

FINAL BASIC ASSESSMENT REPORT FOR THE PROPOSED PROSPECTING IN SEA CONCESSION AREA 14C BY TRANS ATLANTIC DIAMONDS

Trans Atlantic Diamonds (Pty) Ltd
Office 1603 Portside
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TRANS ATLANTIC
DIAMONDS

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Appendix 1: EAP and BAR team CVs

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Barry Clark
Sisanda Dalasile
Amy Wright
Kenneth Hutchings

Anchor Environmental Consultants
8 Steenberg House, Silverwood Close, Tokai, South Africa
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CURRICULUM VITAE

BARRY MALCOLM CLARK

BORN: 25 August 1968; Livingstone, Zambia

AGE: 52 YEARS

NATIONALITY: South African, British

ACADEMIC QUALIFICATIONS:

Ph.D. Marine Biology, 1997, University of Cape Town

BSc (Hons) Marine Biology, 1991, University of Cape Town

BSc Zoology and Ocean & Atmosphere Science, 1990, University of Cape Town

OTHER QUALIFICATIONS: Scientific diver, Diving supervisor, Small boat skipper

LANGUAGE PROFICIENCY: English (Excellent), Afrikaans (Good)

COUNTRY EXPERIENCE: South Africa, Namibia, Lesotho, Mozambique, Tanzania, Kenya, Mauritius, Seychelles, Angola, Ghana, Cote d'Ivoire, Nigeria, Liberia, Sierra Leone, Somaliland, Republic of Congo, Egypt, United Arab Emirates, Azerbaijan

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EMPLOYMENT HISTORY: 1991-1993 – Scientific Officer, University of Cape Town

2000-2002 – Marine Coordinator, Cape Peninsula National Park

1996-Present - Director, Anchor Environmental Consultants CC

2002-Present – Research Associate, University of Cape Town

SUMMARY PROFILE

Dr Barry Clark has thirty years' experience in marine biological research and consulting on coastal zone and marine issues. He has worked as a scientific researcher, lecturer and consultant and has experience in tropical, subtropical and temperate ecosystems. He is presently Director of an Environmental Consultancy firm (Anchor Environmental Consultants) and Research Associate at the University of Cape Town. As a consultant has been concerned primarily with conservation planning, monitoring and assessment of human impacts on estuarine, rocky shore, sandy beach, mangrove, and coral reef ecosystems as well as coastal and littoral zone processes, aquaculture and fisheries. Dr Clark is the author of 27 scientific publications in class A scientific journals as well as numerous scientific reports and popular articles in the free press. Geographically, his main area of expertise is southern Africa (South Africa, Lesotho, Namibia, Mozambique, Tanzania, Seychelles, Mauritius and Angola), but he also has working experience from elsewhere in Africa (Republic of Congo, Sierra Leone, Liberia, Cote d'Ivoire, Ghana, Nigeria), the Middle East (UAE) and Europe (Azerbaijan, Greenland).

MEMBERSHIP OF PROFESSIONAL BODIES/ORGANISATIONS

- Professional Natural Scientist, registered with the South African Council for Natural Scientific Professions (2004-)
- Professional member of the South African Institute of Ecologists and Environmental Scientists (2000-)
- South African representative to the SURVAS Network (Synthesis and Upscaling of Sea-level Rise Vulnerability Assessment Studies) (2000-)
- Member of the International Association of Impact Assessors (IAIA) (2000-)
- Member of the Subsistence Fisheries Task Group (1999-2000)
- Member of the Subsistence Fisheries Advisory Group (2000-2002)
- Member of the South African Network for Coastal and Oceanic Research (SANCOR) Economics Task Team

STUDENT SUPERVISION

Name	Institution	Degree	Thesis title	Year
Vici Napier	UCT	MSc	Value and management of the subsistence fishery at Knysna Estuary, South Africa	2004-2005
Khara Shine	UCT	MSc	Biogeographic Patterns and Diversity in Demersal Fish off the south and west coasts of South Africa: Implications for Conservation	2006-2007
Bomikazi Tshingana	UKZN	MSc	Relating flora, fauna and environmental parameters of Durban Bay Sandbanks	2017-2018
Josef Shikeva	UNAM	MSc	The use of underwater video footage as a tool in the assessment of mining related impacts on the hard-bottom benthic environment in southern Namibia	2018-2019
Nomcebo Dhlalani	US	MSc	ICP-MS analysis of trace metals in Pacific Oysters (<i>Crassostrea gigas</i>) within the Port of Saldanha, South Africa	2019-2020

SELECTED PROJECT EXPERIENCE

Period	Country	Client	Project, Tasks
2021	South Africa	V& A Waterfront	Economic impact analysis of the proposed Granger Bay Marina
2021	Greenland	DeBeers Marine (Pty) Ltd	Environmental Mitigation Assessment for geophysical surveys off West Greenland
2021	South Africa	Cliff Path Action Group/Ecosense	Environmental impact assessment for a proposed pedestrian path connecting the two parts of the Hermanus Cliff Path
2021	South Africa	IDM Consultants	Environmental impact assessment for the proposed Msimbazi River Estate in KwaZulu-Natal
2020-2021	Sierra Leone	Iluka/Sierra Rutile/Digby Wells	Environmental, Safety and Health Impact Assessment (ESHIA) for mining of the Sembehun group of deposits in the Southern Province of Sierra Leone

Period	Country	Client	Project, Tasks
2020-2021	South Africa	EDTEA KZN	Development of an Estuary Management Plan for the Uthongathi Estuary, KzwaZulu-Natal
2020	South Africa	Department of Forestry, Fisheries and the Environment	Environmental assessment and monitoring for a sea-based Aquaculture Development Zone (ADZ) in Saldanha Bay
2020	South Africa	DeBeers Marine (Pty) Ltd	Near- and far-field effluent dispersion modelling study and impact assessment for a proposed SWRO plant in the Port of Cape Town
2020	South Africa	V&A Waterfront	Dispersion modelling study and environmental impact assessment and for the East Pier District cooling plant in the Port of Cape Town
2020	South Africa	Transnet National Ports Authority, Chand Environmental	Environmental Impact Assessment for a proposed Seawater Reverse Osmosis Plant in the Port of Cape Town
2020	South Africa	IFC World Bank/ Royal Haskoning DHV	Technical, environmental and social due diligence for the Umdloti and Umkhomazi wastewater treatment works (WWTW)
2020	Kenya	Ministry of Water, Sanitation and Irrigation of Kenya / Aurecon	Kenya Water Security And Climate Resilience Project - Development and piloting of a resource directed measures (RDM) Framework for Kenya
2020	South Africa	DeBeers Marine (Pty) Ltd	Specialist environmental assessment of the Namaqua Fossil Forest Marine Protected Area and proposed Ecologically or Biologically Significant Marine Area (EBSA)
2020	South Africa	ATKV/Cape EA Prac	Comparative ecological impact assessment for the ATKV Hartenbos dune stabilisation study
2020	South Africa	Diamond Coastal Aquaculture	Design and implementation of an environmental monitoring programme for an abalone ranching operation at Kleinzee, Northern Cape.
2020	South Africa	TNPA/Chand Environmental	Environmental Impact Assessment for a Reverse Osmosis Desalination Plant in the Port of Cape Town
2020	South Africa	Department Forestry Fisheries & Environment	Implementation of an environmental monitoring programme for the Saldanha Bay Aquaculture Development Zone
2020	South Africa	V&A Waterfront	Environmental impact assessment and dispersion modelling study for the East Pier District cooling plant outfall at the V&A Waterfront, Port of Cape Town
2019-2020	South Africa	City of Cape Town	Design and implementation of an environmental monitoring programme for domestic effluent outfalls offshore of Hout Bay, Camps Bay and Green Point in Cape Town

Period	Country	Client	Project, Tasks
2019	South Africa	Vopak/SRK Consulting	Environmental Impact Assessment for Vopak- Reatile Terminal Richards Bay, a bulk liquid storage and handling facility
2019	South Africa	Rheinmetall Denel Munition	Design and implementation of an environmental monitoring programme for the Rheinmetall Denel Munitions facility in Helderberg
2019	Somaliland	WSP/DP World	Marine specialist study for an Environmental and Social Impact assessment (ESIA) for the upgrade of Berbera Port, Somaliland
2018-2019	Mozambique	Golder/ Sasol	Environmental impact assessment for 2D and 3D seismic surveys and exploratory drilling in Block 16 & 19, offshore in Inhambane Province, Mozambique
2018-2021	South Africa	Mhlathuze Water	Toxicity testing, water, sediment and flora and fauna monitoring for Mhlathuze Water Effluent Pipelines, in Richards Bay, South Africa
2018	South Africa	City of Mhlathuze	Environmental Impact Assessment for construction of a new bridge over the Mzingazi Canal at the Richards Bay Waterfront
2018	Republic of Congo	Kola Potash	Marine ecology impact assessment, baseline studies and toxicity testing for the Kola Potash project, Republic of Congo
2018	South Africa	Sun International/ GCX Analytics	Marine ecology impact assessment for discharge of brine effluent from a Reverse Osmosis desalination plant in Granger Bay
2018	Mozambique	JG Afrika/ Mozal	Estuarine impact assessment for discharge of brine effluent from a Reverse Osmosis desalination plant into Maputo Bay
2018	South Africa	Kleinzee Mariculture	Environmental Impact Assessment for construction and operation of abalone holding tanks and associated infrastructure at Kleinzee.
2018	South Africa	ArcelorMittal Saldanha	Marine ecology impact assessments for the discharge of brine effluent from a Reverse Osmosis desalination plant
2018	South Africa	Diamond Coast Abalone	Environmental Impact Assessment for an Aquaculture Farm in Kleinzee, Northern Cape
2018	South Africa	G7 Renewable Energies (Pty) Ltd	Marine ecology impact assessment for discharge of brine effluent from a Reverse Osmosis desalination plant in Gordon's Bay, South Africa
2018	South Africa	Mainport Africa	Assessment of biofouling community collected from MV Cherry Blossom
2017-2018	Sierra Leone	Iluka/Sierra Rutile (Ltd)	Marine and estuarine specialists studies for an Environmental, Social and Health Impact Assessment (ESHIA) for proposed expansions to Sierra Rutile Limited's mining operations in Sierra Leone
2017	South Africa	Advisian, City of Cape Town	Marine ecology impact assessments for nine desalination plants for the Cape Town Emergency Water Resilience Project

Period	Country	Client	Project, Tasks
2017	South Africa	Hospitality Property Fund	Marine ecology impact assessment and Coastal Waters Discharge Permit application for a desalination plant at the Westin Hotel, Cape Town.
2017	South Africa	GIBB, Transnet National Ports Authority	Strategic Environmental Assessment for Port of Cape Town - Oceanographic and ecological significance and sensitivity of the Port of Cape Town and surrounding areas
2017	South Africa	Shell Downstream South Africa (Pty) Ltd	Specialist marine ecology report for coastal water discharge permit application for Shell Downstream South Africa (Pty) Ltd Bulk Chemicals Storage Facility, Port Elizabeth
2017	South Africa	Viking Fishing (Pty) Ltd	Socio-economic assessment of a 60% reduction in Viking fishing group's allocation in the inshore demersal trawl fishery
2016-2019	South Africa	Department of Water & Sanitation	Classification of and determine the Resource Quality Objectives for significant water resources within (1) the Berg Water Management Area and (2) the Breede Gouritz Water Management Area (2 separate appointments). Project leader on the estuaries component of both projects.
2016-2017	South Africa	SIROCCON Consulting Engineers & Project Managers	Specialist marine impact studies for a proposed Atlantic Salmon farm at Dwarskersbos
2016-2017	South Africa	CEN Environnemental Mangement Unit, Nelson Mandela Metro	Dispersion modelling for the Driftsands Waste Water Treatment Works, Port Elizabeth, South Africa
2016-2017	South Africa	Tongaat Hullet	Marine ecology impact assessment for a proposed beach enhancement initiative at Tinley Manor
2016-2017	South Africa	Nemai Consulting, Transnet National Ports Authority	Marine Impact Assessment for the proposed offshore sand winning for developments within the Port Of Durban, KwaZulu Natal
2016-2017	South Africa	Department of Environmental Affairs	Revision and update of the South African Water Quality Guidelines for Coastal and Marine Waters – 2017. Natural Environment, Mariculture and Industrial Use
2016-2017	South Africa	Royal Society for Protection of Birds	Assessment of the effects of exposure to brodifacoum pellet bait on Tristan Rock Lobster <i>Jasus paulensis</i>
2016-2017	South Africa	Elandsfontein Exploration and Mining (Pty) Ltd	Assessment of the impacts of the Elandsfontein Phosphate Mine on Langebaan Lagoon
2016-2017	South Africa	Department of Agriculture, Forestry, Fisheries	Assessment of catch and effort in the West Coast Rock Lobster recreational fishery
2016-2017	Namibia	Namdeb Diamond Company	Benthic macrofauna and sediment quality monitoring programme for the Mid-water license region, Namibia

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2016	South Africa	DeBeers Group of Companies	Assessment of mining-related impacts on macrofaunal benthic communities in the Northern Inshore Area of Mining Licence Area MPT 25-2011 and subsequent recovery
2016	South Africa	Advisian, Oiltanking Mogs Saldanha (RF) (Pty) Ltd	Marine ecological specialist study for the proposed HDPE pipeline and sea water intake and discharge for Oiltanking Mogs Saldanha (Rf) (Pty) Ltd
2016	Republic of Congo	Southern Waters, International Finance Corporation	Aquatic Biodiversity Assessment for the Sounda Hydropower Project
2016	South Africa	Southern Cross Salmon	Marine specialist environmental impact report for a proposed salmon and trout sea cage farm Jutten Island Saldanha -
2016	South Africa	Port Owen Marina Authority	Assessment of currents and invertebrate and fish fauna in the Berg Estuary channel and recommendations for disposal of dredge water
2016	Lesotho	Lesotho Highlands Development Authority	Specialist study of freshwater fish populations present in rivers and streams adjacent to the proposed Polihali Dam in the Lesotho Highlands
2016	South Africa	Transnet National Ports Authority	Baseline ecological assessment of marine and estuarine fauna and flora at Pier 1 and Salisbury Island, Port of Durban and an assessment of the potential impacts associated with the upgrade and expansion of the terminal.
2016	South Africa	Transnet National Ports Authority	Assessment of ecosystem goods and services associated with Durban Bay any assessment of potential impacts associated with the development of the Container Terminal at Pier 1 and Salisbury Island
2016	South Africa	ACC Agriculture	Risk assessment for introduction of <i>Camelina savitina</i> as a commercial crop into South Africa
2015	Liberia	Conservation International	Identification and profiling of priority mangrove sites in Liberia through remote sensing and field surveys and identification and delineation of two coastal and marine protected areas
2015	South Africa	AquaTech	Risk assessment for in-water hull cleaning operations in the Port of Durban, South Africa
2015	Tanzania	Aurecon, Schlumberger	Environmental impact assessment for a supply base for Schlumberger in Mtwara port, Tanzania
2015	South Africa	Cape Nature	Environmental flows assessment for the Klein River estuary, South Africa
2015	South Africa	Mossel Bay Municipality	Preparation an estuary management plan for the Hartenbos Estuary
2015	South Africa	Department of Environmental Affairs	Development of an assessment framework for management of effluent discharged from land-based sources to the marine environment in South Africa

