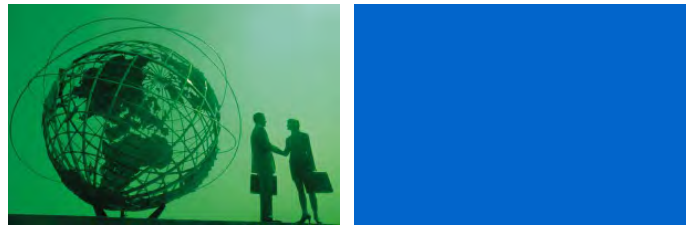


Annex A

Project Team CV's

Claire Alborough

Senior Consultant
Impact Assessment and Planning Team (IAP)



Claire Alborough joined ERM Sub-Saharan Africa in 2007 as a consultant in the Impact Assessment and Planning (IAP) team based in Cape Town, South Africa.

Since joining ERM Claire has worked on projects based in South Africa, Namibia, Uganda, Nigeria, Ghana and Equatorial Guinea. These projects include large and small scale Environmental Impact Assessments, legislative reviews and permit applications with a focus on oil and gas, power and telecommunications.

Claire's experience includes numerous South African environmental authorisation applications in the oil and gas, telecommunications and power sectors. She has been involved in all phases of environmental authorisation applications from screening through to compliance auditing. Claire has recently project managed the development of a number of Environmental Impact Assessments as well as other project support for offshore oil and gas exploration activities in South Africa. Claire has recently project managed the development of a number of Environmental Impact Assessments as well as other project support for offshore oil and gas exploration activities in South Africa.

Professional Affiliations and Registrations

- Member of the IAIA (International Association for Impact Assessment) South Africa

Fields of Competence

- Environmental Impact Assessments (EIAs)
- Environmental Management Programmes (EMPrs)
- Environmental Law (RSA & International)
- Environmental Management Plans (EMPs)

Education

- MPhil (Marine and Environmental Law), University of Cape Town (UCT), South Africa, 2006
Dissertation focussed on the implementation of the NEM: Air Quality Act 39 of 2004
- Postgraduate Certificate (Project Management), Continuing Professional Development programme, UCT, 2006
- BSc Honours (Environmental Management), UCT, South Africa, 2004
- BSc (Environmental and Geographical Science and Oceanography), UCT, South Africa, 2003

Languages

- English
- Afrikaans

Key Industry Sectors

- Oil and Gas
- Telecommunications (focus on offshore)
- Power Sector (focus on Natural Gas and Renewable Energy)
- Local and national government
- Industrial development

Project Experience

Environmental Impact Assessment for Goldfields South Deep PV Solar Power Facility, South Africa 2017

Consultant

Provided assistance with the management of the Environmental Impact Assessment for the Goldfields South Deep Mine PV Solar Power Facility. Assisted the project manager with the SA EIA process requirements, and managed the drafting of the Scoping Report.

Environmental and Social Risk Identification for New Country Entry, South Africa, Confidential Client 2017

Project Manager

Project managed an environmental and social risk identification exercise for a confidential client wanting to enter into the South African Oil and Gas market. Appointed and managed specialists, organised and assisted in facilitation of workshops, drafted and consolidated reporting.

Environmental Impact Assessment for Offshore Exploration Drilling, Equatorial Guinea, ExxonMobil, 2016 – 2017

Project Manager

Responsible for the drafting of an Environmental Impact Assessment for an offshore exploration drilling project offshore Bioko Island, Equatorial Guinea. The EIA compilation included an evaluation of the relevant legal and regulatory requirements; determination of the environmental (biological and physical) and social conditions; determination of potential impacts; and creation of a comprehensive mitigation and management plan.

Environmental and Social Due Diligence for an Oil Storage Facility, South Africa, Confidential Investment Client, 2016

Project Manager

Project managed and undertook a field visit and write up of an ESDD to international standards of a proposed oil storage facility in South Africa for a client looking to invest in the project.

