessments

- Managed projects to develop pre-feasibility and feasibility assessments for various projects, including various tourism developments, aquaculture, infrastructure projects, etc.
- Managed project for the East London Industrial Development Zone (ELIDZ) to develop a Conceptual Framework for a Mariculture Zone within the ELIDZ (2009).
- Managed the following aquaculture feasibility studies:
 - Mariculture Zone at Qoloha on the South African Wild Coast (2013).
 - Mariculture Zone within the Coega Industrial Development Zone (2014).
 - Aquaponics Zone within the Coega Industrial Development Zone (2017).
 - Finfish cage farming within the Port of Richards Bay (2019).

- Multispecies aquaculture hatchery and demonstration facility in the Eastern Cape Province (2019).
- Managed project to determine the financial feasibility of various proposed tourism developments for the Kouga Development Agency in the Eastern Cape Province (2006)
- Contributed significantly to a study to determine the financial and environmental feasibility of three proposed tourism development projects at Coffee Bay on the Wild Coast (2004).

Strategic Environmental Assessment

- Managed Strategic Environmental Assessment (SEA) project toward the development of a Biofuel Industry in the Eastern Cape Province of South Africa (2014-2016)
- Managed Strategic Environmental Assessment (SEA) projects for two South African ports (2006 – 2007).
- Managed Strategic Environmental Assessment (SEA) projects for five (5) local municipalities in the Eastern Cape as part of the municipal Spatial Development Framework plans (2004 – 2005).
- Involved in the financial assessment of various land-use options and carbon credit potential as part of a larger Strategic Environmental Assessment (SEA) for assessing forestry potential in Water Catchment Area 12 in the Eastern Cape of South Africa (2006).

Climate change, emissions trading and renewable energy

- Provided specialist peer review services for National Department of Environmental Affairs relating to climate change impact assessments for large infrastructure projects (2017-2018).
- Conducted climate change impact assessment for a proposed coal-fired power station in Africa (2017-2018).
- Participated in the development of a web-based Monitoring & Evaluation (M&E) system for climate change Mitigation and Adaptation in South Africa for National Department of Environmental Affairs (DEA) (2015-2016).
- Managed project to develop a Climate Change Strategy for Buffalo City Metro Municipality (2013).
- Managed projects to develop climate change strategies for two district municipalities in the Eastern Cape Province (2011).
- Conducted specialist carbon stock and greenhouse gas emissions impact and life cycle assessment as part of the Environmental, Social and Health Impact Assessment for a proposed sugarcane to ethanol project in Sierra Leone (2009 - 2010) and a proposed Jatropha bio-diesel project in Mozambique (2009 - 2010).
- Managed project to develop the Eastern Cape Province Climate Change Strategy (2010).
- Managed project to develop a Transnet National Ports Authority Climate Change Risk Strategy (2009).
- Participated in a project to develop a Renewable Energy roadmap for the East London Industrial Development Zone (ELIDZ) (2013).
- Participated in a project for the East London Industrial Development Zone (ELIDZ) and Eastern Cape Government to prepare a Renewable Energy Strategy (2009).
- Contributed to the development of Arthur Andersen LLP's International Climate Change and Emissions Trading Services (2001).
- Conducted carbon credit (Clean Development Mechanism - CDM) feasibility assessment for a variety of renewable energy projects ranging from biogas to solar PV.

- Participated in the preparation of CDM applications for two solar PV projects in the Eastern Cape.

Waste Management

- Managed project to develop Integrated Waste Management Plans for six local municipalities on behalf of the Sarah Baartman District Municipality in the Eastern Cape Province (2016).
- Managed project to develop Integrated Waste Management Plans for four local municipalities on behalf of Alfred Nzo District Municipality in the Eastern Cape Province (2015).
- Managed project to develop Integrated Waste Management Plans for eight local municipalities on behalf of Chris Hani District Municipality in the Eastern Cape Province (2011).
- Managed a project to develop a zero-waste strategy for a community development in the Eastern Cape Province (2010).
- Managed waste management status quo analysis for a District Municipality in the Eastern Cape Province (2003).
- For three consecutive years, managed elements of the evaluation of the environmental financial reserves of the three largest solid waste companies (Waste Management, Inc., Republic Services, Inc., Allied Waste, Inc.) and number of smaller waste companies in the USA as part of the annual financial audit process for SEC reporting purposes. Ensured compliance with RCRA and CERCLA environmental regulations.
- Managed elements of the evaluation of the environmental financial reserves of the largest hazardous waste company in the USA (Safety-Kleen, Inc.), as part of the audit process for SEC reporting purposes. Ensured compliance with RCRA and CERCLA environmental regulations.