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2015	Seychelles	Raffles Hotel, Aurecon	Assessment of impacts of diesel spill on mangrove forest community on Praslin Island, Seychelles
2014-2016	South Africa	Transnet National Ports Authority	Baseline monitoring programme for all sandbank areas in the Port of Durban.
2014-2015	South Africa	Transnet National Ports Authority	Design and implementation of a water and sediment quality monitoring programme in the Port of Durban
2014-2015	South Africa	Oceana/SRK	Application for a coastal water discharge permit for the Lucky Star Fish Processing Plant, St Helena Bay
2014-2015	South Africa	Coega Development Corporation	Assessment of impacts of waste water discharge from Coega Industrial Development Zone, Algoa Bay
2014-2017	Namibia	DeBeers Marine Namibia	Benthic macrofauna and sediment quality monitoring programme for the Atlantic 1 Mining Licence Area, Namibia
2014-2015	South Africa	Cape Nature	Environmental flow assessment for the Heuningnes estuary, South Africa
2014-2015	South Africa	South African Pelagic Fishing Industry Association	Assessment of the socio-economic impacts of a reduction in the sardine minimum Total Allowable Catch (TAC)
2014-2015	South Africa	Nelson Mandela Bay Metro, GIBB	Assessment of impacts of waste water discharge from a new WWTW at Cape Recife, Algoa Bay
2014	Seychelles	USAID	Implementation of the "reef gardening" approach for restoration of coral reefs on Praslin Island, Seychelles, lost as a result of El Nino and global warming induced bleaching events.
2014	South Africa	Molapong Aquaculture	Risk Assessment for culture of King and Coho salmon in South Africa
2014	South Africa	NWJ Environmental	Impact assessment for a proposed sand mining operation on the Umzumbe Estuary, KwaZulu-Natal
2014	Mozambique	Marine Stewardship Council	Scoping study to assess potential impacts of upgrading the cruise liner facilities at Portuguese Island, Mozambique
2014	South Africa	Bayside Aluminium, WSP	Environmental impact assessment for the decommissioning of the Bayside Aluminium Smelter, Richards Bay
2014	South Africa	Tronnox Namaqua Sands, SRK	Assessment of impacts of a seawater intake for the Tronnox Namaqua Sands mineral processing facility, Northern Cape
2014	South Africa	AquaConcepts	Risk assessment for import of ornamental marine fish species into South Africa
2014	South Africa	Dormac, WSP	Assessment of impact associated with the development of a floating dry dock in the Port of Durban, South Africa
2014	South Africa	Transnet National Ports Authority	Assessment of potential impacts of the proposed Durban Dig Out Port of the annual sardine migration up the East coast of South Africa

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2014	South Africa	WWF-SA	Design and development of a Fisheries Improvement Project for Small Scale Fisheries in the Kogelberg
2014	South Africa	Tronnox Namaqua Sands, Matzikamma Municipality, SRK	Environmental impact assessment for an aquaculture facility at Doringbaai, Northern Cape
2014	Tanzania	Aurecon	Development of a Spatial Development Framework for the coastal environment in the Mtwara/Mikandani Municipal area, Tanzania
2014	South Africa	WSP/ Engen	Assessment of the impacts of an oil spill on mangrove forest communities in the Port of Richards Bay, South Africa
2014	South Africa	Frontier Rare Earths, Coastal Environmental Services	Assessment of impacts of a seawater intake for the Frontier Rare Earths mineral processing facility, Northern Cape
2014	South Africa	Cape Nature	Rezoning and realignment of borders for Betty's Bay, Goukamma and Robberg marine protected areas in South Africa
2013-2014	South Africa	Paardevelei Properties	Assessment of the likely impacts of associated with a new stormwater management system at Paardevelei
2013-2014	South Africa	iSimangaliso Wetland Park Authority	Assessment of the hydrological, hydrodynamic and ecological functioning of the Lake St Lucia Estuarine System and formulation of recommendations for rehabilitation and improved management of the system.
2013-2014	Lesotho	Lesotho Highlands Development Authority	Assessment of the impacts of land use changes and other pressures related to the construction and operation of the Katse and Mohale Dams on its catchment area and attendant fish populations
2013	South Africa	Cape Nature, Department of Environmental Affairs	Assessment of impacts of an oil spill on sandy beach and rocky intertidal communities in the Goukamma MPA
2013	South Africa	Transnet National Ports Authority	Marine specialist study as part of an EIA for upgrading the General Maintenance Quay (GMQ) in the Port of Saldanha Bay
2013	Namibia	LL Namibia Phosphates	Review and update of a Scoping Report and Environmental Management Plan for prospecting for phosphorus deposits in Mining Licence Area 159 off the coast of Namibia

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2012-2013	South Africa	Department of Agriculture, Forestry & Fisheries	Biodiversity Risk and Benefit Assessments (BRBAs) for the seven most important alien species used in the aquaculture industry in South Africa including Pacific oyster <i>Crassostrea gigas</i> , Mediterranean mussel <i>Mytilus galloprovincialis</i> , sharptooth catfish <i>Clarius gariepinus</i> , rainbow trout <i>Onchorhynchus mykiss</i> , brown trout <i>Salmo trutta</i> , Nile Tilapia <i>Oreochromis niloticus</i> and Marron <i>Cherax tenuimanus</i> .
2012-2013	South Africa	Abagold (Pty) Lt	Environmental Impact Assessment for the construction and operation of a wave energy converter (WEC), pump assistance pond and effluent pipe turbine for the Abagold abalone farm.
2012-2013	South Africa	East London Industrial Development Zone	Feasibility study for the establishment of an Aquaculture and Biotechnology Business Incubator for the East London Industrial Development Zone.
2012	Mozambique	Consultec Lda	Water quality assessment and toxicity testing for a proposed coal transfer facility in Beira, Mozambique
2012	Mauritius	Mauritius Oceanography Institute	Alien species, and water and sediment quality assessment of Port Louis, Mauritius.
2012	Namibia	Ministry of Environment and Tourism	Study to identify a set of Core National Environmental Indicators Network (NCEIS), Integrated State of Environment Baseline Report (ISoER) for Namibia's Protected Area Network (PAN), and Coastal and Marine Ecosystems.
2012	South Africa	uMkhanyakude District Municipality/ Nemai Consulting	District-Wide Environmental Management Framework for the uMkhanyakude District Municipality
2012	South Africa	Transnet National Ports Authority	Assessment of potential impacts of iron ore oxide (Fe ₂ O ₃) on the marine flora and fauna of Saldanha Bay.
2012	South Africa	Department of Water Affairs/ Nemai Consulting	Environmental Impact Assessment for the Ncwabeni OCS Dam on the Mzimkhulu estuary
2012	South Africa	East London Industrial Development Zone	Seawater Quality Monitoring Program for aquaculture developments in the East London Industrial Development Zone
2012	South Africa	Transnet National Ports Authority/ Nemai Consulting	Environmental Impact Assessment for the deepening, lengthening and widening of Pier 2 in the container terminal of the Port of Durban.
2011	South Africa	City of Cape Town	Development of water quality indices and related reporting tools for Inland and coastal waters of the City of Cape Town

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2011	South Africa	Overstrand District Municipality/ SSI	Environmental impact assessment for a Waste Water Treatment Works in the Overstrand District Municipality
2010-2013	South Africa	Department of Agriculture, Forestry & Fisheries (DAFF)	Environmental impact assessment for four Marine Aquaculture Development Zones (MADZs) in the Eastern Cape, South Africa.
2010	South Africa	Department of Agriculture, Forestry & Fisheries (DAFF)	Strategic Environmental Assessment (SEA) to identify potential sea-based finfish aquaculture development zones (ADZ) off the South African coastline.
2010	South Africa	Doug Jeffery Environmental Consultants	Environmental impact assessment for an illegal tide pool constructed at Danger Point, Gansbaai.
2010	South Africa	Department of Environmental Affairs & Development Planning, Western Cape Government	Evaluation of boat launching sites in the Western Cape.
2010	South Africa	Department of Environmental Affairs & Development Planning, Western Cape Government	Assessment of the effects of heavy metal accumulation from land based sources on the Diep River Estuary.
2010	South Africa, Namibia	UNDP-GEF Orange-Senqu Strategic Action Programme	Assessment of the impact of changes in the flow regime of the Orange-Senqu River and its impacts on the degradation of the estuary and the broader Benguela Current System.
2010	Tanzania	BRL/ SWECO/ SADC	Baseline description and health assessment for the Rovuma Basin, Tanzania.
2010	South Africa	Water Research Commission, Department of Water Affairs	Update of methods for estimation of freshwater flow requirements for estuaries in South Africa.
2010	South Africa	Chand Environmental	Assessment of the status and sensitivity of the coastal marine environment off Partridge Point on the Cape Peninsula, and likely impacts that would arise from development of the site.
2010	South Africa	Element Consulting Engineers (Pty) Ltd	Environmental impact assessment for a proposed residential and resort development at Trekoskraal on the marine environment.
2009-2011	South Africa	Various companies	Environmental impact assessments for a suite of desalination plants at Sedgfield, Plettenberg Bay, Witsands, Saldanha Bay, and Port Nolloth. (Five separate appointments.)

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2009-2011	South Africa	Cape Action Plan for People & the Environment (C.A.P.E.)/Cape Nature/Marine & Coastal Management (MCM)	Development of management plans for the Olifants, Berg, Uilkraals, and Great Brak Estuaries, South Africa. (Four separate appointments).
2009-2011	South Africa	WWF-SA, Lotto Programme	Recreational fisheries monitoring programme coordinating a team of 20 fisheries monitors at 6 sites on the South and East coasts of South Africa.
2009-2010	Azerbaijan	United National Development Programme, Azerbaijan Country Office	International consultant appointed to prepare Project Identification Form (PIF) and Project Preparation Grant (PPG) for a GEF medium-size project on the expansion of the marine and coastal protected area network in Azerbaijan.
2009-2010	South Africa	Department of Water Affairs & Forestry	Assessment of the nature, distribution and value of aquatic ecosystem services of the Olifants, Inkomati And Usutu To Mhlathuze Water Management in South Africa.
2009-2010	South Africa	WWF-SA/Cape Action for People and the Environment (C.A.P.E.)	Project leader responsible for the preparation of marine and coastal spatial plans and socio-economic assessments for the Kogelberg Biosphere Reserve and Garden Route Initiative.
2009-2010	South Africa	Department of Water Affairs	Environmental Flow Assessment for the Berg Estuary which including preparing scenario assessments of the likely environmental and socio-economic consequences variable fresh water allocation for the estuary.
2009	South Africa	West Coast District Municipality, Jeffares & Green (Pty) Ltd	Environmental assessment of the Jakkalsvlei estuary, and of ecological impacts of illegal excavation and infilling activities
2009	Global	UNDP	Researcher on an assessment of the impact of climate change on the Global Fisheries sector and opportunities and incentives required for adaptation
2009	South Africa	City of Cape Town	Design of a Coastal Monitoring Programme for the City of Cape Town (City of Cape Town).
2009	South Africa	Sturrock Shipping (Pty) Ltd	Marine ecological expert responsible for assessment of marine fouling on vessel, Rita Knutsen.
2009	South Africa	Doug Jeffery Environmental Consultants	Assessment of the status and sensitivity of the coastal marine environment off Oudekraal on the Cape Peninsula

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2008-2011	South Africa	Century City Property Owners Association	Assessment of the effectiveness of a fish eradication programme conducted in the Century City wetlands and canals using the ichthyocide rotenone.
2008-2009	Tanzania, Kenya	Programme for the Sustainable Management of the Coastal Zone of the Countries of the Indian Ocean	Design and implementation of training courses and workshops on Information for Fisheries Co-Management in Dar es Salaam, Tanzania and Mombassa, Kenya.
2008	South Africa	Water Research Commission, Fresh Water Consulting Group	Marine specialist on a project to develop a classification system for wetlands in South Africa.
2008	South Africa	Water Research Commission (WRC)	Design and development of an integrated ecological-economic model to be used to assess freshwater flow requirements for the East-Kleinemonde estuary, a temporally open-closed estuary on the East coast of South Africa.
2008	South Africa	DCD-Dorbyl (Pty) Ltd	Environmental audit of Globe Engineering Works (Pty) Ltd, DCD-Dorbyl (Pty) Ltd and Natulis Marine (Pty) Ltd (Nautilus), three engineering companies based in the Port of Cape Town, South Africa
2008	Angola	Tullow Oil Plc	Environmental Impact Assessment, Environmental Overview and identification of Environmental Best Management Practise (BMP) required for seismic surveying and exploratory drilling for offshore oil and gas resources in Blocks 1, Angola.
2008	South Africa	Department of Environmental Affairs & Development Planning/SRK Consulting	Marine and coastal specialist contributing to the preparation of the State of the Environment Report (SoER) for the Western Cape Province, South Africa.
2008	South Africa	CSIR/Transnet National Ports Authority (Transnet-NPA)	Independent consultant appointed to review an Environmental Impact Assessment and Environmental Management Plan for dredging and dredge spoil disposal for the Ben Schoeman Dock, Port Of Cape Town.
2008	South Africa	Transnet National Ports Authority (Transnet-NPA)/SRK/PD Naidoo & Associates	Independent consultant appointed to review Marine Specialist study components of an Environmental Impact Assessment for extension of the iron ore export terminal and associated ore handling facilities in Saldanha Bay, South Africa
2007-2011	South Africa	Resource Ballast Technology (Pty) Ltd	Independent assessor of efficacy of a newly developed ballast water treatment system and evaluation (risk assessment) of the residual toxicity of ballast water treated with the system.

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2007-2011	South Africa	Department of Environmental Affairs & Tourism: Marine and Coastal Management (DEAT: MCM)	Shore based fisheries monitoring programme designed to assess levels of fishing mortality, stock abundance indices and to evaluate the effectiveness of management measures for the commercial and recreational linefishery, tuna pole and hake handline fishing in South African waters.
2007-2011	South Africa	Department of Environmental Affairs & Tourism: Marine and Coastal Management (DEAT: MCM)	Offshore, boat-based fisheries monitoring programme designed to supply and deploy aboard fishing vessels, competent, suitably trained and equipped scientific observers for the inshore trawl, hake longline and west coast rock lobster fisheries.
2007-2010	Ghana	Tullow Oil Plc	Environmental Impact Assessment, Environmental Overview and identification of Environmental Best Management Practise (BMP) required for seismic surveying and exploratory drilling for offshore oil and gas resources in the Tano shallow water and Deep water blocks in Ghana. (Three separate EIA studies).
2007	South Africa	Shelley Point Breakwater (Pty) Ltd/Doug Jeffery Environmental Consultants	Environmental Impact Assessment for the Shelly Point Small Craft Harbour.
2007	South Africa	University of Cape Town	Project supervisor on a study on fish populations in three False Bay estuaries (Zandvlei, Eerste and Lourens).
2006-2011	Tanzania	International Conservation Union (IUCN)/Pangani Water Basin Office, Tanzania	International mentor of the Estuary Team for a project entitled "Flows for People and the Environment: Supporting Sustainable Land Management in the Pangani Basin (Tanzania)".
2006-2007	South Africa	Cape Action Plan for People & the Environment (C.A.P.E.) and World Wildlife Foundation (WWF)	Project leader responsible for development of a fine scale conservation plan for the Agulhas Marine Bioregion.

