

APPENDIX H – DETAILS OF EAP AND EXPERTISE

Coastal and Environmental Services (CES), trading as EOH Coastal & Environmental Services

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ENVIRONMENTAL ASSESSMENT PRACTITIONER FOR THIS PROJECT

Name and surname	Mr Marc Hardy
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Title	Principal consultant
Branch	Cape Town

EOH Coastal & Environmental Services is a South African based company, established in 1990, to service the field of Environmental Management and Impact Assessment. Our principal area of expertise is in assessing the impacts of development on the natural, social and economic environments through, among other instruments, the EIA process, and in so doing contribute towards sustainable development. Provided below are summarised qualifications for each of the team members involved in the EIA process. A full *Curriculum Vitae* (CV) for the EAP, Marc Hardy, is provided in Appendix D of this report.

Mr Marc Hardy

(Role: Environmental Assessment Practitioner, Project Leader and Reviewer)

Marc holds a M.Phil in Environmental Management from Stellenbosch University's School of Public Management and Planning. His professional interests include environmental impact reporting for linear, energy and bulk infrastructure projects, strategic environmental policy development and reporting – mostly relating to Environmental Management Framework's (EMF's) - compliance monitoring and environmental auditing. Marc has, amongst others, been project manager for the Dinokeng EMF (Gauteng), the Milnerton Refinery to Ankerlig Power Station Liquid Fuels Transportation Infrastructure Project, numerous Eskom Transmission and Distribution power line and substation EIA's countrywide, mining EMPR compliance audits, compliance audits for Camden, Grootvlei and Komati Power Stations and the hazardous waste management facility for the Coega Development Corporation (Coega IDZ). Before entering the consulting field he gained extensive experience in the EIA regulatory field whilst in the employ of the Gauteng Department of Agriculture, Conservation and Environment - being responsible for the review of infrastructure projects like the Gautrain Rapid Rail system and representing the Department on various EMF project steering committees. He is currently managing numerous EIA processes for wind energy developments countrywide, as well as renewable energy and mining projects throughout Africa.

Ms Amber Jackson

(Role: Project Manager and Report Production)

Amber, Senior Environmental Consultant at CES, holds an MPhil in Environmental Management and has a background in both Social and Ecological work. Her undergraduate degrees focused on Ecology, Conservation and Environment with particular reference to landscape effects on Herpetofauna, while her masters focused on the environmental management of social and ecological systems. With a dissertation in food security that investigated the complex food system of informal and formal distribution markets. She has been involved in managing the Environmental and Social Impact Assessment for two large forestry plantation projects in Mozambique (Green Resources) and numerous wind farm applications in South Africa. During her time at CES she has co-ordinated specialist studies, put together the Impact Reports, prepared the Issues and Response trails and managed the compilation of the Social and Environmental Management Programmes and Monitoring Programmes. She has been involved in ecological studies in Mozambique and South Africa. Interests include, ecological studies dealing with indigenous fauna and flora, as well as land use and natural resource management. She is registered as a candidate Professional Natural Scientist in the field of Environmental Science through the South African Council for Natural Scientific Professions (SACNASP).

Mr Gideon Raath

(Role: Report Production and Public Participation)

Gideon, Environmental Consultant, holds an MSc (Geography and Environmental Management; SU), a BSc Honours (Ecology and Environmental Studies - Cum laude; Wits) and a BSc (Geography and Environmental Management; UJ). His MSc thesis focussed on the hydrological impact on the spatial distribution of invasive Eucalyptus trees along the Breede River, while his honours thesis evaluated ethnobotanical relationships around the Rio Tinto copper mine in Phalaborwa. Most recently he has worked Monitoring & Evaluation Project Manager for the City of Cape Town's invasive species unit. Gideon works from the Cape Town office, and is interested in invasion ecology and the management of groundwater pollution through phytoremediation.