Environmental auditing and compliance

- Conducted environmental legal compliance audit for various large Transnet Freight Rail facilities (2018).
- Lead auditor for numerous Environmental Control Officer (ECO) projects, including construction of wind and solar farms, road infrastructure, bulk water and sewage infrastructure, port infrastructure, cemeteries, etc.
- Participated in numerous ISO14001 Environmental Management System (EMS) audits for large South African corporations including SAPPI, BHP Billiton, SAB Miller, Western Platinum Refinery, Dorbyl Group and others (2002 – present).
- Reviewed the SHE data reporting system of International Paper, Inc. (IP) for three successive years as part of the verification of the IP SHE Annual Report, which included environmental assessments of 12 IP pulp and paper mills located throughout the USA.

Environmental Due Diligence and Business Risk

- Participated in project on behalf of the CDC Group (UK) to conduct a due diligence on the ESG systems and mechanisms in place for an agro-industry investment entity with considerable agricultural investments throughout Africa (2021).
- Conducted environmental due diligence projects on behalf of the German Development Bank for a forestry pulp and paper operation in Swaziland (2010) and for a large diversified South African agricultural/agro-processing company (2011).
- Managed project for the Transnet National Ports Authority to identify the environmental risks and liabilities associated with the operations of the Port of Durban

as part of a broader National initiative to assess business and financial risks relating to environmental management (2006).

- Conducted sustainability and cost/benefit analysis of various waste water treatment options (including a marine pipeline at Hood Point) for the West Bank of East London (2004).
- Conducted analysis of permit fees and application processing costs for off-road vehicle use on the South African coastline for the Department of Environmental Affairs and Tourism, Marine & Coastal Management (2003).
- Involved in the determination of the historical cost element of environmental remediation insurance claims for a number of multinational companies, including Dow Chemicals, Inc. and International Paper, Inc.
- Evaluated the environmental budgeting process of the US Army and provided best practice guidance for improving the process.

Policy and Guidelines

- Managed project to develop an Estuarine Management Plan for the Quinera Estuary for the Eastern Cape Department of Economic Development, Environmental Affairs and Tourism (2021).
- Development of Administration / Application Fee Structure for the Reclamation of Land, Coastal Use Permits, Coastal Waters Discharge Permits, Dumping of Waste at Sea, Off-Road Vehicle Regulations Promulgated in Terms of the National Environmental Management Act: Integrated Coastal Management Act (Act No. 24 Of 2008) (2017).
- Managed project to develop an Estuarine Management Plan for the Buffalo River Estuary for the National Department of Environmental Affairs (2017).
- Managed project to develop a Coastal Management Programme for Amathole District Municipality, Eastern Cape (2015 – 2016).
- Managed project to develop a sustainability diagnostic report as part of the development of the Eastern Cape Development Plan and Vision 2030 (2013).
- Managed project for the Department of Environmental Affairs and Tourism, Marine & Coastal Management to determine the cost implications associated with the implementation of the Integrated Coastal Management Act (2007).
- Managed project to develop a Conservation Plan and Municipal Open Space System (MOSS) for Buffalo City Municipality (2007)
- Managed project to develop a Sanitation Policy and Strategy for Buffalo City Municipality, Eastern Cape (2004 – 2006).
- Managed project to develop an Integrated Environmental Management Plan and Integrated Coastal Zone Management Plan for Buffalo City Municipality, Eastern Cape (2004 – 2005).
- Managed projects to develop and implement an Environmental Management System (EMS) for the Chris Hani and Joe Gqabi (formerly Ukhahlamba) District Municipalities in the Eastern Cape generally in line with ISO14001 EMS standards (2004 – 2005).
- Managed project to develop a State of the Environment Report and Environmental Implementation Plans for Amathole, Chris Hani, OR Tambo and Joe Gqabi District Municipalities in the Eastern Cape Province (2005 – 20010).
- Conducted analysis of permit fees and application processing costs for off-road vehicle use on the South African coastline for the Department of Environmental Affairs and Tourism, Marine & Coastal Management (2003).