Period	Country	Client	Project, Tasks
2006-2007	South Africa	Department of Science and Technology (DST) and the South African Environmental Observation Network (SAEON)	Consultant appointed to lead the process of developing a data management facility for the South African National Antarctica Programme (SANAP) in consultation with the SANAP research and management community.
2006	South Africa	Seaton Thompson and Associates and Tintswalo Atlantic (Pty) Ltd	Environmental Impact Assessment for a proposed guest lodge development at Koeelbaai, under Chapman's Peak Drive, in the Table Mountain National Park (TMNP)
2006	Mozambique	Ministry of Co-ordination of the Environment/ World Bank/European Union	Team leader (Expert level I) appointed to prepare a Country Environmental Profile for Mozambique.
2005-2008	South Africa	Port Nolloth Sea Farms (Pty) Ltd/ Department of Environmental Affairs and Tourism (DEAT)	Assessment of ecological impacts and biological and economic viability of abalone ranching in South African west coast.
2005-2007	Angola	BCLME Programme/ United Nation Development Programme (UNDP)/ UNOPS/Global Environment Facility (GEF)	Assessment of the status of biodiversity along the Angola coastline.
2005-2007	South Africa	Cape Action Plan for People & the Environment (C.A.P.E.), Cape Nature, and Department of Environmental Affairs & Tourism: Marine and Coastal Management (DEAT: MCM)	Biodiversity and economic assessment and development of an integrated conservation plan for CAPE estuaries.

Period	Country	Client	Project, Tasks
2005-2007	Angola, Namibia, South Africa	BCLME Programme/ United Nation Development Programme (UNDP)/ UNOPS/Global Environment Facility (GEF)	Assessment of human capacity, training and infrastructure available within the three countries bordering the BCLME – Angola, Namibia and South Africa.
2007, 2005	South Africa	Transnet-National Ports Authority (Transnet NPA)	Ballast water, flora and fauna survey in the Ports of Durban and Port Elizabeth.
2005	South Africa	Department of Environmental Affairs and Tourism (DEAT)	National State of the Environment Report (SoER) for South Africa.
2005	South Africa	Department of Environmental Affairs and Tourism (DEAT)	Assessment of the marine and coastal tourism potential for the Arniston fishing harbour.
2005	Angola, Namibia, South Africa	Benguela Current Large Marine Ecosystem (BCLME) Programme (UNDP/World Bank)	Development of and operationalisation of an affordable, sustainable and user-friendly State of Ecosystem Information System (SEIS) for the BCLME region (Angola, Namibia, South Africa).
2005	South Africa	National Empowerment Fund (NEF)	Due diligence (feasibility) study to assess the feasibility of a proposed eel aquaculture and processing operation in the Eastern cape, South Africa.
2005	South Africa	Department of Environmental Affairs & Tourism	Supervisor on a project to assess the socio-economic value and ecological impacts of the subsistence fishery for sand and mud prawns, and fish in the Knysna estuary, South Africa
2004-2017	South Africa	Saldanha Bay Water Quality Forum Trust (SBWQMFT)	Preparation of a series of “State of the Bay” Monitoring Programme and Reports for Saldanha Bay and Langebaan Lagoon in 2004, and annually between 2008 and 2017.
2004-2008	South Africa	WWF-SA/South African National Parks	Development and implementation of a coastal monitoring programme for the Table Mountain National Park Marine Protected Area.
2004-2005	South Africa	Department of Environmental Affairs and Tourism (DEAT)	Formulation of recommendations on an appropriate permit fees and permitting systems for recreational SCUBA divers and SCUBA diving tour operators in Aliwal Shoal, Pondoland, Bird Island, Tsitsikamma and Table Mountain National Park Marine Protected Areas (MPAs).
2004	South Africa	I & J	Environmental Impact Assessment for an abalone farm at Danger Point, Western Cape.

Period	Country	Client	Project, Tasks
2004	DRC, Angola, Namibia, South Africa, Mozamb., Tanz., Mauritius, Seychelles	EU-SADC MCS Fisheries Programme	Production of instructional material and the holding of a seminar on the effects of pollutants, illegal fishing methods and the requirements of relevant conventions signed by the SADC states.
2004	South Africa	City of Cape Town	Environmental Impact Assessment for a coastal walkway between St James and Kalk Bay, in False Bay, South Africa.
2004	South Africa	City of Cape Town	Environmental Impact Assessment to assess impacts of an education centre and tidal pool, at Bordjiesrif in False Bay, South Africa.
2004	Mozambique	Southern African Development Community/ Government of Mozambique	Production of a policy document and strategy for fisheries Monitoring Control Surveillance in Mozambique.
2004	South Africa	Botanical Society of South Africa	Preparation of guidelines to assist environmental assessment practitioners in selecting biodiversity specialists for involvement in Environmental Impact
2004	Southern Africa	IPCC/ START Programme	Desktop assessment of the likely impacts of climate change on estuaries in southern Arica.
2004	South Africa	EKZN Wildlife Service/ Department of Environmental Affairs and Tourism (DEAT)	Review and assessment of the management of subsistence fisheries in KwaZulu-Natal, South Africa.
2003-2005	South Africa	Department of Water Affairs & Forestry (DWAF)	Project manager, estuarine coordinator and fisheries specialist on the Berg River Baseline Monitoring Programme.
2003-2004	South Africa/ Namibia/ Angola	BCLME Programme/ UNDP/ UNOPS/ GEF	Capacity and Needs Assessment for the Benguela Current Large Marine Ecosystem (BCLME) Project involving three countries – Angola, Namibia and South Africa.
2003-2004	South Africa	Makana Marine and Projects	Environmental Impact Assessment for the development of a new ship repair facility in the Port of Cape Town.
2003-2004	South Africa	World Wildlife Fund, South Africa (WWF-SA)	Production of a business plan for the proposed Kogelberg Marine Park.
2003-2004	South Africa	Department of Environmental Affairs and Tourism (DEAT)	Strategic Environmental Assessment to guide the implementation of regulations promulgated under the National Environmental Management Act 1998: Control of Vehicles in the Coastal Zone.

Period	Country	Client	Project, Tasks
2003	South Africa	Global Ballast Programme/ IMO/UNDP/ GEF	Development of a Ballast Water Management Plan for the Port of Saldanha, South Africa.
2003	South Africa, Namibia and Angola	Global International Waters Assessment (GIWA) Programme/ GEF	Global International Water Assessment (GIWA) for the Benguela region (South Africa, Namibia and Angola).
2002-2003	South Africa	Cape Action for People and the Environment / World Bank/ UNDP	Lead consultant on the Marine and Coastal Component of the Cape Action for People and the Environment (C.A.P.E.) programme responsible for the developing components of the Project Concept Document (PCD) and Project Implementation Plan (PIP).
2002-2003	Namibia	Namdeb Diamond Company	Environmental Impact Assessment for the Wet Overburden Mining System in Mining Area 1, Oranjemund, Namibia.
2002-2003	South Africa	Department of Environmental Affairs & Tourism	Assessment of the quantity of abalone caught by recreational fishers during the 2002/2003 fishing season.
2002-2003	South Africa	Water Research Commission, Department of Water Affairs & Forestry	Assessment of the relative contribution and importance of individual estuaries to overall estuarine biodiversity in South Africa.
2002-2003	South Africa	National Ports Authority/ Global Ballast Programme	Baseline survey of subtidal reef biota and reef fish off Jaheel & St Croix Islands, Algoa Bay.
2002	Africa	GEF/UNDP UNESCO/IOC/ACOPS	Regional Technical Coordinator for the Working Group on Sustainable Use of Living Resources as part of Phase 2 of the GEF MSP Sub-Saharan Africa Project (GF/6010-0016): Development and Protection of the Coastal and Marine Environment in Sub-Saharan Africa.
2002	South Africa	Department of Environmental Affairs & Tourism	Acoustic tracking study of the West Coast rock lobster (<i>Jasus lalandii</i>) in the Hermanus Whale Sanctuary, on the south-west coast of South Africa.
2002	Namibia	Namdeb Diamond Company	Environmental assessment of sandy beaches in Mining Area 1, Oranjemund, Namibia and an environmental baseline study in a previously unexploited area on the coast.
2002	South Africa	National Research Foundation	Launch the Marine and Coastal Node of the South African Environmental Observatory Network (SAEON) programme.
2002	South Africa	Department of Environmental Affairs & Tourism	Assessment of sardine migration habitats off the East coast of South Africa.

Period	Country	Client	Project, Tasks
2002	South Africa	Department of Environmental Affairs & Tourism	Fisheries monitoring programme for an experimental hoop-net fishery for west coast rock lobster off Cape Hangklip, South Africa.
2002	South Africa	University of Rhode Island/ History of Marine Animal Populations	Desktop assessment of the likely impacts of climate change on the ecosystem functioning and fisheries of the Benguela ecosystem, South Africa.
2002	Seychelles		Assessment of the status of fisheries, fish stocks, and approaches to fisheries management in the Seychelles
2001-2002, 2009-2010	South Africa	Department of Environmental Affairs & Tourism	Assessment of the quantity of west coast rock lobster caught by recreational fishers during the 2001/2002 and 2009/2010 fishing seasons.
2001-2003	South Africa	Department of Environmental Affairs & Tourism/ Rhodes University	Economic Sectoral Study of the South African Fishing Industry.
2001-2002	South Africa	AECI/SYNEXUS	Assessment of risks to marine life and human health resulting from disposal of contaminated groundwater from the Umbogintwini waste disposal site.
2001	South Africa	GEF/UNDP/IMO Global Ballast Programme	Ballast water fauna and flora survey in the Port of Saldanha.
2001	South Africa	Nitrogen Products	Marine specialist on an EIA to assess impacts of effluent disposal on the marine environment from a fertilizer factory.
2001	South Africa	Maribus Industries	Application for a seawater lease and mariculture permit for a Gracilaria farm in St Helena Bay, South Africa
2001	United Arab Emirates	Dubai Municipality/ Martin Mid-East	Assessment of impacts of effluent discharges and shipbuilding activities on Dubai Creek, UAE.
2000-2002	South Africa	South African National Parks	Marine Coordinator Cape Peninsula National Park, responsible for the design and development of a marine component for the newly established Cape Peninsula National Park.
2000-2002	South Africa	Freshwater Consulting Group	Assessment and monitoring changes in the fish community of the Koekdou River following construction of a new dam on the system
2000-2001	Africa	GEF/UNDP UNESCO/IOC/ACOPS	National coordinator for South Africa on Phase 1 of the GEF MSP Sub-Saharan Africa Project (GF/6010-0016): Development and Protection of the Coastal and Marine Environment in Sub-Saharan Africa.
2000-2001	South Africa	SRK Consulting and PD Naidoo and Associates	Environmental Impact Assessment of potential impacts of the extension of the iron ore handling facility in Saldanha Bay on the marine environment and mariculture activities.

Period	Country	Client	Project, Tasks
2000	South Africa	City of Cape Town/ Southern Water Ecological Research and Consulting	Environmental Impact Assessment for the upgrade of a rubble weir and other mouth management options for the Zandvlei estuary.
2000	South Africa	On Track Developments/ Chand Environmental	Environmental Impact Assessment for the redevelopment of the Sea Point Pavilion site, Cape Town
2000	South Africa	City of Cape Town/ Southern Water Ecological Research and Consulting	Freshwater fish specialist on the Zeekoeivlei and Rondevlei restoration project.
2000	Africa	SURVAS	National representative on the SURVAS Network tasked with assessing Vulnerability & Adaptation to Impacts of Accelerated Sea-Level Rise in Africa.
1999-2000	South Africa	United States Department of Energy/ Department of Environmental Affairs and Tourism, South Africa	Assessment of the effects of climate change on marine biodiversity in South Africa.
1999-2000	South Africa	Foundation for Research Development	Assessment of impacts of exploitation of wonderworm <i>Marphysa sanguinea</i> on bouldershore habitats on the Cape Peninsula, South Africa.
1999-2000	South Africa	Department of Environmental Affairs & Tourism, South Africa	National Co-ordinator of the Subsistence Fisheries Programme designed to identify subsistence fishing communities in South Africa, to assess socio-economic profiles and resource harvesting techniques and to provide recommendations for the implementation of appropriate management systems for these fishers.
1999	South Africa	Ridge Management/ Eric van den Honert Environmental Consulting	Environmental Impact Assessment for for the Soetwater Mariculture Project (an abalone and seaweed aquaculture initiative) on the marine environment.
1999	South Africa	City of Cape Town/ Southern Water Ecological Research and Consulting	Environmental Impact Assessment for the construction of a foot bridge over the Zandvlei estuary.
1999	South Africa	City of Cape Town/ Southern Water Ecological Research and Consulting	Environmental Impact Assessment for flood mitigation measures (artificial wetland) on the Silvermine estuary.

Period	Country	Client	Project, Tasks
1999	South Africa	City of Cape Town/ Freshwater Consulting Group	Fish specialist appointed to assess the ecological importance of Zoarvlei (a freshwater wetland) for marine, estuarine and freshwater fish species.
1999	South Africa	City of Cape Town/ Southern Water Ecological Research and Consulting	Environmental Impact Assessment for upgrading the Zandvleit Wate Water Treatment Works on the Eerste estuary.
1999	South Africa	Jakobsbaai Abalone Farm	Assessment of the application of anolytes to control red-tide dinoflagellates <i>Scripsiella trochoidea</i> in the mariculture industry.
1999	South Africa	Southern Water Ecological Research and Consulting	Guidelines for stocking Capricorn Lake (a shallow dendritic lake in the Capricorn Science and Business Park Lake) with fish
1998-1999	Mozambique	ARCO International Oil and Gas Company/ Austral	Environmental Impact Assessment for onshore and offshore seismic exploration and exploratory drilling for oil and gas in Sofala Bay (Beira) area in Mozambique.
1998-1999	South Africa/ Namibia/ Angola	GEF/UNDP/ Benguela Current Large Marine Ecosystem Programme (BCLME)	Production of an "Integrated Overview of Diamond Mining in the Benguela Current Region" as part of the synthesis and assessment of information on the Benguela Current Large Marine Ecosystem (BCLME) project.
1998	Namibia	Government of Namibia/ Desert Research Foundation of Namibia	Environmental Impact Assessment for a new Fishing Port at Möwe Bay, Skeleton Coast, Namibia.
1998	Namibia	Namdeb Diamond Company	Environmental Impact Assessment for the Elizabeth Bay Mine, Lüderitz, Namibia.
1998	South Africa	Marine Diamond Mines Association/ Sue Lane & Robin Carter & Associates	Generic Environmental Baseline Report on the status of the marine environment, fisheries and coastal utilisation in the South African west coast marine diamond 'a' concession areas, surf zone and admiralty strip.
1998	South Africa	Blaauberg Municipality/ World Wide Fund for Nature (WWF-SA)	Assessment of the intensity and impact of bait collecting activities on the ecology of the Diep River estuary, South Africa.
1998	South Africa	De Beers Namaqualand/ Gibb Africa	Environmental Impact Assessment for the construction of a bridge across the Buffels estuary near Kleinzee.