Environmental and Social Due Diligence for a Gas-fired Power Plant, Nigeria, Confidential Investment Client, 2016

Project Manager

Project managed and undertook the desk-based component and write-up of a ESDD to international standards of a proposed gas-fired power station for a client looking to invest in the project.

Environmental Impact Assessment for a 1500 MW Gas-fired Power Plant, Saldanha Bay, South Africa, ArcelorMittal South Africa, 2015 – 2016

Assistant Project Manager

ERM were appointed to undertake an EIA for the development of a gas-fired power plant to supply Saldanha Steel and other industry in Saldanha. Responsible for technical delivery, reporting and specialist co-ordination.

Environmental Impact Assessment for an LNG Import Facility in Saldanha Bay, South Africa, Department of Energy, 2015 – on hold

Assistant Project Manager

ERM were commissioned to undertake and Environmental Impact Assessment for an LNG import facility in Big Bay of the Port of Saldanha, South Africa. Responsible for the compilation of the Scoping Report and appointment of specialists. Future involvement will include public engagement activities as well as the compilation of the Environmental Impact Assessment Report.

Environmental Support for Commenting on South Africa's Proposed Marine Protected Areas, Confidential Oil and Gas Client, 2016

Project Manager

Prepared a summary presentation regarding the proposed MPA's in order to facilitate the clients understanding of the process and motivations for the MPA's. Attended a meeting with the SANBI to discuss the proposed MPA's and the impact to the clients potential future exploration. Assisted the client with the drafting of comments regarding the proposed new MPA's offshore of South Africa.

Environmental and Social Due Diligence Review for a Gas-Fired Power Station, Freetown, Sierre Leone, Confidential Power Client, 2016

Project Manager

Undertook the environmental component of a desk-based ESDD review to IFC performance standards of a

proposed gas-fired power station in Freetown, Sierre Leone.

Environmental Reporting for Reconnaissance Permit Application for a Seismic Survey offshore East Coast South Africa, Schlumberger, 2015 - 2016

Project Manager

Responsible for the drafting of an Environmental Report for submission to the Petroleum Agency South Africa in support of Schlumbergers application for a Reconnaissance Permit for the undertaking of a seismic survey offshore the east coast of South Africa. The project also involved the development of public consultation materials and the notification of stakeholders.

Environmental and Social Scoping Study for a Gas-fired Power Plant in Saldanha Bay, South Africa, Confidential power client, 2015

Project Manager

Led in the preparation of a Scoping Report and Public Consultation Documentation for a gas-fired power station in Saldanha Bay, South Africa.

Environmental and Social Screening Study for a Gas-fired Power Plant in Saldanha Bay, South Africa, Confidential power client, 2015

Project Manager

Led in the development of a Screening Study for a gas-fired power plant in Saldanha Bay and possible associated LNG import. This included a permitting plan and identification of marine and terrestrial risks.

Permitting Plan for oil and gas activities in South Africa, ExxonMobil Exploration and Production South Africa Limited (EMEPSAL), 2014 - 2015

Project Manager

Led in the development of a permitting roadmap for EMEPSAL's potential upcoming exploration activities. This permitting roadmap included all applicable environmental, social, maritime and aviation legislation. All permits and notification requirements were detailed and a timeline for these developed.

Environmental and Socio-economic Impact Assessment (ESIA) for the Batoka Hydro-Electric Scheme (HES) on the Zambezi River, Zambia and Zimbabwe, Zambezi River Authority (ZRA), 2014 – 2015

Project Consultant

Assisted with the preparation of the Scoping and ESIA reports for the proposed Batoka HES project. The proposed project lies on the Zambezi River, approximately 50 km downstream of the Victoria Falls.

Environmental Management Programme (EMPr) Addendum for oil and gas exploration activities in the Tugela South Exploration Area, South Africa, ExxonMobil Exploration and Production South Africa Limited (EMEPSAL), 2014

Project Manager

Prepared a comprehensive addendum EMPr for the renewal of the Tugela South Exploration Right in terms of the South Africa Mineral and Petroleum Resources Development Act (MPRDA). The client wished to include additional activities and update the Implementation Plan. The block is located close to the Durban South Coast.