Environmental & Social Management Systems

PUBLICATIONS

- Managed project to develop Environmental & Social Management Systems (ESMS) in line with IFC Performance Standards for an agricultural equipment supplier in Malawi on behalf of Norfund (2021).
- Managed projects to develop Environmental Management Systems (EMS) in line with ISO14001 EMS Standard for a South African water utility (2019).
- Managed projects to develop Environmental & Social Management Systems (ESMS) in line with IFC Performance Standards for four (4) wind farms in South Africa (2015-2018).
- Managed project to develop an Environmental & Social Management System (ESMS) in line with IFC Performance Standards for a telecoms company in Zimbabwe on behalf of the German Development Bank (2013).
- Conducted Environmental Management System (EMS) reviews for a number of large US corporations, including Gulfstream Aerospace Corporation.

Public financial accounting

- While with Ernst & Young LLP, (USA), functioned as lead financial auditor for various public and private companies, mostly in the technology business segment of up to \$200 million in annual sales. Client experience included assistance in a \$100 million debt offering, a \$100 million IPO and SEC annual and quarterly reporting requirements.
- Completed three years of articles (training contract) in fulfilment of the certification requirements of the South African Institute of Chartered Accountants which included auditing, accounting and preparation of tax returns for many small to medium sized commercial entities.

Refereed Publications

- Carter, A.R. 1985. Reproductive morphology and phenology, and culture studies of *Gelidium pristoides* (Rhodophyta) from Port Alfred in South Africa. *Botanica Marina* 28: 303-311.
- Carter, A.R. 1993. Chromosome observations relating to bispore production in *Gelidium pristoides* (Gelidiales, Rhodophyta). *Botanica Marina* 36: 253-256.
- Carter, A.R. and R.J. Anderson. 1985. Regrowth after experimental harvesting of the agarophyte *Gelidium pristoides* (Gelidiales: Rhodophyta) in the eastern Cape Province. *South African Journal of Marine Science* 3: 111-118.
- Carter, A.R. and R.J. Anderson. 1986. Seasonal growth and agar contents in *Gelidium pristoides* (Gelidiales, Rhodophyta) from Port Alfred, South Africa. *Botanica Marina* 29: 117-123.
- Carter, A.R. and R.H. Simons. 1987. Regrowth and production capacity of *Gelidium pristoides* (Gelidiales, Rhodophyta) under various harvesting regimes at Port Alfred, South Africa. *Botanica Marina* 30: 227-231.
- Carter, A.R. and R.J. Anderson. 1991. Biological and physical factors controlling the spatial distribution of the intertidal alga *Gelidium pristoides* in the eastern Cape Province, South Africa. *Journal of the Marine Biological Association of the United Kingdom* 71: 555-568.

Published reports

- Water Research Commission. 2006. Profiling Estuary Management in Integrated Development Planning in South Africa with Particular Reference to the Eastern Cape. Project No. K5/1485.
- Turpie J., N. Sihlophe, A. Carter, T. Maswime and S. Hosking. 2006. Maximising the socio-economic benefits of estuaries through integrated planning and management: A

rationale and protocol for incorporating and enhancing estuary values in planning and management. Un-published Water Research Commission Report No. K5/1485