MR. MARC RICHARD HARDY

Born: May 1972

ACADEMIC QUALIFICATIONS

- 2001 - B.Soc.Sci. Development Studies (University of Cape Town)
- 2002 - B.Soc.Sci. (Hons) Environmental and Geographical Science (U.C.T.)
- 2009 - M.Phil Environmental Management (Stellenbosch University)

EMPLOYMENT HISTORY

- November 2009 – Present: Principal Environmental Consultant and Mozambique Country Manager: EOH Coastal and Environmental Services (Grahamstown office, Eastern Cape).
- January 2008 – October 2009: Senior Environmental Consultant: Stewart Scott International (SSI) Engineers and Environmental Consultants – now Royal Haskoning DHV (Johannesburg, Gauteng).
- January 2006 – December 2007: Principal Environmental Officer/Acting Assistant Director: Gauteng Provincial Department of Agriculture, Conservation and Environment – Environmental Planning and Impact Assessment Directorate (Johannesburg, Gauteng).
- January 2003 – December 2005: Environmental Consultant/Research Assistant: Various research organisations and consultancies (Cape Town, Western Cape).
- June – November 2004: Temporary Lecturer - Department of Environmental and Geographical Science, University of Cape Town.
- 1999 – 2002: Full time studies at the University of Cape Town.
- 1992 – 1998: Commercial Diver/Diving Supervisor: Commercial diving, marine and alluvial diamond recovery operations in South Africa, Namibia and Angola.
- 1990 – 1991: Learner Official Mining: mining engineering training programme (St. Helena Gold Mine – Welkom, Free State).

COURSES ATTENDED

- Institute of Environmental Management and Assessment (IEMA) Certificate course in ISO 14001 Auditing, June 2007.
- Certificate course in Project Management, U.C.T. Graduate School of Business, May 2009.
- Coastal setback line determination, Department of Port & Coastal Engineering, Stellenbosch University, September 2010.
- Achieving better resettlement outcomes in development projects, Rhodes University, July 2013 (NQF 6).

RESEARCH, CONSULTING & PROFESSIONAL EXPERIENCE

Subsequent to completing his full time studies Marc was involved in research projects through various organisations on behalf the Department of Marine and Coastal Management (MCM) pertaining to various fisheries along the South African coast as research team member for the following:

- On-board monitoring of rock lobster fishing vessels in the Hangklip concession area, False Bay as part of the MCM fishery monitoring program, Cape Town (Research Assistant);
- Compilation of a fishery permit holder database and implementation of a community-based catch monitoring system for the Cape South Coast oyster picking fishery for the MCM (Research Assistant);

- The identification and development of potential additional livelihood options, key intervention strategies, as well as the implementation of a community-based catch monitoring system for the west coast Olifants River subsistence fisher community for the Environmental Evaluation Unit – U.C.T. (Research Assistant).

In the environmental management and assessment field Marc has been project manager or team member for the following projects and processes -

Regulatory

- Appointed to various panels tasked with developing Spatial Development Frameworks, Urban Edge Policy and Environmental Management Frameworks for local/provincial government while employed by GDACE;
- Team member of a unit tasked with the development of GDACE Departmental EIA review and Basic Assessment Report (BAR) format and reporting requirement guidelines in line with 2006 NEMA EIA Regulations.
- Review and management of all EIA applications for the Ekurhuleni region and associated intra-government consultation and forum representation related thereto;
- Joint reviewer for the Gautrain Rapid Rail Project variation alignment applications, as well as numerous linear, service supply and large infrastructure project applications while employed by GDACE, and represented the Department of the Gautrain Environmental Monitoring Committee.