Environmental Management Programme (EMPr) for oil and gas exploration activities in the Deepwater Durban Exploration Area, South Africa, ExxonMobil Exploration and Production South Africa Limited (EMEPSAL), 2013 - 2014

Project Manager

Prepared a comprehensive EMPr for the client's planned oil and gas exploration surveys (excluding drilling) in the Deepwater Durban Exploration Area off the east coast of South Africa. The block is located at it's closest 50 km offshore and in water depths ranging from 2200m and 3600m. The development of the EMPr was carried out in terms of the South Africa Mineral and Petroleum Resources Development Act (MPRDA) and included an evaluation of the relevant legal and regulatory requirements; determination of the environmental (biological and physical) and social conditions; determination of potential impacts; and creation of a comprehensive mitigation and management plan. The process also included a comprehensive public consultation process including public meetings. The project had complicated stakeholder issues and went through a Regional Mining Development and Environmental Committee hearing process subsequent to submission. Preparation for and attendance of the meeting was required.

Environmental Impact Assessment (EIA) update for changes to the offshore Zafiro Field oil and gas development, Equatorial Guinea, Mobil Equatorial Guinea Inc. (MEGI), 2013

Project Manager

Prepared an EIA update report for the client for both onshore and Block B offshore operations to meet the

intent of the environmental licensing requirements of the Republic of Equatorial Guinea Environmental Law. The update included the following aspects: providing an updated description of the client's current onshore and offshore operations related to the Zafiro Field, including the new planned drilling programme; incorporating aspects of on-going production activities that were not previously addressed in the EIA (produced sand waste management, completion / workover fluids waste management, abrasive blast media); incorporating applicable requirements of the operation's Environmental License ; and providing the client's staff with sound environmental management guidance and direction with regard to continued offshore operations from the Zafiro Field, as well as their logistical and operational support facilities on Bioko Island.

EIA update, exploration drilling programme in Block P offshore, Equatorial Guinea, Guinea Ecuatorial de Petroleos (GEPetrol), 2013

Project Consultant

Prepared a revised/updated EIA for a proposed exploration drilling programme in the Rio Muni Basin, offshore Equatorial Guinea. Involved in the preparation of an updated report including updates to the project description, baseline and impact assessment sections and the development of an Environmental Management Plan (EMP).

EMPr for oil and gas exploration activities in the Transkei and Algoa exploration areas off the East Coast, South Africa, Impact Africa, 2013

Project Manager

Prepared a comprehensive EMPr for planned oil and gas exploration surveys (excluding drilling) in the Transkei and Algoa Blocks off the east coast of South Africa. The block is located between the shore and approximately 100 km and 180 km offshore and up to 4000 m water depth. The development of the EMPr was carried out in terms of the South Africa Mineral and Petroleum Resources Development Act (MPRDA) and included an evaluation of the relevant legal and regulatory requirements; determination of the environmental (biological and physical) and social conditions; determination of potential impacts; and creation of a comprehensive mitigation and management plan. The process also included a comprehensive public consultation process and public meetings.

Port of Saldanha (Liquified Petroleum Gas) project EIA, South Africa, Sunrise Energy, 2012 - 2013
Project Consultant

Developing an EIA for the installation of and LPG Importation and Storage Facility within and adjacent to the Port of Saldanha, West Coast, South Africa. Responsible for report writing, public consultation activities, management of subcontractors, as well as aspects of client liason and financial management.