Conference Proceedings

- Carter, A.R. 2002. Climate change and emission inventories in South Africa. Invited plenary paper at the 5th International System Auditors Convention, Pretoria. Held under the auspices of the South African Auditor & Training Certification Association Conference (SAATCA).
- Carter, A.R. 2003. Accounting for environmental closure costs and remediation liabilities in the South African mining industry. Proceedings of the Mining and Sustainable Development Conference. Chamber of Mines of South Africa, Vol. 2: 6B1-5
- Carter, A.R. and S. Fergus. 2004. Sustainability analysis of wastewater treatment options on the West Bank of East London, Buffalo City. Proceedings of the Annual National Conference of the International Association for Impact Assessment, South African Affiliate: Pages 295-301.
- Carter, A., L. Greyling, M. Parramon and K. Whittington-Jones. 2007. A methodology for assessing the risk of incurring environmental costs associated with port activities. Proceedings of the 1st Global Conference of the Environmental Management Accounting Network.
- Hawley, GL, AR McMaster and AR Carter. 2009. Carbon, carbon stock and life-cycle assessment in assessing cumulative climate change impacts in the environmental impact process. Proceedings of the Annual National Conference of the International Association for Impact Assessment, South African Affiliate.
- Hawley, GL, AR McMaster and AR Carter. 2010. The Environmental and Social Impact Assessment and associated issues and challenges. African, Caribbean and Pacific Group of States (ACP), Science and Technology Programme, Sustainable Crop Biofuels in Africa.
- Carter, AR. 2011. A case study in the use of Life Cycle Assessment (LCA) in the assessment of greenhouse gas impacts and emissions in biofuel projects. 2nd Environmental Management Accounting Network- Africa Conference on Sustainability Accounting for Emerging Economies. Abstracts: Pages 69-70.

CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

ALAN ROBERT CARTER

Date: March 2022



CONTACT DETAILS

Name of Company	CES – Environmental and Social Advisory Services
Designation	Principal Environmental Consultant
Profession	Environmental Consultant
Years with firm	2
E-mail	r.thomson@cesnet.co.za
Office number	+27 (0)43 726 7809
Nationality	South African
Professional Affiliations	International Association of Impact Assessment (IAIAsa) Environmental Assessment Practitioners Association of South Africa - Interim Certification Board (EAPSA)
Key areas of expertise	<ul style="list-style-type: none">• Environmental Impact Assessments: Basic and Full Scoping & EIR• Environmental Management Plans• Environmental Feasibility Studies• Water Use Licensing• Public Participation and Stakeholder Engagement• Construction Compliance Monitoring• Environmental and Social Due Diligence• Auditing / Compliance Monitoring• Environmental Risk Management• Geographical Information Systems and Mapping

PROFILE

Ms Robyn Thomson

Robyn Thomson is a Senior Environmental Consultant and holds a BSc (Environmental Science) degree with majors in Archaeology, Environmental and Geographical Science, as well as a BSc (Hons.) in Environmental Science, with coursework in Environmental Management, Environmental Impact Assessment, Environmental Risk Assessment, Environmental Contamination Rehabilitation, Geographic Information Systems and fundamentals in Statistics. The Honours programme also entailed a research project, which looked at the effectiveness of the community awareness programme conducted by the Asbestos Interest Group (AIG) on the effects of and attitudes towards asbestos contamination in two rural communities, Heuningvlei and Ga-Mopedi respectively, in the Northern Cape Province. The research project formed part of a larger project quantifying the extent of secondary environmental asbestos contamination in South Africa. Robyn obtained her undergraduate degree at the University of Cape Town, and her Honours degree at Rhodes University. Robyn has 15 years of experience and expertise in Basic Assessments, Environmental Impact Assessments, Environmental Monitoring, Environmental Management Plans, Water Use Licencing, public participation, GIS and project coordination. Robyn has particularly strong experience in infrastructure projects for various municipal, provincial and national organisations. Robyn is working in the field of environmental and social management for large aquaculture-related developments, and Mining and Renewable Energy projects (wind energy facilities) within South Africa. She is currently employed in the East London Office of CES.

**EMPLOYMENT
EXPERIENCE**

Principal Environmental Consultant – Coastal and Environmental Services (East London)

August 2022 – Present

Senior Environmental Consultant – Coastal and Environmental Services (East London)

March 2020 – August 2022

- Developing EIAs
- Developing Environmental Management Plans & Programmes
- Conducting Site Assessments
- Mining License Applications
- Construction Environmental Compliance Monitoring
- Client Liaison
- Authority Consultation
- Facilitating Public Participation & Stakeholder Engagement
- Technical and Financial Project Management
- Water Use License Applications
- Geographic Information Systems