Strategic environmental management processes

- The Ekurhuleni Metropolitan Municipality Environmental Management Framework (EMF), Gauteng Province;
- The Dinokeng EMF, Gauteng Province;
- The Tlokwe (Potchefstroom) EMF, North West Province;
- Strategic assessment and environmental risk analysis for 12 potential wind farm projects Western and Northern Cape provinces;
- Environmental risk assessment for a proposed cement manufacturing facility in Tete, Tete Province, Mozambique;
- Rapid Assessment Study for a proposed resettlement project for the Anadarko Petroleum Corporation, Palma District, Cabo Delgado Province, Mozambique;
- Environmental risk assessment for the proposed Kenmare Nataka titanium mineral sands mining expansion project, Nampula Province, Mozambique;
- Environmental risk assessment for Frontier RareEarths proposed graphite mining project in Cabo Delgado Province, Mozambique;
- Environmental risk assessment for the proposed Kenmare Pilivilli and Congolone mining expansion projects, Nampula Province, Mozambique.

Environmental monitoring, due diligence and compliance auditing

- New Vaal Colliery EMP compliance audit, Vereeniging, Gauteng Province;
- Gauteng Freeway Improvement Project (GFIP) Construction EMP compliance audits, Johannesburg, Gauteng Province;
- Cerebos Salt due diligence audit, Coega IDZ, Eastern Cape Province;
- Komati Power Station return to service Construction EMP compliance audits, Mpumalanga Province;
- Camden Power Station return to service Construction EMP compliance audits, Mpumalanga Province;
- Grootvlei Power Station return to service Construction EMP compliance audits,

Mpumalanga Province;

- Environmental due diligence assessment for Zone 5 of the Coega Industrial Development Zone, Eastern Cape Province;
- Port Alfred Waste Water Treatment works expansion project, Environmental Control Officer (ECO) and Construction EMP compliance audits, Eastern Cape Province;
- Egazini Memorial Precinct Project, ECO and Construction EMP compliance audits, Grahamstown, Eastern Cape Province;
- Green Resources Forestry Company plantation and pole treatment works environmental and social due diligence audit against International Finance Corporation (IFC) Performance Standards (PS), Jinja and Lira, Uganda;
- Environmental and Social Due Diligence (ESDD) audit of a proposed photovoltaic solar electricity generation facility (against IFC PS and EHS guidelines) on behalf of the Standard Bank Group, De Aar, Northern Cape Province;
- ESDD of the ESIA and Draft Resettlement Action Plan (against IFC PS/EHS guidelines) for the Copperbelt Energy Company's proposed Kabompo Gorge Hydroelectric scheme on behalf of the Standard Bank Group, North-Western Province, Zambia;
- IFC PS deviation assessment for Kenmare mineral sands, Moma, Nampula Province, Mozambique;
- Construction EMP compliance audits for the Kenmare Namalope mineral sands expansion project, Moma, Mozambique;
- Construction phase compliance monitoring of the Solar Capital Ilanga Lethemba 1 photovoltaic facility, De Aar, Northern Cape Province;
- Kenmare titanium mineral sands mining project, Project Lender's Completion Test compliance audit, Moma, Nampula Province, Mozambique;
- Usutu Forestry plantation and pulp mill due diligence audit on behalf of the Deutsche Investitions und Entwicklungsgesellschaft bank (DEG), Bhunya, Swaziland;
- Copperbelt Energy Corporation corporate Environmental and Social Management System IFC PS compliance review, Solwezi, North-Western Province, Zambia;
- Independent Environmental and Social Monitor (IESM) for the operation of the Kenya-Uganda (Mombasa to Kampala) railway line, on behalf of Rift Valley Railways Kenya Ltd. (RVRK) and Rift Valley Railways Uganda Ltd. (RVRU) as the IESM for the operation of the Kenya-Uganda railways line system of a total track length of approximately 2,350 km. The project involves an investment by various international investors including the IFC, the AfDB, the FMO, DEG, KfW, PROPARGO and the Equity Bank of Kenya;
- IFC PS Gap Analysis for the proposed Ossiomo Petrochemical Ammonia-Urea Project on behalf of SWEDFUND, Ologbo, Edo State, Nigeria;
- IFC PS Gap Analysis, First Quantum Minerals, Kalumbila Copper Project, North Western Province, Zambia;
- ESDD for Chikweti Forest of Niassa (Global Solidarity Forest Fund) operations on behalf of a potential investor, Lichinga, Niassa Province, Mozambique;
- Phase 1 Environmental Assessment on a South African based agro-chemical (pesticides and fungicides) manufacturer, importer and distributing entity on behalf of Winfield Land 'O Lakes, Texas, U.S.A.;
- ESDD for the proposed Graphit Kropfmühl graphite mining project situated in Ancuabe (Cabo Delgado Province), Mozambique on behalf of DEG;
- ESDD for the proposed Kabanga Nickel mine in, Kagera District, Tanzania, on behalf of the Independent Group;
- Construction phase compliance monitoring of the SCDA 3 photovoltaic facility, De Aar, Northern Cape Province;
- Environmental scans on 2 properties (Luanda, Angola and Beira, Mozambique) on behalf of the Church of Latter Day Saints;
- E&S Compliance monitoring for Green Resources AS forestry operations in Uganda, Tanzania and Mozambique;