Period	Country	Client	Project, Tasks
1997-2012	Namibia	Namdeb Diamond Company	Baseline and Environmental Impact Assessment for beach diamond mining in the Bogenfels Mining Licence Area in the Sperrgebiet, Namibia. Sequential appointment for studies undertaken in 1997, 1998, and annually from 2004-2011.
1997-1998, 2000-2001, 2009-2011	South Africa	Department of Environmental Affairs & Tourism/ Department of Agriculture, Forestry & Fisheries	Implementation of an offshore, boat-based fisheries monitoring programme designed to supply and deploy aboard fishing vessels, competent, suitably trained and equipped scientific observers for the offshore trawl, inshore trawl, hake longline and west coast rock lobster fisheries.
1997-1998	South Africa	Foundation for Research Development/ University of Cape Town	Assessment of the enhanced utilisation and management of demersal fish resources off the east, south and west coasts of South Africa.
1997	United Arab Emirates	Adnoc-Borealis Petrochemicals/Martin Mid-East	Environmental Impact Assessment and Baseline Survey for a new petro-chemicals plant in Dubai, UAE.
1996	South Africa	Rein's Nature Reserve	Assessment of the status of exploited marine species in a small marine reserve near Mossel Bay, South Africa.
1994-1996	South Africa	Sea Fisheries Research Institute/ Worldwide Fund for Nature (SA)	Assessment of the impact of commercial beach-seine netting on the fish and invertebrates in False Bay, South Africa.
1990	South Africa	Seafarm Products	Assessment of the impact of fish predation on the cultured mussel, <i>Mytilus galloprovincialis</i> , in the Seafarm Dam, South Africa.

PUBLICATION RECORD

Thesis

Clark, B.M. 1997. Dynamics and utilization of surf zone habitats by fish in the south-western Cape, South Africa. PhD Thesis, University of Cape Town, 216 pp.

Scientific papers

SHELTON, J.M., CLARK, B.M., SEPHAKA, T. & TURPIE, J.K. 2016. Population crash in Lesotho's endemic Maloti minnow *Pseudobarbus quathlambae* following invasion by translocated smallmouth yellowfish *Lebeobarbus aeneus*. *Aquatic Conservation: Marine and Freshwater Ecosystems*. DOI: 10.1002/aqc.2633.

- Clark, B.M.** 2009. Introduction – The Berg River Baseline Monitoring Programme. Transactions of the Royal Society of South Africa 64(2): 95,
- Clark, B.M.** & S. Taljaard. 2009. Historic changes in inorganic nutrient loading and its effects on water quality biota of the Berg estuary, South Africa. Transactions of the Royal Society of South Africa 64(1) In press
- Clark, B.M.,** Hutchings, K. & Lamberth, S.J. 2009. Long-term variations in composition and abundance of fish in the Berg estuary, South Africa. Transactions of the Royal Society of South Africa 64(2): 238–258.
- Clark, B.M.,** Impson, D. & J. Rall. 2009. Present status and historical changes in the fish fauna of the Berg River, South Africa. Transactions of the Royal Society of South Africa 64(2): 142–163
- Clark, B.M.** 2005. Climate change: A looming challenge for fisheries management in southern Africa. Marine Policy 30 (1): 84-95.
- Clark, B.M.,** Hauck, M., Harris, J., Salo, K. and E. Russell. 2002. Identification of subsistence fishers, fishing areas, resource use and activities. South Africa Journal of Marine Science 24: 425-438.
- Clark, B.M.** 1996. Variation in surf zone fish community structure across a wave exposure gradient. *Est. cstl. Shelf Sci.* 44: 659-674.
- Clark, B.M.** 1996. Marine diamond mining activities off Namibia: do they really pose a threat to island biota? *S.A. Comm. Mar.* 5(3): 16.
- Clark, B.M.** & B.A. Bennett 1993. Are juvenile fish an issue in the trek net controversy? *Fish, fishers and fisheries, Proc. 2nd Mar. Recreational Angling Symp., Durban, October 1992.* Beckley, L.E. & R.P. van der Elst (eds.) *Spec. Publ. oceanogr. Res. Inst. S. Afr.* 2: 157-159.
- Clark, B.M.,** B.A. Bennett & S.J. Lamberth 1994. A comparison of the ichthyofauna of two estuaries and their adjacent surf-zones, with an assessment of the effects of beach-seining on the nursery function of estuaries for fish. *S. Afr. J. mar. Sci.* 14: 121-131.
- Clark, B.M.,** B.A. Bennett & S.J. Lamberth 1994. Assessment of the impact of commercial beach-seine netting on juvenile teleosts in the surf-zone of False bay, South Africa. South Africa Journal of Marine Science 14: 255-262.
- Clark, B.M.,** B.A. Bennett & S.J. Lamberth 1996. Factors affecting spatial variability in seine net catches of fish in the surf-zone of False Bay, South Africa. *Mar. Ecol. Prog. Ser.* 131: 17-34.
- Clark, B.M.,** B.A. Bennett & S.J. Lamberth 1996. Temporal variations in surf-zone fish assemblages from False Bay, South Africa. *Mar. Ecol. Prog. Ser.* 131: 35-47.
- Branch, G.M. and **Clark, B.M.** 2006. Fish stocks and their management: The changing face of fisheries in South Africa. *Marine Policy* 30 (1): 3-17.
- Hutchings, K., **Clark, B.M.,** Atkinson, L.J. & C. G. Attwood. 2008. Evidence of recovery of the linefishery in the Berg River Estuary, Western Cape, South Africa, subsequent to closure of commercial gillnetting. *African Journal of Marine Science* 2008, 30 (3): 507–517.
- Napier V.R., J.K. Turpie & **B.M. Clark.** 2009. Value and management of the subsistence fishery at Knysna estuary, South Africa. *African Journal of Marine Science* In press

- Branch, G.M., May, J., Roberts, B., Russell, E., **Clark, B.M.** 2002. Case studies on the socio-economic characteristics and lifestyles of subsistence and informal fishers in South Africa. *South Africa Journal of Marine Science* 24: 439-462.
- Cockroft, A.C., Sauer, W., Branch G.M., **Clark, B.M.**, Dye, A. H. and E. Russell. 2002 - Assessment of resource availability and sustainability for subsistence fishers in South Africa with a review of resource management procedures. *South Africa Journal of Marine Science* 489-502.
- Griffiths, C. L., L. van Sittert, P. B. Best, A. C. Brown, **B.M. Clark**, P. A. Cook, R. J. M. Crawford, J. H. M. David, B. R. Davies, M. H. Griffiths, K. Hutchings, A. Jerardino, N. Kruger, S. Lamberth, R. Leslie, R. Melville-Smith, R. Tarr & C. D. van der Lingen, 2004. Impacts of human activities on marine animal life in the Benguela – An historical overview. *Oceanogr. Mar. Biol. Ann. Rev.* 42, 303-392.
- Harris, J.M., Branch, G.M., **Clark, B.M.**, Coetzee, C., Dye, A.H., Hauck, M., Johnson, A., Kati-Kati, L., SiqWano-Ndulo, N., and M. Sowman. 2002. Recommendations for the management of subsistence fishers in South Africa. *South Africa Journal of Marine Science* 24: 503-523.
- Harris, J.M., Sowman, M., Branch, G.M., **Clark, B.M.**, Cockroft, A.C., Coetzee, C., Dye, A.H., Hauck, M., Johnston, A., Kati-Kati, L., Maseko, Z., Salo, K., Sauer, W.H.H., Siqwana-Ndulo, N. and J. Beaumont. 2002. The process of developing a management system for subsistence fisheries in South Africa: recognizing and formalizing a marginalized fishing sector in South Africa. *South Africa Journal of Marine Science* 24: 405-424.
- Hauck, M., Sowman, M., Russel, E., **Clark, B.M.**, Harris, J.M., Venter, A., Beaumont, J. and Z. Maseko. 2002. Perceptions of subsistence and informal fishers in South Africa. *South Africa Journal of Marine Science* 24: 464-474
- Lamberth, S.J., B.A. Bennett & **B.M. Clark** 1994. The catch composition of commercial beach-seine fishermen in False Bay, South Africa. *S. Afr. J. mar. Sci.* 14: 69-78.
- Lamberth, S.J., B.A. Bennett & **B.M. Clark** 1995. The vulnerability of fish to capture by commercial beach-seine nets in False Bay, South Africa. *S. Afr. J. mar. Sci.* 15: 25-31.
- Lamberth, S.J., B.A. Bennett & **B.M. Clark** 1995. Seasonality of beach-seine catches in False Bay, South Africa, and implications for management. *S. Afr. J. mar. Sci.* 15: 157-167.
- Lamberth, S.J., B.A. Bennett & **B.M. Clark** 1995. The impact of beach-seine netting on the benthic fauna and flora of False Bay, South Africa. *S. Afr. J. mar. Sci.* 15: 157-167.
- Lamberth, S.J., Bennett, B.A. & **B.M. Clark**. 1995. It's nothing new. *S.A. Comm. Mar.* 2(4): 29.
- Lamberth, S.J. & **B.M. Clark**. 1995. Attempts to resolve the conflict between recreational anglers and beach-seine fishermen in False Bay, South Africa. In: *Proc. 1st Pan African Fisheries Congress, Nairobi, Kenya, July-August 1995. Fish Manage. Ecol.*
- Lamberth SJ, Branch GM & **BM Clark** 2010. Estuarine refugia and fish responses to a large anoxic, hydrogen sulphide, "black tide" event in the adjacent marine environment. *Est. cstl. Shelf Sci.* 86: 203-215

- Lamberth, S.J., W.H.H. Sauer, B.Q. Mann, S.L. Brouwer, **B.M. Clark** & C. Erasmus. 1997. The current status of the South African beach-seine and gill-net fisheries. *S. Afr. J. mar. Sci.* 18: 195-202
- Napier, V.R., Turpie, J.K. & **B.M. Clark**. 2009. Value and management of the subsistence fishery at Knysna Estuary, South Africa. *African Journal of Marine Science* 31(3): 297–310.
- Parker, D., Kerwath, S.E., Næsje, T.F., Arendse, C.J., Keulder-Stenevik, F.J., Hutchings, K. , **Clark, B.M.**, Winker, H, Cowley, P.D. and CG Attwood. 2017. When plenty is not enough: an assessment of the white stumpnose (*Rhabdosargus globiceps*) fishery of Saldanha Bay, South Africa. *African Journal of Marine Science* 2017, 39(2): 153–166.
- Solanofernández, S., Attwood, C.G., Chalmers, R. **Clark, B.M.**, Cowley, P.D., Fairweather, T., Fennessy, S.T., Götz, A., Harrison, T.D., Kerwath, S.E., Lamberth, S.J., Mann, B.Q., Smale M.J. & L. Swart. 2012. Assessment of the effectiveness of South Africa's marine protected areas at representing ichthyofaunal communities. *Environmental Conservation* 39 (03): 259-270

Books/Book Chapters

- Turpie, J., **Clark, B.M.**, Knox, D., Martin, P., Pemberton, C. & C Savy. 2004. Contributions to Information Requirements for the Implementation of Resource Directed Measures for Estuaries. Volume 1. Improving the biodiversity importance rating of South African estuaries. JB Adams (Ed.). Report to the Water Research Commission by the Consortium for Estuarine Research and Management. WRC Report No. 1247/1/04.
- De Villiers CC, Brownlie S, **Clark B.M.**, Day EG, Driver A, Euston-Brown DIW, Helme NA, Holmes PM, Job N, Rebelo AB (2005) Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape. Fynbos Forum and Botanical Society of South Africa, Kirstenbosch. ISBN 0-620-35258-2
- Harris, J.M., Branch, G.M., **Clark, B.M.** & S.C. Sibiya. 2007. Redressing Access Inequities and Implementing Formal Management Systems for Marine and Estuarine Subsistence Fisheries in South Africa. In: T.R. McClanahan and J.C. Castilla (eds.) *Fisheries Management: Progress towards Sustainability*. Blackwell Press, pp. 112-138.
- Niang, I., Nyong, A., **Clark, B.M.**, Desanker, P., Din, N., Githeko, A., Jalludin, M., Osman, B. (2007) Vulnerability, Impacts and Adaptation to Climate Change. In: Otter, L., Olago, D.O. and Niang, I. (eds) *Global Change Processes and Impacts in Africa: A Synthesis*. START/East African Educational Publishers, Nairobi, pp. 226-249.

CHERUSCHA SWART

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NATIONALITY: South African

ACADEMIC QUALIFICATIONS

MSc (Cum Laude) Biodiversity and Ecology (Zoology), Stellenbosch University, 2015 – 2017

BSc (Hons) Biodiversity and Ecology, Stellenbosch University, 2013

BSc Biodiversity and Ecology, Stellenbosch University, 2010 – 2012

COUNTRY EXPERIENCE: South Africa

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EMPLOYMENT HISTORY: 2018 – Present — Environmental Consultant and Environmental Assessment Practitioner: Anchor Environmental Consultants
2014 – 2017 — Assistant Research Consultant: Stellenbosch University
2014 – 2015 — Research Intern: National Research Foundation

SUMMARY PROFILE

Cheruscha is very passionate about the natural environment and its conservation. She attained a Master of Science degree (MSc) in Zoology (Cum Laude) and an Honours (BSc Hons) and a Bachelor of Science degree (BSc) in Biodiversity and Ecology (terrestrial and marine biodiversity and ecology, impact assessments, conservation biology, plant and animal sciences), from the University of Stellenbosch. Her interests include biodiversity and conservation planning, invasion biology, environmental legislation and management and sustainable development. She has eight years of research and consulting experience in several disciplinary fields, three of which have been spent conducting Basic and Scoping and Environmental Impact Assessments. Her training and experience have made her highly competent within a variety of disciplines, including environmental monitoring and impact assessments, terrestrial and marine ecology, invasion biology, conservation biology and marine invertebrate taxonomy and biology. Within Anchor Environmental Consultants, her primary role is that of Environmental Assessment Practitioner, leading consultant on several environmental specialist studies and collaborating consultant on several other projects. Tasks include applications for prospecting, ranching and other operational rights, environmental licenses and environmental authorisations; specialist impact assessments and baseline studies; environmental monitoring of important conservation and disturbed habitats; and monitoring environmental compliance of various operations. Projects include, amongst others, land-based and offshore prospecting operations; offshore mining operations; greenhouse agricultural projects; land- and sea-based aquaculture facilities; and monitoring the health of bays and ports along the West Coast. Cheruscha is the author of three peer reviewed scientific publications and numerous scientific reports, with several other projects and publications in preparation.