Environmental Consultant/ Director – Makhetha Environmental Consultants

September 2012 – February 2020

Environmental Scientist – SRK Consulting

October 2006 – August 2010

GIS Technician – Conservation Support Services

August 2004 – September 2006

Environmental Consultant – Greenergy

November 2003 – July 2004

**ACADEMIC
QUALIFICATIONS**

- 2003 - B.Sc. Environmental and Geographical Science, and Archaeology (UCT)
- 2007 - B.Sc. (Hons) Environmental Science (Rhodes)

**CONTINUING
PROFESSIONAL
DEVELOPMENT**

- NOSA Occupational Health and Safety Auditors Course, 2013
- Rhodes University and Coastal and Environmental Services, Introduction to Environmental Impact Assessment, 2006.
- Rhodes University Investec Business School, Environmental Risk Assessment, 2006.
- Rhodes University, Introduction to GIS, 2005.
- Regular attendance at Environmental Quality Management Forums and Workshops conducted by the Eastern Cape Provincial Department of Economic Development, Environmental Affairs and Tourism (DEDEAT).

**PROFESSIONAL
EXPERIENCE**

Robyn has been involved in various roles (i.e. lead author, co-author, project manager, reviewer, GIS specialist, public participation) on the following projects:

Environmental Impact Assessments and EMPr's:

- Uitenhage Wood Treatment Plant, Uitenhage, Eastern Cape Province (2006);
- Straits Chemical Chlor-Alkali Plant, Coega, Eastern Cape (2007);
- St Francis Bay Beach Remediation, St Francis Bay, Eastern Cape (2007);
- Woodlands Collector Sewer Upgrade, Port Elizabeth, Eastern Cape (2007)
- Underground Storage Tank Decommissioning, Port Elizabeth, Eastern Cape (2008);
- Underground Storage Tank Decommissioning, Port Alfred, Eastern Cape (2008);
- Motherwell Waste Transfer Station, Motherwell, Eastern Cape (2008);
- Paapenkuils Bulk Sewer Augmentation, Port Elizabeth, Eastern Cape (2007);
- Seaview Bulk Water Supply, Port Elizabeth, Eastern Cape (2008)
- Churchill Pipeline Upgrade, Port Elizabeth, Eastern Cape (2008)
- Kwazakhele Collector Sewer Upgrade, Port Elizabeth, Eastern Cape (2008);
- Amanzi Reservoir and Pipeline, Port Elizabeth, Eastern Cape (2008);
- Markman Wastewater Ponds, Port Elizabeth, Eastern Cape (2009);
- Nelson Mandela Bay Municipality Kwazakhele Road Upgrade, Eastern Cape (2009);
- Nooitgedagt/ Coega Low Level Water Supply Scheme, Port Elizabeth, Eastern Cape (2009)
- Uitenhage Reclaimed Effluent System Upgrade, Port Elizabeth, Eastern Cape (2010)
- Witteklip Bulk Water Supply and Wastewater Treatment Works, Port Elizabeth, Eastern Cape (2009)
- TR15 Road Upgrade, Matatiele Local Municipality, Eastern Cape (2010);
- Fibre Optic Data Cable, Boemfontein to Graaff-Reinet, George to Port Elizabeth, Port Elizabeth to Colesberg, Aliwal North to East London, Free State, Western Cape, Northern Cape and Eastern Cape, (2011);
- R61 Section 6 Road Upgrade, Engcobo Local Municipality, Eastern Cape, (2012);
- Centane Kei River Mouth Road Upgrade, Mquma Local Municipality, Eastern Cape, (2012);
- R61 Section 2 Road Upgrade, Inxuba Yethemba Local Municipality, Eastern Cape (2012);
- Whittlesea Borrow Pits, Lukhanji Local Municipality, Eastern Cape, (2012);
- R61 Section 8 Road Upgrade, Port St Johns Local Municipality, Eastern Cape, (2012);