- ESDD on Depthwise Limited, a shallow water and swamp barge oil and gas drilling contractor operating in the Delta region on behalf of the Africa Finance Corporation, Delta State, Nigeria.

Power generation, transmission and renewable energy projects

- Upgrade of the ashwater return process at Eskom's Arnot Power Station, Mpumalanga Province (Basic Assessment);
- 3MW alien invasive wood fired electrical energy project, Grahamstown, Eastern Cape Province, (Basic Assessment);
- EA Energy 13 MW photovoltaic electricity generation project, Coega IDZ, Eastern Cape Province, (Basic Assessment);
- Matla Power Station to Jupiter B-Sebenza 400kV overhead powerlines and Substations, Mpumalanga and Gauteng Provinces (Full EIA);
- Johannesburg East electricity supply strengthening project: 400/132KV overhead powerlines and Substations, Gauteng Province (EIA);
- Witkloof-Thuli 132kV overhead power line, Mpumalanga Province (EIA);
- Vryburg 400kV/132kV Substation and loop in lines North-West Province (EIA);
- Boulders-Malelane 132kV overhead power line, Mpumalanga Province (EIA);
- Tarlton-Magaliesburg 132kV overhead power line, North-West Province (EIA);
- Watershed-Sephaku 132kV overhead power line, North-West Province (EIA);
- Cookhouse wind energy project, Eastern Cape Province (EIA);
- Grahamstown wind energy project, Eastern Cape Province (EIA);
- Riebeeck East wind energy project, Eastern Cape Province (Scoping);
- Beaufort West wind energy project, Western Cape Province (Scoping);
- Poortjie Wes wind energy project, Western Cape Province (Scoping);
- Carolina wind energy project, Mpumalanga Province (EIA);
- Nanagha Hills wind energy project, Eastern Cape Province (Scoping);
- Brakkefontein wind energy project, Western Cape Province (Scoping);
- Vrede wind energy project, Eastern Cape Province (Scoping);
- Richards Bay wind energy project, Kwa-Zulu Natal Province (EIA);
- St Lucia wind energy project, Kwa-Zulu Natal Province (Scoping);
- Hluhluwe wind energy project, Kwa-Zulu Natal Province (EIA);
- Peddie wind energy project, Eastern Cape Province (EIA);
- Richards Bay wind energy project, Kwa-Zulu Natal Province (EIA);
- Mossel Bay wind energy project, Western Cape Province (EIA);
- Grassridge-Coega IDZ wind energy project, Eastern Cape Province (EIA);
- Brandvallei and Rietkloof wind energy project - Laingsburg, Western and Northern Cape (EIAs);
- Coega IDZ wind energy project, additional turbines and substations (Basic Assessment).