EMPr for Exploration of the Bredasdorp Exploration Area, South Africa, Impact Africa, 2012 - 2013
Project Manager

Prepared a comprehensive EMPr for the client's planned exploration surveys in the Bredasdorp Exploration Area off the south coast of South Africa. The block is located adjacent to the coast in water depths between 100m and 200m. The development of the EMPr was carried out in terms of the South Africa Mineral and Petroleum Resources Development Act (MPRDA) and included an evaluation of the relevant legal and regulatory requirements; determination of the environmental (biological and physical) and social conditions; determination of potential impacts; and creation of a comprehensive mitigation and management plan. The process also included a public consultation process.

Amendment to an EMPr for exploration in the Algoa/Gamtoos Block, South Africa, NewAGE, 2012
Project Manager

South Africa's Mineral and Petroleum Resources Development Act requires an EMPr to be compiled and submitted to the Petroleum Agency South Africa as part of an application for an Exploration Right. The client appointed ERM to develop the EMPr and the subsequent amendment required due to a change in work programme. Responsibilities included project management, public consultation, developing the EMPr including the preparation of EMPs for seismic surveys and prospect well drilling.

Photovoltaic (PV) solar power facility Environmental Impact Assessments, South Africa, Solaire Direct, 2012
Project Consultant and assistant Project Manager

Conducted EIAs for two solar power facilities in the Northern and Eastern Cape. Responsible for aspects of public consultation, subcontractor management, liason with authorities, and report writing and submission. Also responsible for some aspects of financial management and client liason.

Cable system screening study, Angola, Alcatel Lucent Submarine Networks (ASN), 2012

Project Manager and co-ordinator

Performing a screening/feasibility study for an offshore optical fibre cable system in Angola. Responsible for client liaison, financial management, subcontractor management, report compilation and review.

Waste Management Licence Basic Assessment, Cape Town Refinery, Chevron, 2011 - 2013**Project Consultant**

Assisted with a Waste Management Licence Application and associated Basic Assessment process for the construction of a consolidated waste facility at the Chevron Refinery in Cape Town. Responsible for report writing, stakeholder engagement, site visit and client liaison.

Underground pipeline project for Cape Town Refinery, South Africa, Chevron, 2010 - 2012**Project Manager**

ERM were commissioned to provide the client with an EIA for the installation of an underground pipeline from the refinery, extending approximately 1.3 km along Koeberg Road. Responsible for client liaison, stakeholder engagement, organising and undertaking a site visit, and report writing.

Wind Farm EIAs, G7 Renewable Energies, 2010 – 2011**Assistant Project Manager**

Performed EIAs for five wind farms in the Western and Northern Cape. Responsible for aspects of public consultation, organisation of site visits, conduction of primary and secondary research, liaison with authorities, and report writing and submission. Also responsible for some aspects of financial management and client liaison.

Solar power farm EIAs, South Africa, Intikon Energy, 2010 – 2011**Assistant Project Manager**

ERM completed EIAs for two solar power farms in the Northern Cape and Free State. Responsible for aspects of public consultation, organisation of site visits, conduction of primary and secondary research, liaison with authorities, and report writing and submission. Also responsible for some aspects of financial management and client liaison.

West Africa cable system project EIAs, South Africa and Namibia, Alcatel-Lucent Submarine Networks, 2009 - 2011**Assistant Project Manager**

Provided assistance with the EIAs for the submarine telecommunications cable landings in South Africa and Namibia. Responsible for organisation of site visits, consultation meetings, public participation, conduction

of primary and secondary research, liaison with authorities, as well as report compilation and submission. Additional responsibilities included co-ordination of permits required other than the EIA and liaison with the client and landing parties.

West Africa cable system project EIAs, Cote d'Ivoire, Congo, DRC and Togo, Alcatel-Lucent Submarine Networks, 2009 - 2011**Project Co-ordinator**

Coordinated EIAs for the submarine telecommunications cable landings in Cote d'Ivoire, Congo, DRC, Togo and Cameroon. Responsible for co-ordination between the ERM team based in France, the client and the overall project management team.