- N1 Section 14 Road Upgrade, Kapanong Local Municipality, Free State, (2012);
- DR08017 (Sections 2B and 2C) Road Upgrade, Matatiele Local Municipality, Eastern Cape (2012);
- Masbulele Trading, Fuel Transportation Environmental Management Plan, Queenstown, Eastern Cape (2013);
- R61 Section 6 Road Upgrade, Intsika Yethu Local Municipality, Eastern Cape (2014);
- Design of Dust Control System for the K24 Tunnel, Richards Bay Port, uMhlathuze Local Municipality, Kwa-Zulu Natal (2015);
- Port of Ngqura Stormwater Management Plan, Coega, Eastern Cape (2017);
- Coffee Bay Bulk Water Supply Phase 3B, Coffee Bay, King Sabata Dalindyebo Local Municipality, Eastern Cape (2019);
- Breidbach Pumpsation and Sewer Line, Breidbach, Buffalo City Metropolitan Municipality, Eastern Cape (2019);
- Elundini Rural Drought Relief Programme, Wards, 1, 5, 6 and 7, Elundini Local Municipality, Eastern Cape (2019);
- Osner Housing Development, Buffalo City Metropolitan Municipality, Eastern Cape (2020);
- R72 Hamburg Quarry, Nqushwa Local Municipality, Eastern Cape (2020/21);
- R56 Edendale Quarry, Matatiele Local Municipality, Eastern Cape (2020/21);
- Refele Village Sportsfield and Grandstand, Elundini Local Municipality, Eastern Cape (2020/21);
- Great Kei Concrete Tower Manufacturing Facility, Great Kei Local Municipality, Eastern Cape (2020/21);
- Chaba Battery Storage Facility, Great Kei Local Municipality, Eastern Cape (2020/21);
- Sakhisizwe Contractors Water Abstraction; Amahlati Local Municipality, Eastern Cape (2020/21);
- Wenah Housing Development (WULA), Buffalo City Metropolitan Municipality, Eastern Cape (2020);
- Wild Coast Abalone Expansion, Great Kei Local Municipality, Eastern Cape (2020/21);
- Wihananah Graphite Exploration, Inhambane, Cabo Delgado, Mozambique (2021);
- Wild Coast Abalone expansion EIA, Great Kei Local Municipality, Eastern Cape (2020/21);
- Waaihoek Wind Energy Facility, Part 2 Amendment, Kwa-Zulu Natal (2021);
- Haga Haga Wind Energy Facility access roads Basic Assessment, Great Kei Local Municipality, Eastern Cape (2021);
- Kroondal Chrome Mine TSF and WRD redesign Basic Assessment and Water Use Licence, North West Province (2021/2022);
- Lido Avenue residential development, Buffalo City Metropolitan Municipality (2021);
- Seunqu Rural Water Supply Scheme Basic Assessment, Senqu Local

Municipality (2021/2022);

- Latrodex Wind Turbines Basic Assessment, Great Kei Local Municipality, Eastern Cape (2022);
- Glencore Eastern Mines, Thornecliff, Helena & Marageng Mines Water Use Licences, Limpopo Province (2022);
- Buchule residential development Basic Assessment, Buffalo City Metropolitan Municipality (2021);
- Inyathi BESS Basic Assessment, Buffalo City Metropolitan Municipality (2022);
- Mulilo Newcastle WEF, Kwa-Zulu Natal (2022);
- Victoria West 5 x WEFs, GIS mapping, Pixley Ka Seme District Municipality, Northern Cape (2022);
- Soyuz Britstown 6 x WEFs, Scoping and EIR, Pixley Ka Seme District Municipality, Northern Cape (2022);
- Eskom Hex BESS, EMPr updating, Western Cape (2022);

Baseline Environmental assessment:

- Florida residential development, Uitenhage, Eastern Cape (2006).
- Coastal Infrastructure Upgrades, Bitou Local Municipality, Western Cape (2020)
- BCMM Stormwater and Sewage Reclamation Feasibility, Buffalo City Metropolitan Municipality (2021/2022);

Environmental auditing, due diligence and compliance monitoring:

- Churchill Pipeline Upgrade, Port Elizabeth, Eastern Cape (2008)
- Kwazakhele Collector Sewer Upgrade, Port Elizabeth, Eastern Cape (2008);
- Amanzi Reservoir and Pipeline, Port Elizabeth, Eastern Cape (2008);
- Nelson Mandela Bay Municipality Kwazakhele Road Upgrade, Eastern Cape (2009); and
- Coffee Bay Bulk Water Supply Phase 3B, Coffee Bay, King Sabata Dalindyebo Local Municipality, Eastern Cape (2019);
- Breidbach Pumpsation and Sewer Line, Breidbach, Buffalo City Metropolitan Municipality, Eastern Cape (2020/21);