General

- Numerous meteorological monitoring masts for wind energy projects nationally (Basic Assessments);
- Coega IDZ (St Georges Interchange) filling stations, Eastern Cape Province (Scoping);
- Hopewell Private Game Reserve lodge expansion, Alexandria, Eastern Cape (Basic Assessment);
- Greys Gift lodge development, Makana, Eastern Cape (Basic Assessment);
- Egazini Memorial Precinct Project, Grahamstown, Eastern Cape Province (Basic Assessment);
- Pinedale eco-estate residential development, Bathurst area, Eastern Cape Province

(EIA);

- EMP revision for the N2 highway bridge upgrades between Umtata and Butterworth, Eastern Cape Province (EMP);
- Improvement of National Route N2 from Caledon to Rivierseind, Western Cape (Basic Assessment and construction phase ECO) on behalf of SANRAL;
- Ecological Fatal Flaw Assessment for the proposed Diaz Road Arterial from the Port Elizabeth CBD to Rocklands, Eastern Cape Province.

Waste management, large and bulk service infrastructure

- Ingagane Power Station domestic waste landfill closure, Newcastle, KZN Province (Basic Assessment and landfill closure permit);
- Regional Hazardous Waste Disposal Facility for the Coega IDZ, Port Elizabeth, Eastern Cape Province (Full EIA and Permit Application Report - PAR).
- Rooiwal Waste Water treatment Works (WWTW) infrastructure and sludge treatment works upgrades, Pretoria Gauteng Province (Basic Assessment and waste permit application);
- Fishwater Flats Wastewater Treatment Works Upgrade, Port Elizabeth, Eastern Cape Province (Full EIA);
- Gansbaai Waste Water treatment Works (WWTW) EMP development, Western Cape Province (EMP);
- Regional Hazardous Waste Disposal Facility for the Coega IDZ, Port Elizabeth, Eastern Cape Province (Addendum EIA);
- Numerous potable water bulk supply pipeline applications for Rand Water, Gauteng Province (Basic Assessments);
- Environmental Management Plans (EMPs) for storm water management system upgrades, Port Elizabeth, Eastern Cape Province.
- Eskom multi products fuel transport infrastructure (rail and pipeline) from Milnerton refinery to Atlantis Power Station, Cape Town, Western Cape Province (EIA);
- Transnet New Multi Products Pipeline (NMPP), Jameson Park to Langlaagte route alignment, Gauteng and Mpumalanga Provinces (EIA);
- Biodiversity survey of area of concern on the proposed pipeline routes from the port of Saldanha to Ankerlig power station on behalf of the Central Energy Fund (CEF) and iGas, Western Cape;
- Socio-Economic Baseline Study on behalf of the Lesotho Highlands Development Agency (LHDA) for the proposed Polihali Dam - Phase 3 of the Lesotho Highlands Water Scheme – survey of 11 000 households in the catchment and downstream areas of the proposed dam – including Social Baseline and Income and Expenditure Reports, Mokhotlong, Lesotho;
- Biological Resources Baseline Study of the proposed Polihali Dam catchment area on behalf of the LHDA, Mokhotlong, Lesotho.

Mining

- Xstrata Ferrochrome bag filter plant upgrades, North-West Province (Basic Assessment);
- GS Cimentos cement factory in the Mozal IDZ and associated limestone mine, Maputo and Salamanga, Mozambique (Full ESIA).
- Kenmare Namalope mineral sands expansion project, Moma, Nampula Province, Mozambique (Addendum EIA);
- Kenmare Nataka expansion project, Nataka, Nampula Province, Mozambique (Full ESHIA to IFC PS);
- First Quantum Minerals, Kalumbila Copper Project, North Western Province, Zambia (Full ESIA and RAP to IFC PS);