EMPr for exploration in the Ultra Deepwater Orange Basin Block, South Africa, Shell, 2010**Project Consultant**

South Africa's Mineral and Petroleum Resources Development Act requires an EMPr to be compiled and submitted to the Petroleum Agency South Africa as part of an application for an Exploration Right. Shell appointed ERM to develop the EMPr. Responsibilities included developing the EMPr including the preparation of EMPs for seismic surveys and prospect well drilling.

Flare Modernisation Basic Assessment, Cape Town Refinery, Chevron, 2008 – 2009**Project Consultant**

Basic Assessment for the modernisation of Chevron's Cape Town Refinery's flaring system. Responsible for organising an authorities consultation meeting, submission of notice of intent, liaising with specialists and the client, assisting with stakeholder engagement, and compilation and submission of the Basic Assessment Report.

Environmental Performance Strategy, South Africa, City of Cape Town, 2008 – 2009**Project Consultant**

The project involved the development of an environmental performance strategy for the City of Cape Town. Responsibilities included attending and taking minutes of interviews undertaken for an 'as is' assessment of the City, assistance with report preparation, the compilation of a case study on the eThekweni Municipality and the drafting of an EIA Manual for the City of Cape Town.

Environment, Health and Safety Legal Register, South Africa, mining client, 2009
Project Consultant

Review of legislation applicable to a Mining Industry client's Johannesburg Offices and the development of an Environment, Health and Safety Legal Register.

**Environment, Health and Safety Legal Register, Ghana, Baker Hughes Oil Tools, 2008 – 2009
Project Consultant**

Review of all environmental, health and safety legislation applicable to Baker Hughes current and potential future operations in Ghana and the development of an Environment, Health and Safety Legal Register to be used by incountry EHS staff.

**MaIN OnE submarine cable project Phase 1 EIAs, Nigeria and Ghana, Main Street Technologies, 2008 – 2009
Project Consultant**

Phase 1 EIAs for a submarine cable and the associated landing sites in both Nigeria and Ghana. Responsible for conducting secondary level research and report compilation, as well as other project related activities.

**Early Production System (EPS) EIA, Lake Albert, Uganda, Tullow Uganda Operations Pty Ltd, 2007 – 2008
Project Consultant**

EIA for an EPS because the client has a Memorandum of Understanding (MoU) with the Government of Uganda to develop an onshore EPS – the first oil production in Uganda. Responsible for researching and writing sections of the biophysical baseline chapter and the legal overview chapter, editing, compiling and submission of the final report, and assisting the project manager with client and sub-contractor liaison.

**Lake Albert offshore exploration drilling EIA, Uganda, Tullow Uganda Operations Pty Ltd, 2007 – May 2008
Project Consultant**

EIA for offshore exploration drilling in Lake Albert. The EIA also includes an assessment of the onshore facilities required for the project. Responsible for researching and compiling the legal overview and biophysical baseline sections as well as editing the final report.

**Air Pollution Regulation Review, South Africa, Zimco Group, 2008
Researcher**

Reviewed proposed regulations under South Africa's National Environmental Management: Air Quality Act 39 of 2004. The objective of this review was to assess the proposed ambient and point source requirements for five metallurgical and mineral processing facilities.

**Basic Assessment for the Installation of LPG Tanks, Simba Parow Industria, 2008
Project Consultant**

Basic Assessment of two fully-mounded LPG tanks at Simba's Parow Industria facility. Undertook site visit and compiled the Basic Assessment Report, also responsible for public participation and assisting the project manager with client liaison.

**Atmospheric Pollution Prevention Act (APPA) permit amendment application, South Africa, Corning Products South Africa Pty Ltd, 2008
Researcher**

Researched and liaised with authorities to gather information on the current APPA permitting requirements. Compiled and submitted the amendment application form, this required a thorough understanding of the current and future air pollution legislation.

**Freight line upgrade EIA, Coega to De Aar, South Africa, Transnet Projects, 2008
Project Consultant**

Assisted with the compilation of a stakeholder database and drafting of the stakeholder engagement material for the project.