PROJECTS UNDERTAKEN

Period	Country	Clients	Project, Tasks
2022/2023	South Africa	Xwena Kaolin	<p>Scoping & Environmental Impact Assessment and application for prospecting rights: Prospecting of kaolin and silica in the Western Cape</p> <p>Tasks</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; • Applying for prospecting rights and Environmental Authorisation; • Conducting a Scoping and Environmental Impact Assessment; • Compiling Scoping and Environmental Impact Assessment (S&EIA) Report; • Compiling Environmental Management Programme (EMPr); and • Conducting several Public Participation Processes.
2022/2023	South Africa	I&J Danger Point	<p>Abalone ranging right application & Risk Assessment</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Applying for abalone ranching right; • Public Participation Process; and • Conducting Risk Assessment for application.
2022 (ongoing)	South Africa	Buffeljags Abalone	<p>Environmental Authorisation amended application</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Applying for environmental authorisation amendment.
2021 - present (2022)	South Africa	Drylands	<p>Basic Assessment Process for a proposed agricultural development on a farm along the west coast of South Africa</p> <p>Tasks - ongoing</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; • Applying for Environmental Authorisation; • Conducting a Basic Assessment Process; • Compiling a Basic Assessment Report; • Compiling Environmental Management Programme (EMPr); • Conducting several Public Participation Processes; and • Conducting site visits and selected specialist assessments and compliance statements.

2022/ 2023	South Africa	Drylands	<p>Basic Assessment Process for a proposed agricultural development on a mine in the Northern Cape of South Africa</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; • Applying for Environmental Authorisation; • Conducting a Basic Assessment Process; • Compiling a Basic Assessment Report; • Compiling Environmental Management Programme (EMPr); • Conducting several Public Participation Processes; and • Conducting site visits and selected specialist assessments and compliance statements.
2019 – present (2022)	South Africa	Saldanha Bay Water Quality Forum Trust	<p>The State of Saldanha Bay and Langebaan Lagoon: Annual Monitoring Campaign</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Annual monitoring of the bay and surrounding environment. This includes: <ul style="list-style-type: none"> ○ Field research, sample and data collection; ○ Identification of Invertebrate species (taxonomy) collected during sampling; ○ Statistical analyses; ○ Writing of several chapters of the final report; and ○ Report compilation and editing.
2018 – present (2022)	South Africa	De Beers Marine Namibia	<p>De Beers Marine Namibia Environmental Monitoring Programme in the Atlantic 1 Mining License Area: Annual Benthic Sampling Campaign</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Annual monitoring of mining activities on the environment. This includes: <ul style="list-style-type: none"> ○ Identification of Invertebrate species (taxonomy) collected during sampling; ○ Identification of epifaunal species by means of benthic imagery analysis collected with SkiMonkey; ○ Statistical analyses of data using Statistica and Primer; and ○ Writing of several chapters of the final report.
2021/2022	South Africa	SANEK Liquidators	<p>Stonehurst mountain Estate Phase 4 Development – Environmental Site Officer (ESO)</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Monitoring work to ensure compliance with the EMP; • Liaising with stakeholders and contractors on environmental related matters;

			<ul style="list-style-type: none"> • Providing environmental awareness training to the Contractors; • Finding environmentally acceptable solutions to construction problems and updating the EMP accordingly; and • Reviewing ESO reports.
2021/2022	South Africa	Trans Atlantic Diamonds	<p>Basic Assessment Process and application for prospecting rights in an offshore sea concession 9B in the Northern Cape (application pending)</p> <p>Tasks</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; and • Applying for prospecting rights and Environmental Authorisation.
2021/2022	South Africa	Trans Atlantic Diamonds	<p>Basic Assessment Process and application for prospecting rights in an offshore sea concession 10B in the Northern Cape (application pending)</p> <p>Tasks</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; and • Applying for prospecting rights and Environmental Authorisation.
2021/2022	South Africa	Trans Atlantic Diamonds	<p>Basic Assessment Process and application for prospecting rights in an offshore sea concession 7C in the Northern Cape (application pending)</p> <p>Tasks</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; and • Applying for prospecting rights and Environmental Authorisation.
2021/2022	South Africa	Trans Atlantic Diamonds	<p>Application for prospecting rights in the sea concession area 12B, Western Cape (application pending)</p> <p>Tasks</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; • Applying for prospecting rights and Environmental Authorisation; • Conducting a Basic Assessment Process; and • Compiling a Basic Assessment Report.
2021/2022	South Africa	Trans Atlantic Diamonds	<p>Basic Assessment Process and application for prospecting rights in the offshore sea concession area 14C, Western Cape</p> <p>Tasks</p>

			<ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; • Applying for prospecting rights and Environmental Authorisation; • Conducting a Basic Assessment Process; • Compiling a Basic Assessment Report; • Compiling Environmental Management Programme (EMPr); and • Conducting several Public Participation Processes.
2021/2022	South Africa	Trans Atlantic Diamonds	<p>Basic Assessment Process and application for prospecting rights in the offshore sea concession area 11C, Western Cape</p> <p>Tasks</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; • Applying for prospecting rights and Environmental Authorisation; • Conducting a Basic Assessment Process; • Compiling a Basic Assessment Report; • Compiling Environmental Management Programme (EMPr); and • Conducting several Public Participation Processes.
2021	South Africa	Trans Atlantic Diamonds	<p>Basic Assessment Process and application for prospecting rights in the inshore sea concession area 14A, Western Cape</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Fulfilling the primary duties of the Environmental Assessment Practitioner; • Applying for prospecting rights and Environmental Authorisation; • Conducting a Basic Assessment Process; • Compiling a Basic Assessment Report; • Compiling Environmental Management Programme (EMPr); and • Conducting several Public Participation Processes.
2021/2022	South Africa	SRK Consulting	<p>Marine Impact Assessment for the increase in manganese handling capacity at the Multi-Purpose Terminal, Port of Saldanha, Saldanha Bay, South Africa</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Literature review and research; • Baseline survey of the environment; • Marine Specialist Impact Assessment; and • Final Marine Specialist Impact Assessment Report.

2021	South Africa	Nomalungelo Faku	<p>Feasibility study for a pearl farm in the greater Nelson Mandela metropolitan area</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Literature review and research: <ul style="list-style-type: none"> ○ Biological and environmental requirements of candidate oyster species for pearl culturing in Algoa Bay, South Africa; ○ Environmental suitability of the receiving environment; ○ Legislative requirements of the pearl farming industry, • International and local market assessment and financial assessment of pearls and pearl culturing; • Development of a basic economic model; and • Compilation of report to support decision making and business plan development.
2021	South Africa	Cliff Path Action Group	<p>Marine Environmental Impact Assessment for the Proposed Pedestrian Path to Connect the two Parts of the Hermanus Cliff Path via Poole’s Bay</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Literature review and research; • Baseline survey of the environment; • Marine Specialist Impact Assessment; and • Final Marine Specialist Impact Assessment Report.
2018 – 2021	South Africa	Mhlathuze Water	<p>Mhlathuze Water Environmental Monitoring Programme for the Richards Bay Offshore Outfalls Region</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Monitoring of the state of the bay. This included: <ul style="list-style-type: none"> ○ Identification of Invertebrate species (taxonomy) collected during sampling; ○ Statistical analyses; and ○ Conducting sea urchin toxicity testing.
2020	South Africa	Planet Capital and Cape Nordic Corporation	<p>Proposed Land-based Aquaculture Facility near Elands Bay – Bat Specialist Impact Survey and Assessment</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Literature review and research; • Bat Specialist survey, acoustic monitoring and Impact Assessment; • Data analysis; and • Final Bat Specialist Impact Assessment Report.
2020	South Africa	CSIR Coastal Systems	<p>CSIR Coastal Systems Research Group</p> <p>Tasks:</p>

		Research Group	<ul style="list-style-type: none"> • Identification of benthic invertebrate macrofauna.
2020	South Africa	Department of Environmental Affairs and Development Planning	<p>Berg Estuary Valuation Study: Value of The Berg Estuary and Importance of Management Interventions</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Coordinating informal meetings; and • Engaging and consulting with members of the local community.
2019/2020	South Africa	Planet Capital and Cape Nordic Corporation	<p>Basic Assessment Process for the Proposed Land-based Aquaculture Facility near Elands Bay on the West Coast of South Africa</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Assisting with the Basic Assessment Process under the supervision of the EAP; • Conducting site visits; • Assisting with compilation of the Basic Assessment Report and Environmental Management Programme; and • Managing stakeholder database, engagement and public participation process.
2019	South Africa	Department of Agriculture, Forestry & Fisheries	<p>Basic Assessment Process for the Proposed Sea-Based Aquaculture Development Zone in Algoa Bay, Eastern Cape</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Assisting with the Basic Assessment process under the supervision of the EAP; • Assisting with compilation of the Basic Assessment Report and Environmental Management Programme; and • Managing stakeholder database, engagement and public participation process.
2019	South Africa	Doring Bay Abalone	<p>Draft Environmental & Risk Assessment for an Application for a Right to Engage in an Abalone Ranching Pilot Project</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Managing stakeholder database, engagement and public participation process.
2019	South Africa	Mozal Alumium Smelter	<p>Estuarine Specialist Report for the Mozal Matola River Pipeline, Mozambique: Estuarine Impact Assessment</p> <p>Tasks:</p> <ul style="list-style-type: none"> • Identification of Invertebrate species (taxonomy) collected during sampling; • Statistical analyses; and

			<ul style="list-style-type: none"> • Report writing.
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MSc THESIS

SWART C (2017) An assessment of invasive predatory marine crabs and the threat they pose along the South African coastline. MSc Thesis, Stellenbosch University, 154 pp.

PUBLICATION RECORD — ARTICLES

SWART C AND ROBINSON TB (2019) Horizon scanning for alien predatory crabs: insights from South Africa. African Journal of Marine Science 41(2): 125 – 135, DOI: 10.2989/1814232X.2019.1588782

SWART C, VISSER V AND ROBINSON TB (2018) Patterns and traits associated with invasions by predatory marine crabs. NeoBiota 39: 79 – 102. <https://doi.org/10.3897/neobiota.39.22002>

ROBINSON TB AND **SWART C** (2015) Distribution and impact of the alien anemone *Sagartia ornata* in the West Coast National Park. *Koedoe* 57 (1): DOI: 10.4102/koedoe.v57i1.1246

SEDICK S, CLARK D, GIHWALA K, **SWART C** (2022) The description of a new species of Nereis (Annelida, Nereididae) from the shallow waters of southern Namibia. In prep.

PUBLICATION RECORD — TECHNICAL REPORTS

SWART C, HUTCHINGS K, DALASILE S AND CLARK BM. 2022. Draft Scoping Report: Environmental Impact Assessment for Prospecting Rights with Bulk Sampling for kaolin and silica by Xwena Kaolin (Pty) Ltd, Western Cape. Report no. 2020/1 prepared by Anchor Environmental (Pty) Ltd for Xwena Kaolin (Pty) Ltd. In prep

SWART C, DALASILE S, SEDICK S AND CLARK BM .2022. Basic Assessment Report for proposed prospecting in Sea Concession Area 12B by Trans Atlantic Diamonds (Pty) Ltd. Report no. 1962 prepared by Anchor Environmental Consultants (Pty) Ltd for Trans Atlantic Diamonds (Pty) Ltd. In prep.

SWART C, DALASILE S, SEDICK S AND CLARK BM. 2022. Basic Assessment Process for the proposed prospecting in Sea Concession Area 12B by Trans Atlantic Diamonds (Pty) Ltd. Part B: Environmental Management Programme. Report no. 1962/B prepared by Anchor Environmental (Pty) Ltd for Trans Atlantic Diamonds (Pty) Ltd. In prep.

SWART C, HUTCHINGS K, SEDICK S, DALASILE S, WRIGHT A AND CLARK BM. 2022. Draft Basic Assessment Report for the proposed prospecting in Sea Concession Area 14C by Trans Atlantic Diamonds (Pty) Ltd. Part B: Environmental Management Programme. Report no. 2006/1. Part B. Prepared by Anchor Environmental (Pty) Ltd for Trans Atlantic Diamonds (Pty) Ltd. 63 pp.

SWART C, HUTCHINGS K, SEDICK S, DALASILE S, WRIGHT A AND CLARK BM. 2022. Draft Basic Assessment Report for the proposed prospecting in Sea Concession Area 14C by Trans Atlantic Diamonds (Pty) Ltd. Report no. 2006/1 Part A. Prepared by Anchor Environmental (Pty) Ltd for Trans Atlantic Diamonds (Pty) Ltd. 228 pp.