- World Titanium Resources Toliara mineral sands project, Ranobe and Toliara, Madagascar (Full ESIA and RAP to IFC PS);
- Syrah Resources graphite mining project, Balama, Cabo Delgado Province, Mozambique (Full ESIA and RAP to IFC PS);
- Zirco mineral sands mine, Groenrivier, Northern Cape, South Africa (Full ESHIA to IFC PS);
- Kenmare Pilivilli and Congolone expansion projects, Nampula Province, Mozambique (Scoping);
- Baobab Resources iron ore mining project, Tete, Mozambique (Full ESHIA to IFC PS);
- Triton Minerals Nicanda Hill graphite mining project, Cabo Delgado Province, Mozambique (Full ESHIA to IFC PS);
- Triton Minerals Ancuabe graphite mining project, Cabo Delgado Province, Mozambique (Full ESHIA and RAP to IFC PS);
- MPC SPRL & Alphamin Resources Corporation Bisie tin mining project, Bisie, North Kivu Province, Democratic Republic of Congo (Socio-Economic Baseline Study);
- Alphamin Bisie Mining SPRL tin mining project, Bisie, North Kivu Province, DRC (Full ESHIA to IFC PS).

Commercial agriculture, plantations and biofuels

- Addax Bioenergy sugarcane to ethanol biofuel project, Makeni, Sierra Leone (Full Environmental, Social and Health Impact Assessment – ESHIA – to IFC and RSB standards including the Resettlement Action Plan - RAP);
- Equatorial Palm Oil expansion projects, Butaw and Palm Bay, Grand Bassa and Sinoe Counties, Liberia (Full ESHIA and RAP– to AfDB and RSPO standards)
- Nedoil Lokomasama palm oil project, Port Loko District, Sierra Leone (Scoping);
- Green Resources Niassa forestry project, Lichinga, Niassa Province, Mozambique (Full ESIA);
- Green Resources Lurio forestry project, Nampula Province, Mozambique (Full ESIA and RAP);
- Eleqtra/Envalor sugarcane to ethanol biofuel project, Sena, Sofala Province, Mozambique (Socio-Economic Baseline Study);
- EcoFarm Mozambique (Ltd) organic sugarcane growing project, Chemba District, Sofala Province, Mozambique (Full ESIA);
- Balmed Holdings cocoa and coffee outgrowers scheme Kenema, Sierra Leone (Social and Environmental Assessment - SEA - as aligned with the Africa Agriculture and Trade Investment Fund - AATIF – environmental and social reporting requirements);
- Zambeef Holdings (Community Engagement and Biodiversity Management Plans for Zambeef's Zambian operations, notably, five major agricultural production estates situated throughout the country), Zambia;
- Envalor sugarcane to ethanol biofuel project, Sena, Sofala Province, Mozambique (ESIA);
- Croke Brothers Ltd (Murrimo Farming Lda) - Resettlement Action Plan for the MFL Macadamia, Potato and Grains Project at Gurue, Zambezia Province, Mozambique;
- Ugandan Ministry of Agriculture Animal Industry and Fisheries - Buvuma Island vegetable oil development project, Lake Victoria, Uganda (Full ESHIA).

During the course of his professional career Marc has worked in Angola, Liberia, Sierra Leone, Madagascar, Mozambique, Namibia, Nigeria, Democratic Republic of Congo, Zambia, Swaziland, Lesotho, Kenya, Uganda, Tanzania and South Africa. Marc has been actively involved in lecturing and presenting environmental management training content over the last few years as a course presenter for the CES hosted annual EIA training courses, as well as the presenting of undergraduate and postgraduate environmental

management course modules at Rhodes University.

SKILLS

Planning and management of projects and research/specialist teams or support staff; preparation and management of budgets in excess of \$500 000; EIA and socio-economic impact reporting for linear, energy and bulk infrastructure, mining and renewable energy projects (to World Bank and International Finance Corporation Performance Standards); environmental and due diligence auditing, compliance monitoring; strategic policy planning and reporting. Business development and marketing functions concomitant with my current position are also fulfilled in a strategic and daily operational basis.

PROFESSIONAL MEMBERSHIP

- International Association for Impact Assessment (IAIAsa – Member No: 2416)