**NEMA Rectification Applications for above and underground fuel storage tanks, South Africa, Shell SA Marketing Pty Ltd, 2007 – 2008
Project Consultant**

NEMA rectification applications for above and underground fuel storage tanks throughout South Africa. Involved in the undertaking of site visits, report writing and submission of reports to the authorities in the Mpumalanga Province. Also assisted with the compilation of a synopsis of the rectification sites.

**Angara Spit Environmental and Social Baseline Report, Lake Albert, Uganda, Tullow Uganda Operation Pty Ltd, 2007
Project Consultant**

EIAs for exploration well drilling on the Angara sand spit near Kaiso village. Responsible for final editing and compilation of the environmental and social baseline report.

Ingeborg M McNicoll

Senior Partner
Capital Projects



Ingeborg McNicoll is a Senior Partner with ERM Sub Saharan Africa, based in Cape Town, South Africa. She brings over 30 years' experience working as an environmental consultant predominantly in the marine environment, initially in fish farming and marine resources and latterly for the oil and gas industry starting in the UK North Sea and Atlantic Margin, Norwegian Sector of the North Sea, Republic of Ireland focusing on exploration through the whole project life cycle to decommissioning for Upstream, Midstream and Downstream Projects. She has developed extensive global experience in Oil and Gas projects including the Mediterranean, Former Soviet Union, South East Asia, North Asia, Australia, New Zealand, North, East and West Africa and the Gulf of Mexico.

She has acted as Project Director/ Manager in numerous environmental projects which include Strategic Environmental Assessments for Oil and Gas exploration and decommissioning, environmental impact assessments, environmental permitting, oil spill contingency planning, consultation with stakeholder and statutory authorities, environmental management systems. Her experience in all stages of the oil and gas lifecycle including technical and process aspects enables her to provide due diligence support for transactions and facilitate a range of types of Environmental Workshops such as environmental scoping, BAT, eALARP and ENVIDs, etc.

Her clients include eni, Sasol, Shell, Premier Oil, Statoil, Aker, Chevron, Petronas Carigali, Talisman, BHPB Billiton, Total, BP Exploration and Production, Hess, ExxonMobil, Tullow, EMAS, Toyo, Vopak, Coastal Energy, PTTEP, Petrofac, Brunei LNG as well as financial institutions.

Fields of Competence

- Environmental Impact Assessment
- Environmental Risk Assessment
- Strategic Environmental Assessment
- Best Available Techniques Studies
- Design and execution of marine ecology studies
- Onshore and offshore oil spill contingency plans
- Environmental Management
- Environmental Due Diligence
- Marine assessments
- Training and capacity building
- Public consultation and participation

Education

- BSc (Hons) Marine Biology, Heriot-Watt University (1979)
- ERM CVS Lead Assessor 14001 training course, 2006

Languages

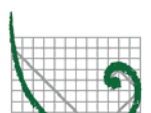
- English

Key Industry Sectors

- Oil and Gas,
- Government

Professional Affiliations & Registrations

- Member of the Energy Institute
- Member of the Society of Petroleum Engineers
- Affiliate Member of the Institute of Environmental Management and Assessment
- Nuffield Scholar
- DOE registered EIA Consultant (Reg. No.: CS0120)
- DOE registered Subject Consultant, Marine Ecological Studies (Reg. No.: CS0120)
- NREB registered EIA Consultant and Permanent Specialist in Marine Biology and Environmental Management (Reg. No. NREB/1/00810)



Environmental Impact Assessment/ Environmental Management

ExxonMobil (2017)

Project Director – Blockwide EIA for exploratory drilling and seismic in Block B, offshore Equatorial Guinea. The EIA presented the assessment of the important environmental and social issues relating to the project. A waste management plan was also prepared for drilling and seismic operations.