- HUTCHINGS K, **SWART C**, SEDICK S AND CLARK BM. 2022. Final Basic Assessment Report for the proposed prospecting in Sea Concession Area 11C by Trans Atlantic Diamonds (Pty) Ltd. Report no. 1987 prepared by Anchor Environmental (Pty) Ltd for Trans Atlantic Diamonds (Pty) Ltd.
- HUTCHINGS K, **SWART C**, SEDICK S AND CLARK BM .2022. Final Basic Assessment Report for the proposed prospecting in Sea Concession Area 11C by Trans Atlantic Diamonds (Pty) Ltd. Part B: Environmental Management Programme. Report no. 1987/B prepared by Anchor Environmental (Pty) Ltd for Trans Atlantic Diamonds (Pty) Ltd. 60 pp.
- HUTCHINGS K, **SWART C**, SEDICK S AND CLARK BM .2021. Final Basic Assessment Report for proposed prospecting in Sea Concession Area 14A by Trans Atlantic Diamonds (Pty) Ltd. Report no. 1987 prepared by Anchor Environmental Consultants (Pty) Ltd for Trans Atlantic Diamonds (Pty) Ltd. 146 pp.
- SWART C**, SEDICK S, HUTCHINGS K AND CLARK BM. 2021. Basic Assessment Process for the proposed prospecting in Sea Concession Area 14A by Trans Atlantic Diamonds (Pty) Ltd. Part B: Environmental Management Programme. Report no. 1987/B prepared by Anchor Environmental (Pty) Ltd for Trans Atlantic Diamonds (Pty) Ltd. 77 pp.
- CLARK BM, HUTCHINGS K, BICCARD A, TURPIE J, DAWSON J, GIHWALA K, **SWART C**, SEDICK S, WRIGHT A, SCHMIDT K, WEISS J, MAKHOSONKE A, MOSTERT B, BROWN E, LAIRD M, CONRAD J, PARKER A, HOLLOWAY M AND BLECHER I. 2021. The State of Saldanha Bay and Langebaan Lagoon 2021, Technical Report. Report No. AEC 1936/1 prepared by Anchor Environmental Consultants (Pty) Ltd for the Saldanha Bay Water Quality Forum Trust, October 2021.
- SWART C**, CLARK BM & S SEDICK. 2022. Marine Environmental Impact Assessment for the Proposed Pedestrian Path to Connect the Two Parts of the Hermanus Cliff Path Via Poole's Bay, South Africa. Report prepared by Anchor Environmental Consultants (Pty) Ltd for Ecosense Environmental Consultants (Pty) Ltd. 55 pp.
- SWART C**, GIHWALA K, HUTCHINGS K AND BM CLARK. 2022. Marine Baseline Survey for the Increase in Manganese Handling Capacity at the Multi-Purpose Terminal, Port of Saldanha, Saldanha Bay, South Africa. Report prepared by Anchor Environmental Consultants (Pty) Ltd for SRK Consulting. 45pp.
- SWART C**, GIHWALA K, HUTCHINGS K AND BM CLARK. 2022. Marine Impact Assessment for the Increase in Manganese Handling Capacity at the Multi-Purpose Terminal, Port of Saldanha, Saldanha Bay, South Africa. Report prepared by Anchor Environmental Consultants (Pty) Ltd for SRK Consulting. 71pp.
- SWART C**, HUTCHINGS K AND S LOUW. 2021. Feasibility Study for Pearl Culturing in Algoa Bay South Africa. Report prepared by Anchor Environmental Consultants (Pty) Ltd 64pp.
- BICCARD, A., K. GIHWALA, B.M. CLARK, S. SEDICK, **C. SWART**, E.A. BROWN, B.P. MOSTERT, J. DAWSON, S MTSOKOBA, A. MAKHOSONKE AND K. SCHMIDT. 2021. De Beers Marine Namibia Benthic Environmental Monitoring Programme: Atlantic 1 Mining Licence Area 2019 Sampling Campaign. Report prepared for De Beers Marine Namibia by Anchor Environmental Consultants (Pty) Ltd. Report no. AEC 1840/2.
- CLARK BM, HUTCHINGS K, BICCARD A, BROWN E, DAWSON J, LAIRD M, GIHWALA K, **SWART C**, MAKHOSONKE A, SEDICK S, TURPIE J. AND MOSTERT B. 2020. The State of Saldanha Bay and Langebaan Lagoon 2020, Technical Report. Report No. AEC 1876/1 prepared by Anchor

Environmental Consultants (Pty) Ltd for the Saldanha Bay Water Quality Forum Trust, October 2020.

SWART C, DAWSON J, MALULEKE T, WEISS J AND B CLARK. 2020. Bat Specialist Report and Impact Assessment for a Proposed Land-Based Aquaculture Facility and Small Wind Energy Facility Near Elands Bay, Western Cape. May 2020.

BICCARD A, GIHWALA K, CLARK BM, SEDICK S, BROWN EA, MOSTERT BP, **SWART C**, MTSOKOBA S, TSHINGANA B, MAKHOSONKE A AND DAWSON J. 2020. De Beers Marine Namibia Environmental Monitoring Programme: Atlantic 1 Mining Licence Area 2018 Benthic Sampling Campaign. Report prepared for De Beers Marine Namibia by Anchor Environmental Consultants (Pty) Ltd. Report no. AEC 1807

BICCARD A, GIHWALA K, CLARK BM, BROWN EA, MOSTERT BP, MAKHOSONKE A, **SWART C**, SEDICK S, TSHINGANA B AND DAWSON J. 2019. De Beers Marine Namibia Environmental Monitoring Programme: Atlantic 1 Mining Licence Area 2017 Benthic Sampling Campaign. Report prepared for De Beers Marine Namibia by Anchor Environmental Consultants (Pty) Ltd. Report no. 1775/1

SWART C, MASSIE V AND HUTCHINGS K. 2019. Proposed Abalone Ranching Pilot Project in Doringbaai, Western Cape. Supporting Document for the Ranching Right Application: Stakeholder Consultation Report. September 2019

WRIGHT AG, SCHMIDT K, MOSTERT BP, CLARK BM AND **SWART C**. 2018. Estuarine Specialist Report for the Mozal Matola River Pipeline, Mozambique: Estuarine Impact Assessment. Specialist Report no. 1824/2 prepared by Anchor Environmental Consultants (Pty) Ltd for JG Afrika. 33pp

CLARK BM, MASSIE V, HUTCHINGS K, BICCARD A, BROWN E, LAIRD M, GIHWALA K, **SWART C**, MAKHOSONKE A, SEDICK S, TURPIE J AND VERMAAK N. 2019. The State of Saldanha Bay and Langebaan Lagoon 2019, Technical Report. Report prepared by Anchor Environmental Consultants (Pty) Ltd for the Saldanha Bay Water Quality Forum Trust, September 2019. Report No. AEC 1841/1

CLARK B, WRIGHT AG, HUTCHINGS K, MASSIE V, MOSTERT B, DAWSON J, CATHCART N, TSHINGANA B, LAIRD M, BROWN E, **SWART C**, BICCARD A. 2019. Mhlathuze Water Environmental Monitoring Programme for the Richards Bay Offshore Outfalls Region 2018/2019 Survey, Technical Report. Report prepared by Anchor Research and Monitoring (Pty) Ltd for Mhlathuze Water, March 2019. Report No. 1800/1. 214pp (+38pp appendices)

GIHWALA K, BICCARD A, CLARK BM, BROWN EA, MAKHOSONKE A, **SWART C** AND TSHINGANA B. 2019. Mining-related impacts to soft bottom benthic habitats and associated macrofauna assemblages in mining license area SASA 2C and subsequent recovery. Report prepared for De Beers Group of Companies by Anchor Environmental Consultants (Pty) Ltd. Report no. 1800/1

CONFERENCES

2014 Poster Presentation: "Distribution and impact of the alien anemone *Sagartia ornata* in the West Coast National Park". South African Marine Science Symposium, Stellenbosch University, Stellenbosch, 15 – 18 July 2014

2015 Poster Presentation: National Research Foundation Research Day, Feb 2014; Second Prize

2017 Oral Presentation: "Horizon scanning for intertidal predatory crab invaders: South Africa as a case study". South African Marine Science Symposium, Nelson Mandela University, Port Elizabeth, 4 – 7 July 2017

WORKSHOPS

- 2014** Basic Project Management course, HUDISA Business School
 - 2020** Environmental Impact Assessment Law Event Workshop, Live Online Training, Cape Town. In association with Janice Tooley Attorney and Accredited with SACNASP and ECSA
 - 2021** ISO 14001:2015 Environmental Management System training course
 - 2022** Western Indian Ocean Regional Benthic Imagery Workshop
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CURRICULUM VITAE

SAFIYYA SEDICK

ACADEMIC QUALIFICATIONS:

MSc Zoology, 2018, Stellenbosch University

BSc (Hons) Biodiversity and Conservation Biology, 2014, University of the Western Cape

BSc Marine Biology & Ocean and Atmospheric Science, 2013, University of Cape Town

Additional Certifications

Marine Mammal Observer - Joint Nature Conservation Committee (JNCC)

Seafarer Medical Certification - South African Maritime Safety Authority (SAMSA)

Personal Survival Techniques - South African Maritime Safety Authority (SAMSA)

Competency in Security Awareness - South African Maritime Safety Authority (SAMSA)

COUNTRY EXPERIENCE: South Africa, Namibia

LANGUAGE PROFICIENCY: English (Excellent), Afrikaans (Basic)

POSTAL ADDRESS: 8 Steenberg House, Silverwood Close, Tokai 7945

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E-MAIL: safiyya@anchorenvironmental.co.za

EMPLOYMENT HISTORY: 2018-present: Environmental Consultant (Anchor Environmental Consultants)

2018 : Trainee (International Seabed Authority)

2017-2018: NRF Intern (South African Environmental Observation Network)

SUMMARY PROFILE

Safiyya has degrees in Zoology, Biodiversity & Conservation Biology, Marine Biology and Ocean & Atmospheric Science. She has working experience as a biodiversity expert, conservation biologist and marine invertebrate taxonomist. She is particularly interested in deep sea mining and has worked with organisations such as the International Seabed Authority. Her other interests include conservation planning, climate change and biodiversity. Safiyya has worked on a wide range of projects since she completed her university education in 2018, including the De Beers Marine Namibia Benthic Environmental Monitoring Programme, the State of the Bay Monitoring Programme for the Saldanha Bay Water Quality Forum Trust, the Richards Bay Outfalls Environmental Monitoring Programme, various Environmental Impact Assessment studies and a management plan for the Mhlathuze Estuary.

SKILLS: PRIMER v6 (Plymouth Routines in Multivariate Ecological Research), STATISTICA, SPSS (Statistical Package for Social Sciences), GRADISTAT, ESTIMATE S (Biodiversity Estimation), MEGA v7 (Molecular Evolutionary Genetics Analysis), MS Suite.

SELECT PROJECT EXPERIENCE

Period	Country	Clients	Project, Tasks
2020 - Present	South Africa	City of Cape Town	Construction of moorings, trace metal analysis and report writing.
2018 - Present	South Africa	De Beers Marine Namibia	De Beers Marine Namibia Environmental Monitoring Programme in the Atlantic 1 Mining License Area: Annual Benthic Sampling Campaign.
2019 - Present	South Africa	Saldanha Bay Water Quality Trust	The State of Saldanha Bay and Langebaan Lagoon.
2019 - Present	South Africa	Mhlathuze Water	Mhlathuze water environmental monitoring programme for the Richards Bay offshore outfalls.
2020 - Present	South Africa	KwaZulu Natal Department of Economic Development, Tourism and Environmental Affairs	The development of an Estuary Management plan for the uThongathi Estuary.
2022	South Africa	Trans-Atlantic Diamonds	Basic Assessment for diamond and gemstone prospecting in sea concession 11C.
2022	South Africa	City of Cape Town	Marine ecological monitoring of the Zandvlei Estuary
2022	South Africa	Bigen Africa	Ecotoxicity Assessment of the Caledon Waste Water Treatment Works
2022	South Africa	Stonehurst Mountain Estate	Environmental Site Officer
2021	South Africa	Trans-Atlantic Diamonds	Application for prospecting rights in sea concession areas 12C&14C.
2021	South Africa	Trans-Atlantic Diamonds	Basic Assessment for diamond and gemstone prospecting in sea concession 12B.
2021	South Africa	Tritan Survey	Zandvlei estuary macrofauna
2021	South Africa	Trans-Atlantic Diamonds	Basic Assessment for diamond and gemstone prospecting in sea concession 14A
2020	South Africa	St. Helena Bay Water Quality Trust	The State of St Helena Bay.
2020	South Africa	City of Cape Town	Biodiversity Assessment of select tidal pools in the Cape Town Metropol
2019	South Africa	Rheinmetall Denel Muniton	Environmental monitoring and management programme for Rheinmetall Denel Muniton Coastal Waters Discharge Permit.
2019 - 2020	South Africa	Department of Agriculture, Forestry and Fisheries (DAFF)	Algoa Bay Sea-based Aquaculture Development Zone.

PUBLICATION RECORD

- Steffani N, Sedick S, Rogers J, Gibbons MJ. 2015. Infaunal benthic communities from the inner shelf off Southwestern Africa are characterized by generalist species. *PLoS ONE* 10 (11):e0143637. doi:10.1371/journal.pone.0143637
- Kara J, Simon CA, Clark DM, Sedick S. 2021. A checklist of priority species from South Africa with notes on diversity and taxonomic status. In review.
- Sedick S, Simon CA. 2019. The description of three new *Syllis* species from the south coast of South Africa. *Zootaxa* 4688(4): 585-598.
- Sedick S, Clark D, Biccard A, Gihwala K. 2021. The description of a new species of Lumbrineridae(Annelida) from southern Namibia. In prep.
- Sedick S, Clark D, Gihwala K, Swart C. 2021. The description of a new species of *Nereis* (Annelida, Nereididae) from the shallow waters of southern Namibia. In prep.

CONSULTING REPORTS

- Gihwala K, Sedick S, Louw S, Wright AG & Clark BM. 2022. Ecotoxicity assessment of the Caledon Waste Water Treatment Works. Specialist Report no. 1957/3 prepared by Anchor Environmental Consultants (Pty) Ltd for Theewaterskloof Municipality. 19 pp.
- Sedick S, Simone L, Hutchings K and Clark BM. 2021. City of Cape Town, Effluent Pipelines Biomonitoring, Field and Data Report no. 1865/4 prepared by Anchor Research & Monitoring (Pty) Ltd. 24pp.
- Sedick S, K, Hutchings K and Clark BM. 2021. City of Cape Town, Effluent Pipelines Biomonitoring, Annual Report no. 1865/4 prepared by Anchor Research & Monitoring (Pty) Ltd. 36pp.
- Gihwala K, Wright AG, Mostert B, Sedick S, Biccard A, Mtsokoba S and K. Hutchings. 2021. PetroSA Vleesbaai Outfall Monitoring Programme: 2020 Survey. Specialist Report no. 1917/1 prepared by Anchor Research and Monitoring (Pty) Ltd for PetroSA. 107 pp.
- Dawson J, Sedick S, Hutchings K and Clark BM. 2021. uThongathi Estuary Management Plan Stakeholder Consultation Report. Specialist report no. 1905/10 prepared by Anchor Research & Monitoring (Pty) Ltd for the KwaZulu Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA). 140 pp
- Biccard A, Gihwala K, Clark BM, Sedick S, Swart C, Brown EA, Mostert BP, Dawson J, Mtsokoba S, Makhosonke A and Schmidt K. 2021. De Beers Marine Namibia Benthic Environmental Monitoring Programme: Atlantic 1 Mining Licence Area 2019 Sampling Campaign. Report prepared for De Beers Marine Namibia by Anchor Environmental Consultants (Pty) Ltd. Report no. AEC 1840/2.
- Swart C, Clark BM and Sedick S 2021. Marine Environmental Impact Assessment for the Proposed Pedestrian Path to Connect the Two Parts of the Hermanus Cliff Path Via Poole's Bay, South Africa. Report prepared by Anchor Environmental Consultants (Pty) Ltd for Ecosense Environmental Consultants (Pty) Ltd. 54 pp.
- Gihwala K, Wright AG, Mostert B, Sedick S, Biccard A, Mtsokoba S and K. Hutchings .2021.PetroSAVleesbaai Outfall Monitoring Programme: 2020 Survey. Specialist Report no. 1917/1prepared by Anchor Research and Monitoring (Pty) Ltd for PetroSA. 107pp
- Clark BM, Dawson J and Sedick S. 2020. The development of an estuary management plan for the uThongathi Estuary. Inception Report no. 1905/1 prepared by Anchor Research & Monitoring (Pty) Ltd for the KwaZulu Natal Department of Economic Development, Tourism and Environmental Affairs (KZNEDTEA). 19 pp.
- Biccard, A., K. Gihwala, B.M. Clark, S. Sedick, E.A. Brown, B.P. Mostert, C. Swart, A. Makhosonke, B. Tshingana, A. Makhosonke and J. Dawson. 2020. De Beers Marine Namibia Environmental Monitoring Programme: Atlantic 1 Mining Licence Area 2017 Benthic Sampling Campaign. Report prepared for De Beers Marine Namibia by Anchor Environmental Consultants (Pty) Ltd. Report no. AEC 1807.