Strategic Environmental Assessment:

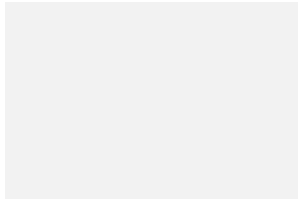
- Afforestation Potential in Water Management Area 12, Eastern Cape (2005); and
- Environmental Management Framework for the coastal zone between Port Alfred and Kei Mouth, Eastern Cape (2009).

Environmental Contamination Assessment:

- Secondary Asbestos Contamination Survey, Northern Cape, North-West Province, Mpumalanga and Limpopo (2006).

Specialist Geographical Information Systems:

- Chris Hani District Municipality Rural Infrastructure Asset Register, Eastern Cape (2005).



Community Social Development:

- eShowe Bulk Water Supply, uMlalazi Local Municipality, Kwa-Zulu Natal (2014-2017); and
- Department of Education Fencing of 37 rural schools in the OR Tambo and Alfred Nzo District Municipalities, Eastern Cape (2016).

CERTIFICATION

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Robyn Thomson
2022

Date: 5 September

CONTACT DETAILS

Name of Company	CES – Environmental and Social Advisory Services
Designation	Environmental consultant grade 2 - East London branch of CES
Profession	Environmental consultant
Years with firm	Current
E-mail	sagewansell@gmail.com
Office number	+27 (0) 43 726-7809
Mobile	+27 (0) 61 431-9114
Nationality	South African
Professional Body	➤ SACNASP: Candidate Natural Scientist application in progress
Key areas of expertise	➤ Environmental Impact Assessment ➤ Environmental Management

PROFILE

Sage holds a Master of Science degree in Botany and has gained experience in field and laboratory work by researching invasive aquatic species in South Africa during that time. Her research focused on the ecology, spread and management strategies of an invasive wetland species called pickerelweed. Apart from invasion biology research, Sage has a BSc Honours degree in Biotechnology. She investigated the biochemical characterization of a sleeping sickness parasite in sub-Saharan countries to contribute to fighting the disease. Her biotechnology, botany and microbiology background also provide an understanding of wastewater management, indigenous biodiversity and water quality.

**EMPLOYMENT
EXPERIENCE**

- Small Business Start-Up & Entrepreneur: Simply Sage South Africa - event management, designer woodwork, wedding planning & floristry 2020-2021
- Event management and assistant coordinator at Plan A 2020-2021
- Teaching assistant and Demonstrator for Cell Biology & Botany 2017-2019
- GADRA, Mobile Science Lab - teaching and mentoring at rural high schools 2017-2018

**ACADEMIC
QUALIFICATIONS**

- M.Sc. Botany - Rhodes University 2021
- B.Sc. Hons. Biotechnology with Full Academic colours - Rhodes University 2018
- B.Sc. Botany and Microbiology with Half Academic colours - Rhodes University 2017

COURSES

- Biological Weeds Short Course on Invasion Biology - Centre for Biological Control 2018
- First Aid Level 2 - Riverport Training Academy

**CONSULTING
EXPERIENCE**

Environmental Impact Assessment

Assistance during Draft Basic Assessment Report for proposed house development at Bonnie Doon, East London, Buffalo City Municipality

Environmental auditing and compliance

Job shadowing during inspection of implemented Environmental Management Plan at Wild Coast Abalone Farm for Imithi Services

Conference Proceedings

- Wansell, S. & Coetzee, J. 2018. Invasion ecology of *Pontederia cordata* L. in South Africa. 45th Annual Research Symposium on the Management of Biological Invasions. Thohoyandou, 3-6 July 2018.
- Wansell, S., Geerts, S. & Coetzee, J.A. 2021. The invasion biology of *Pontederia cordata* L. (Pontederiaceae) in South Africa. National Symposium on Biological Invasions – virtual symposium. 5–7 May 2021. Presentation Award.

CERTIFICATION

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SAGE NORA-LEE WANSELL

Date: 1 March 2022