- Biccard A, Hutchings K, Wright AG, Mostert BM, Sedick S and Clark BM. 2020. The State of St Helena Bay 2020. Report No. AEC 1908/1 prepared by Anchor Environmental Consultants (Pty) Ltd for the St Helena Bay Water Quality Trust. 113 pp.
- Brown E, Sedick S, Hutchings K, Wright AG and Clark BM. 2020. Biodiversity Assessment of select tidal pools in the Cape TOWN Metropole. Specialist Report no. 1902/1 prepared by Anchor Research & Monitoring (Pty) Ltd for City of Cape Town. 43 pp.
- Clark BM, Hutchings K, Biccard A, Brown E, Laird M, Gihwala K, Swart C, Makhosonke A, Sedick S, Turpie J. and Mostert B. 2020. The State of Saldanha Bay and Langebaan Lagoon 2020, Technical Report. Report No. AEC 1876/1 prepared by Anchor Environmental Consultants (Pty) Ltd for the Saldanha Bay Water Quality Forum Trust, September 2020.
- Biccard, A., K. Gihwala, B.M. Clark, E.A. Brown, B.P. Mostert, A. Makhosonke, C. Swart, S. Sedick, B. Tshingana and J. Dawson. 2019. De Beers Marine Namibia Environmental Monitoring Programme: Atlantic 1 Mining Licence Area 2017 Benthic Sampling Campaign. Report prepared for De Beers Marine Namibia by Anchor Environmental Consultants (Pty) Ltd. Report no. 1775/1.
- Mostert B., Sedick S. & B.M. Clark. 2019. Environmental impact and monitoring programme for Rheinmetall Denel Munition Coastal Waters Discharge Permit. Report no. 1852/1 prepared by Anchor Research and Monitoring (Pty) Ltd for Rheinmetall Denel Munition RF (PTY) LTD 54 pp.
- Clark B, Massie V, Hutchings K, Biccard A, Brown E, Laird M, Gihwala K, Swart C, Makhosonke A, Sedick S, Turpie J & Vermaak N. 2019. The State of Saldanha Bay and Langebaan Lagoon 2019, Technical Report. Report No. AEC 1841/1 prepared by Anchor Environmental Consultants (Pty) Ltd for the Saldanha Bay Water Quality Forum Trust, September 2019.

CONFERENCES & WORKSHOPS

- 2021 3rd Annual Workshop For The Promotion Of Sustainable Development Of Africas Deep Seabed Resources In Support Of Africas Blues Economy - International Seabed Authority (ISA)
- 2021 DNA barcoding workshop series: From theory to practice
- 2019 Workshop For The Promotion Of Sustainable Development Of Africas Deep Seabed Resources In Support Of Africas Blues Economy - International Seabed Authority (ISA)
- 2015 Zoological Society of Southern Africa (ZSSA)
- 2014 Southern African Marine Science Symposium

Full Name: Ms. Sisanda Vinolia Dalasile
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PROFILE

I am a responsible, dedicated person who always gives 100% to any assignment I undertake. I am an analytical thinker and generally work through difficult tasks efficiently and methodically. I thrive under pressure and adhere to deadlines religiously as well as maintaining a high standard when reporting to my superiors. I have strong leadership skills and therefore possess the ability to function as a team member as well as an individual. I also have the ability to learn from others and share knowledge. Being open minded and decisive I believe I would be an asset.

EMPLOYMENT EXPERIENCE

1. Name of the company & position held

-National Department of Public Works
-Process Controller

Date of employment: April 2015 - 17 December 2019

Reason for leaving: contract expired

Duties

- Monthly report writing; take weekly dosage rate and calculations
- Maintaining the water at the sewage treatment plant;
- Ensure that the water has been properly disinfected;
- Sampling and testing of PH, phosphates, ammonia, turbidity and electrical conductivity.

2. Name of company & position held

-Anchor Environmental Consultants (Pty) Ltd
-Junior Consultant (trainee)

Date of employment: 01 March 2017- September 2017

Reasons for leaving: contract expired

Duties

Water use license application for BP fuel station

- Site visit, In situ water quality analysis using a HACH water quality meter;
- Collect water quality samples for laboratory analysis;
- Description of the affected water course;
- Identification of potential environmental impacts

Basic assessment procedure for diamond coastal aquaculture development (application for environmental authorisation).

- Assisted in conducting compliance of inspection investigating where non-compliance is triggered.
- Identify applicable listed activities(Environmental Impact Assessment regulations,2017)
- Characterize land use of the impact site and surroundings;
- Describe the socio-economic background of the Nama Khoi Municipality;
- Assist in completing the Environmental Authorisation application.

State of the Saldanha Bay and De Beers Marine Namibia(long term monitoring study)

- Sorting, cataloguing and filling of benthic invertebrate specimens(compiling of reference collection)
- Processing and analysis of sediments

3. Name of company & position held

- Southern African Foundation for the Conservation of Coastal Birds (SANCCOB)

-Seabird Rehabilitation trainee (In-service training)

Date of employment: 01 March 2014- August 2014

Reason for leaving: contract expired

Duties

- Provide assistance in controlling and eliminating waste in the oceans;
- Assist in developing actions to reduce waste in the oceans
- Conduct joint site inspection to investigate coastal water pollution related matters;
- Record findings during the site visits and take photo's;
- Compile site inspection reports and make recommendations
- Liase with local community including local schools and colleges to raise awareness of environmental issues;
- Assisted with clean-up activities;
- Rescuing and washing of birds that affected by oil spills
- Administrative function
- Participate in Coastal Clean-up campaigns and other coastal awareness raising events like the International Coastal Cleanup, Marine week and World Oceans Day.

EDUCATIONAL QUALIFICATIONS

School name: Zisukhanyo Senior Secondary School

Highest grade: Grade 12

Year: 2010

TERTIARY QUALIFICATIONS

1. Name of institution:

Cape Peninsula University of Technology

Course:

National Diploma in Environmental Management

Year completed:

2014

2. Name of institution:

Cape Peninsula University of Technology

Course:

Btech in Environmental Management

Year:

2019

OTHER CERTIFICATES

SAMTRAC (Occupational health and safety) obtained from NOSA College

SKILLS & KNOWLEDGE

- Water Use License application, Good administrative and organizational skills; prioritizes; conflict management; problem solving; planning and organizational skills; multi-tasking; time management; practical implementation skills; identify continuous improvement opportunities.
- Excellent communication skills; Excellent presentation skills; Strong problem solving and analysis skills; Strong teamwork and interpersonal skills; Environmental law and regulations; Develop and drive initiatives; Ability to interact in a professional manner with all levels of stakeholders

REFERENCES

1

Vera Liebau (Consultant)
Anchor Environmental Consultants (Pty) Ltd
Tel: 021 701 3420
Cell: 082 724 5329
Email: *vera@anchorenvironmental.co.za*

2

Bethwell Xiviti (Mentor)
National Department of Public Works
Tel: 021 402 2148
Cell: 079 989 0055
Email: *bethwell.xiviti@dpw.gov.za*

3.

Loiuse Myburgh(former supervisor)
Southern African Foundation for the Conservation of Coastal Birds (SANCCOB)
Tel: 021 557 6155

CURRICULUM VITAE

AMY GRACE WRIGHT

ACADEMIC QUALIFICATIONS:

MSc Biological Sciences, 2017, University of Cape Town

BSc (Hons) Biological Sciences, 2013, University of Cape Town

BSc Marine Biology and Applied Biology, 2012, University of Cape Town

OTHER TRAINING:

Deltares Academy Delft3D Environmental Modelling, 2019, Deltares, Netherlands

Delft3D SWAN (Wave transformations in coastal waters), 2019, Stellenbosch University

Computational Fluid Dynamics (short course), 2019, Stellenbosch University

COUNTRY EXPERIENCE: South Africa, Namibia, Mozambique, Mauritius, Kenya and Tanzania

LANGUAGE PROFICIENCY: English (Excellent), Afrikaans (Basic)

POSTAL ADDRESS: 8 Steenberg House, Silverwood Close, Tokai 7945

PHONE: +27-21-7013420

E-MAIL: amy@anchorenvironmental.co.za

EMPLOYMENT HISTORY:

2021-present: Senior Consultant: Marine Ecosystems & Resources
(Anchor Environmental Consultants)

2017-2021: Marine Consultant (Anchor Environmental Consultants)

2014: Intern Consultant (Capricorn Marine Environmental)

SUMMARY PROFILE

Amy has an MSc degree in Biological Sciences and BSc. Hons. degrees in Marine Biology and Applied Biology from the University of Cape Town. She is currently a Senior Consultant for Marine Ecosystems & Resources at Anchor Environmental Consultants. She is an ecologist that specialises in two- and three-dimensional hydrodynamic modelling of marine, estuarine and freshwater systems to inform impact assessments and regulatory compliance, as well as monitoring program design and implementation. She is proficient in hydrodynamic, water quality and particle tracking applications across a range of numerical model systems, with experience in Delft3D modelling suite (FLOW, SWAN, WAQ, PART), CorMIX, Deltares MAMPEC and Ancylus MOM, and training in Delft3D FM (FLOW, WAQ). She has dispersion modelling, impact assessment, permitting and environmental auditing experience across a range of diverse industries, including land- and sea-based mariculture, reverse osmosis operations, power and gas facility intake and discharge, and shipping (antifoulants, heavy metals). She is the author of four scientific publications in Class A scientific journals, and over 80 technical reports. As a Senior Consultant her responsibilities include environmental research, impact assessment and monitoring project development, management and sales, as well as staff supervision, training and peer review.

SKILLS: Delft3D modelling suite (FLOW, SWAN, WAQ, PART), CorMIX, Delft3D FM, Deltares MAMPEC, Ancylus MOM, WRPLot, SEATerm, Statistica, SPSS, BGIS, BEAM-Visat, OceanView, MS Suite.

MEMBERSHIP OF PROFESSIONAL BODIES/ORGANISATIONS:

- Professional Natural Scientist, the South African Council for Natural Scientific Professions (Registration Number: 131256) (2021-)
- NF-POGO Alumni Network for the Ocean (2015-)
- Golden Key Honour Society (2011-)

SELECT PROJECT EXPERIENCE

Period	Country	Clients	Project, Tasks
2022-2024	South Africa	Marine Living Resources Fund, Department of Environment, Forestry and Fisheries	Project manager Independent Environmental Control Officer (ECO) for the Saldanha Bay sea-based Aquaculture Development Zone.
2022	South Africa	WSP Africa/ DNG Energy (Pty) Ltd	Project manager, ecologist Marine Ecology and Terrestrial/Aquatic Impact Assessment for the proposed gas-to-power facility and associated infrastructure in Mosselbay, Western Cape Province.
2022-2023	South Africa	Lambert's Bay Foods (Pty) Ltd	Project manager, environmental auditor, marine ecology and hydrodynamic modelling team lead Environmental and effluent monitoring, audit and dispersion modelling in fulfilment of the awarded Coastal Water Discharge Permit, and permit renewal application.
2022	South Africa	SRK Consulting (South Africa) (Pty) Ltd	Project manager & marine ecology specialist Marine Ecology Impact Statement for expansion of a sea water intake at Tronox Mineral Sands (Pty) Ltd.
2021-2022	South Africa	Nemai Consulting	Project manager & hydrodynamic modelling team lead Delft-3D hydrodynamic dispersion modelling study of the Mzimkhulu Estuary (Kwa Zulu Natal) to assess salinity distributions and hydrodynamic impacts of a proposed weir development.
2022	South Africa	Sea Harvest (Pty) Ltd	Project manager, water quality specialist Development and assessment of monitoring program to evaluate water quality in support of proposed Coastal Water Discharge Permit amendment.
2022	South Africa	Guillaume Nel Environmental Consultants	Project manager, estuarine ecologist Estuarine Impact Assessment and Constraints Analysis study of the Goukou Estuary in Stilbaai, Western Cape.
2021-2022	South Africa	Golder Associates Africa	Co-author Total Energies Block 11b/12b Environmental and Social Impact Assessment (EISA): Marine Ecology Impact Study.

Period	Country	Clients	Project, Tasks
2021-2022	South Africa	Department of Environment, Forestry and Fisheries	Co-author Saldanha Bay Aquaculture Development Zone Environmental Monitoring: Inception report, Progress reports, Quarterly Monitoring reports.
2021-2022	South Africa	Nemai Consulting	Field scientist, water quality specialist Ecological Water Requirements (EWR) update and estuarine impact assessment for the Mzimkhulu Estuary, Kwa Zulu Natal.
2021-2022	South Africa	Exigent Engineering Consultants	Project manager, marine ecologist & hydrodynamic modelling team lead Marine Impact Assessments and hydrodynamic dispersion modelling for proposed FSRU facilities and associated infrastructure in Saldanha Bay.
2021	South Africa	V&A Waterfront	Co-author Economic Assessment of Recreational Sailing in Cape Town.
2021	South Africa	EcoMo Homes	Project manager Freshwater Assessment: Wetland Delineation for Erf 325, Franschoek.
2021	South Africa	Mossel Bay Municipality	Co-author Amendments to the Environmental Maintenance Management Plan (EMMP) for the Great Brak Estuary, Mossel Bay.
2021-2023	South Africa	Mhlathuze Water	Project manager, audit team lead Annual Coastal Waters Discharge Permit effluent quality compliance audit.
2021	South Africa	PHS Consulting	Project manager, marine ecologist, hydrodynamic modelling team lead Marine specialist study and dispersion modelling for the proposed expansion of the West Point fish meal processing plant, St Helena Bay.
2021	South Africa	SLR Consulting (South Africa) (Pty) Ltd	Project manager, marine ecologist Marine Ecology Specialist Assessment for the import and export of refined petroleum products at Berth 104 in Big Bay, Saldanha.
2021	South Africa	SRK Consulting (South Africa) (Pty) Ltd	Project manager Olifants estuarine baseline and ephemeral system hydrological modelling study to inform sensitivity study for De Punt prospecting site.
2021	South Africa	Proxa Water (Pty) Ltd	Project manager, audit team lead Coastal Waters Discharge Permit compliance audit as requested by the Department of Forestry, Fisheries and the Environment.
2021	South Africa	Bigen Africa Services (Pty) Ltd	Project manager Bioassay toxicity testing in line with the requirements of the Caledon Waste Water Treatment Works Water Use License.
2021	Namibia	Benguela Current Commission	Project manager (South African team) Drafting of national legislation for the effective implementation of the Ballast Water Convention in Namibia.

Period	Country	Clients	Project, Tasks
2021	South Africa	Nsovo Environmental Consulting	Project manager, marine ecologist Marine Impact Assessments for proposed gas-to-power facilities (FSRU) and associated infrastructure development in Saldanha Bay, Mossel Bay and Coega.
2021	South Africa	Allan Gray (Pty) Ltd	Project manager, audit team lead Coastal Waters Discharge Permit compliance audit.
2021	South Africa	PetroSA	Water quality specialist Assessment of the inshore subtidal environment in the vicinity of the PetroSA Outfall at Vleesbaai, Mossel Bay.
2020-2021	South Africa	V&A Waterfront	Project manager & hydrodynamic modelling team lead Marine specialist study and dispersion modelling for the East Pier District cooling plant outfall at the V&A Waterfront.
2020-2021	South Africa	De Beers Marine (Pty) Ltd	Project manager & hydrodynamic modelling team lead Far field dispersion modelling (Delft 3D FLOW) and impact statement for proposed desalination outfalls in the Port of Cape Town. Amendment to CWDP.
2020	Kenya, Tanzania	Swedish Agency for Marine and Water Management	Specialist Poverty and gender considerations in Marine Spatial Planning: review and conceptual framework.
2020	South Africa	Doug Jeffery Environmental Consultants	Project manager Wetland Rehabilitation plan for the Stillbay arterial roadway, Western Cape, South Africa.
2020-2021	South Africa	CES - Environmental and Social Advisory Services	Project manager, marine ecologist Marine Impact Assessment for the proposed marine pipeline servitude at the Coega Industrial Development Zone, Port of Ngqura, South Africa.
2020	South Africa	Guillaume Nel Environmental Consultants	Project manager, estuarine ecologist Estuarine Impact Assessment study for the development 222 and 223 Weir Road Milnerton.
2020	South Africa	Chand Environmental Consultants	Project manager, marine ecologist Marine Specialist Study for the Proposed Transnet 2.5 MI/D Reverse Osmosis Plant in the Port of Cape Town – Baseline Study and Impact Assessment Report.
2020	South Africa	Transnet National Ports Authority	Marine ecology team lead Amendment to Environmental Authorisation of Transnet Berths 203-205 on the Port of Durban – Marine Ecology Impact Assessment of new proposed dredging activities.
2020	South Africa	Rheinmetall Denel Munition	Project manager, marine ecologist Coastal Waters Discharge Permit environmental monitoring and impact assessment (beach macrofauna, sediment, water quality).
2020	South Africa	City of Cape Town	Project manager, marine ecologist Marine ecology monitoring plans (MEMPs) for the Helderberg Marine Protected Area, Milnerton Lagoon and Zandvlei Estuary.

Period	Country	Clients	Project, Tasks
2020	South Africa	City of Cape Town	Marine ecology specialist Biodiversity assessment/survey and public information programme for five tidal pools around the Cape Peninsula.
2020, 2021	South Africa	SRK Consulting (South Africa) (Pty) Ltd	Marine ecology specialist Marine Ecology Impact Assessment for expansion of a sea water intake at Tronox Mineral Sands (Pty) Ltd.
2020	South Africa	ATKV	Marine ecology team lead Hartenbos (Mossel Bay) dune stabilisation specialist study and impact assessment.
2020	South Africa	Lake Michelle Estate	Marine ecology specialist Fish community survey of Lake Michelle, Noordhoek.
2019-2020	South Africa	Department of Environmental Affairs and Development Planning (DEA&DP)	Hydrodynamics, sediment dynamics and biota Specialist Environmental flows and the health and value of the Berg River Estuary: Potential trade-offs between estuary value and regional water supply under a changing climate.
2019-2022	South Africa	Sea Harvest (Pty) Ltd	Project manager, hydrodynamic modelling team lead and marine ecologist Development and undertaking of monitoring program (sediment, water quality and benthic macrofauna) to both fulfil CWDP conditions and validate the CorMIX hydrodynamic modelling study that informed the application.
2019-2020	South Africa	Bivalve Shellfish Farmers Association of South Africa — Saldanha Bay Chapter	Marine ecology team lead Sanitary Survey Report for Saldanha Bay — Update of the 2018 DAFF Sanitary Survey Report.
2019-2020	South Africa	ArcelorMittal Saldanha	Project manager, marine ecologist Design and implementation of the environmental monitoring program in accordance with the CWDP.
2019	South Africa	De Beers Marine (Pty) Ltd	Project manager, hydrodynamic modelling team lead and marine ecologist Dispersion modelling (CorMix) and specialist marine impact statement for a desalination discharge in the Port of Cape Town.
2019	South Africa	De Beers Marine (Pty) Ltd	Project manager Review of environmental permitting requirements for the De Beers Port of Cape Town desalination plant.
2019	South Africa	Doug Jeffery Environmental Consultants	Project manager, hydrodynamic modelling team lead and marine ecologist Delft 3D (FLOW, WAQ) hydrodynamic modelling, CorMIX dispersion modelling and specialist marine impact studies for a proposed Atlantic Salmon farm the Port of Cape Town.

Period	Country	Clients	Project, Tasks
2019-2021	Mauritius	International Ocean Institute; Mauritius Oceanography Institute	Hydrodynamic modelling team lead and marine ecologist Development of a Deltares MAMPEC dispersion model to capture marine pollutant dispersion resulting from in-water hull cleaning in Port Louis. This work included extensive training of the MOI staff in the use, set up and calibration of the model, as well as in collection, interpretation and implementation of the requisite oceanographic data.
2019	Mozambique	JG Afrika	Project manager, estuarine ecologist Estuarine specialist report for proposed MOZAL Matola River pipeline.
2018-2019	South Africa	Planet Capital (Pty) Ltd	Project manager & hydrodynamic modelling team lead Dispersion modelling of effluent outfall (CorMix), baseline study, impact assessment and CWDP application for the discharge of land-based aquaculture effluent.
2018	South Africa	NuLeaf Planning & Environmental	Estuarine ecology team lead Marine impact assessment for the establishment of an aquaculture development zone in Amatikulu Estuary, Kwa-Zulu Natal.
2018-2019	South Africa	Lwandle Technologies (Pty) Ltd	Marine ecology specialist City of Cape Town small scale desalination plant monitoring program marine ecology baseline, operational and post-operational monitoring report.
2018	South Africa	Marine Living Resources Fund, Department of Agriculture, Forestry and Fisheries	Team lead (Hydrodynamic modelling team lead) Ancylus MOM dispersion modelling of finfish cage aquaculture in Algoa Bay to determine impacts and carrying capacity.
2018	South Africa	Marine Living Resources Fund, Department of Agriculture, Forestry and Fisheries	Hydrodynamics and marine ecology specialist Algoa Bay Sea-Based Aquaculture Development Zone: Basic Assessment Process in Terms of the National Environmental Management Act, 1998 (Act No. 107 Of 1998) - Pre-Application Basic Assessment Report Appendix D: Marine Specialist Impact Assessment.
2018	South Africa	SeaVuna Fishing Company (Pty) Ltd	Project manager & hydrodynamic modelling team lead Dispersion modelling of effluent outfall (CorMix), baseline study and impact assessment for the discharge of brine effluent into the Port of Mossel Bay as per the awarded CWDP.
2018	South Africa	V&A Waterfront	Project manager, marine ecologist Development and implementation of an Environmental Monitoring in accordance with CWDP 2013/002/WC/Victoria & Alfred to both fulfil CWDP conditions and validate the hydrodynamic modelling study that informed the application.

Period	Country	Clients	Project, Tasks
2018	South Africa	Chand Environmental Consultants	Project manager, marine ecologist Marine specialist study and impact assessment for a CWDP application for a reverse osmosis plant at the Cape Town International Convention Centre (CTICC).
2018-2019	South Africa	Sea Harvest (Pty) Ltd	Project manager, hydrodynamic modelling team lead and marine ecologist Dispersion modelling of effluent outfall (CorMix), baseline study, impact assessment and CWDP application for the discharge of brine effluent into Saldanha Bay.
2018	South Africa	City of uMhlathuze	Team lead (estuarine ecology) Estuarine ecology impact assessment for construction of a new bridge over the Mzingazi Canal at the Richards Bay Waterfront.
2018	South Africa	Turnkey Water Solutions, Hessequa Local Municipality	Estuarine ecology specialist Marine ecology impact assessment and dispersion modelling for the discharge of brine from a RO Plant in the Breede River Estuary.
2018	South Africa	Khula Environmental Services	Team lead (marine ecology) Marine ecology impact assessment for the maintenance management plan for the rock revetment at East Pier, Port of Cape Town.
2018-2021	South Africa	Mhlathuze Water	Marine ecology and effluent specialist Marine Environment Impact Assessment for Mhlathuze Water Effluent Pipelines, in Richards Bay.
2018	South Africa	WSP, Environment & Energy, Africa	Project manager, marine ecologist Marine ecology impact assessment for sea water cooling system intake discharge in the Port of Cape Town.
2018	Mozambique	JG Afrika	Project manager, hydrodynamic modelling team lead and estuarine ecologist Dispersion modelling of effluent outfall (CorMix), baseline study and impact assessment for the discharge of brine effluent into Maputo Bay.
2018	South Africa	SRK Consulting (South Africa) (Pty) Ltd	Project manager, hydrodynamic modelling team lead and marine ecologist Dispersion modelling of effluent outfall (CorMix), baseline study and impact assessment for the discharge of brine effluent into Saldanha Bay. Preparation of the Coastal Water Discharge Permit for Coastal Waters Discharge Permit.
2018	South Africa	Sun International, Table Bay Hotel; GCX Analytics GCX Water	Project manager, hydrodynamic modelling team lead and marine ecologist Dispersion modelling of effluent outfall (CorMix), baseline study and impact assessment for the discharge of brine effluent into Table Bay. Preparation of the Coastal Water Discharge Permit; registration as a Water Services Intermediately with the Department of Water and Sanitation; registration as a private sector water provision intervention under the City of Cape Town S30A Directive.

Period	Country	Clients	Project, Tasks
2018	South Africa	ArcelorMittal Saldanha	Project manager, hydrodynamic modelling team lead and marine ecologist Dispersion modelling of effluent outfall (CorMix), baseline study and impact assessment for the discharge of brine effluent into Saldanha Bay. Preparation of the Coastal Water Discharge Permit for Coastal Waters Discharge Permit issued by the Department of Environmental Affairs: Oceans and Coasts.
2018	South Africa	Mainport Africa	Marine ecology specialist Assessment of biofouling community collected from NM Cherry Blossom.
2017	South Africa	Viking Fisheries	Fisheries specialist Socio-economic assessment of the impacts in a reduction of quota on a small commercial fishery.
2017	South Africa	SRK Consulting (South Africa) (Pty) Ltd	Marine ecology specialist Tormin Mine EIA assessment, West Coast, South Africa; marine specialist report: baseline scoping report and marine environmental impact assessment.
2017	South Africa	GIBB	Marine ecology team lead Marine specialist report for Table Bay and the Port of Cape Town; review of the known data regarding the oceanographic and ecological conditions of Table Bay and the Port of Cape Town.
2017	South Africa	GIBB	Marine ecology specialist CorMIX modelling of effluent outfall for storm surge scenario for Cape Recife WWTW.
2017	South Africa	Oiltanking MOGS (Pty) Ltd and Advisian	Marine ecology team lead Impact assessment for the proposed expansion of the crude oil jetty and construction of the associated pipeline system, Saldanha Bay, Western Cape; marine specialist report: baseline scoping report and marine environmental impact assessment
2017	South Africa	Nsovo Environmental Consulting	Project manager Impact assessment for the proposed design and construction of the IOT stormwater system Saldanha Bay, Western Cape; marine specialist report: baseline scoping report and marine environmental impact assessment.
2017	South Africa	Eco Impact Legal Consulting (Pty) Ltd.	Estuarine ecology team lead Estuarine specialist study and impact assessment for the proposed expansion of Kliphoek Resort, Velddrif.
2017	South Africa	Advisian, City of Cape Town	Marine ecology specialist Marine ecology impact assessments for eleven desalination plants for the Cape Town Emergency Water Resilience Project
2017, 2018, 2021	South Africa	Saldanha Bay Water Quality Trust	Marine ecology specialist The State of Saldanha Bay and Langebaan Lagoon; ongoing annual ecological monitoring of Saldanha Bay and Langebaan Lagoon.

Period	Country	Clients	Project, Tasks
2017	Namibia	NAMDEB	Invertebrate taxonomy specialist Annual benthic sampling campaign: NAMDEB's offshore environmental monitoring programme in the midwater mining license area.
2017	Namibia	De Beers Marine Namibia	Invertebrate taxonomy specialist Annual benthic sampling campaign: De Beers Marine Namibia environmental monitoring programme in the Atlantic 1 mining license area for 2016.
2017	Namibia	De Beers Marine Namibia	Invertebrate taxonomy specialist Annual benthic sampling campaign: De Beers Marine Namibia environmental monitoring programme in the Atlantic 1 mining license area for 2015.

STUDENT CO-SUPERVISION

Year	Name	Institution	Degree	Thesis title
2017	Arno Botha	UCT	BSc (Hon)	Build or rent? Advantages and disadvantages of pseudoshells to two deep-water hermit crab species.

PUBLICATION RECORD

- Wright, A.G.**, Griffiths, C.L. & Fairweather, T. 2020. Distribution and abundance patterns of two parapagurid hermit crabs (Crustacea: Decapoda: Anomura) along the west and south coasts of South Africa. *African Journal of Marine Science* 42(2): 177-183.
- Wright, A.G.**, Botha, T.P.A. & Griffiths, C.L. 2019. Population structure and morphology of South African deep-water parapagurid hermit crabs. *Acta Zoologica*: 1–15.
- Pillay, D., Moyo, R., **Wright, A.G.** 2018. Density- vs trait-mediated responses of a symbiont (*Betaeus jucundus*) to burrows of a burrowing crustacean (*Callichirus kraussi*). *Estuarine, Coastal and Shelf Science* 209: 183-190.
- Wright, A.G.**, Perez-Portela, R., Griffiths, C.L. 2016. Determining the correct identity of South African Marthasterias (Echinodermata: Asteroidea). *African Journal of Marine Science* 8(3): 443-455.

THESES

- Wright, A.G.** 2017. Deep water parapagurid hermit crabs: their distribution, abundance population structure and associations in the Southern Benguela. MSc Thesis, University of Cape Town, 120 pp.
- Wright, A.G.** 2013. Drivers of burrow symbiont distribution in a soft-sediment system: host abundance or burrow trophic environment? BSc Hons. Thesis, University of Cape Town, 33 pp.
- Wright, A.G.** 2013. Resolution of the Marthasterias Taxonomic "Disar-star". BSc Hons. Thesis, University of Cape Town, 32 pp.

CONFERENCES

- 2019 Deltares Delft Software Days. Hydrology and hydrodynamics; Coastal morphodynamics; Water quality and ecology (Attendee).
- 2016 International Benguela Symposium. Long-term changes in distribution and population structure of deep water hermit crabs in the southern Benguela (Poster; awarded Best Poster)
- 2015 Zoological Society of South Africa (ZSSA). Deep water hermit crab–zoanthid associations and basic biology (Presentation)
- 2014 Southern African Marine Science Symposium. The Marthasterias “disar-star” (Poster)