ExxonMobil (2017)

Project Director – Blockwide EIA for exploratory drilling in Block 6, offshore Equatorial Guinea. The EIA presented the assessment of the important environmental and social issues relating to the project. A waste management plan was also prepared for drilling operations.

eni East Africa (2016)

Technical Specialist – specialist studies for the Floating LNG project offshore Mozambique including and Offshore Environmental Baseline Action Plan, Biodiversity Action Plan including Critical Habitat Assessment and a number of Management Plans.

BG Tanzania (2016)

Project Director – Blockwide EIAs for Blocks 1 and 4, offshore Tanzania. The Block-Wide EIAs covered a defined programme of exploration and drilling activities that were currently planned as well as activities that may be carried out in the future. The EIA presented the assessment of the important environmental and social issues relating to the project. Management and mitigation measures proposed in order to minimise potential impacts were also an outcome of the process.

Sasol Exploration & Production International (SEPI)

(2017) –Project Director for the Environmental and Social Impact Assessment for the Export pipeline from the onshore Liquid Export Facility to an Offshore FSO, Mozambique. The ESIA required extensive field and specialist studies to enable assessment of biodiversity, cultural heritage, tourism, fisheries, marine ecology, communities, flora and fauna as well as the physical environment.

Department of Mineral Fuels (2016)

Technical Advisor –. Preparation of a Manual to undertake the Best Practicable Environmental Option (BPEO) process for decommissioning oil and gas facilities and deliver training to key operators in Thailand.

Idemitsu (2016)

Technical Advisor – Facilitator for Best Available Techniques (BAT) Workshop for FEED Stage of a Full Field Development offshore Vietnam.

Hess (2015)

Technical Advisor and ENVID Facilitator for an Environmental and Social Impact Assessment Scoping for the DWT OCTP Development deepwater oil production and export project offshore Ghana. The project comprises installation of production wells and reinjection wells and a FPSO. An ENVID workshop was conducted to inform the scoping process

ION (2015)

Project Director – Environmental Impact Assessment for 2D Seismic Survey, offshore Angola.

Confidential Client (2015)

Technical Advisor – Decommissioning Environmental Assessment for Phase I decommissioning of platforms and pipelines in South East Asia.

Department of Mineral Fuels, Thailand (2015)

Technical Advisor –. Delivery of a Technical Seminar on the Environmental Issues and Assessment Process for Decommissioning.

Confidential Client (2015)

Technical Advisor –Waste management study on potential decommissioning facilities in Asia Pacific.

Hess Oil and Gas (2015)

Project Director-Sdn Bhd Environmental Impact Assessment and associated Marine Environmental Baseline Survey, and an Environmental Issues Identification (ENVID) Workshop for the Full Field Development, Offshore Peninsular Malaysia.

Petrofac (Malaysia-PM304) Limited (2014-2015)

Project Director –. Decommissioning Environmental Risk Assessment and Environmental Management Plan for the disconnection and removal of a Floating Storage and Offloading (FSO) vessel and Mobile Production Unit (MOPU) at the Cendor Field, Offshore Peninsular Malaysia.

eni East Africa (2014-2015)

Technical advisor - specialist studies for the Floating LNG project offshore Mozambique.

Hess Oil and Gas (2014)

Project Director-Sdn Bhd Environmental Impact Assessment and associated Marine Environmental

Baseline Survey, and an Environmental Issues Identification (ENVID) Workshop for the Integrated Gas Development Early Production System, Offshore Peninsular Malaysia.

Aker Engineering International (2014)

Environmental Adviser seconded to Aker for the Detailed Design of Statoil's Gina Krog Platform Project, Norway. Responsible for aligning Detailed Design to environmental performance standards. Additional studies included an Environmental Design Review, BAT Evaluation Report, Environmental Budget Study and the Waste Handling Philosophy.

Brunei Shell Joint Venture (2014)

Project Director - (BSJVs) Strategic Impact Assessment (SIA) and Environmental Management Plan (EMP) for 6 jetty and wharf facilities along the coastline of Brunei that service BSP's offshore operations.

Cobalt International Energy (2014)

Technical Advisor for an ESHIA for an oil and gas field development offshore Angola. IFC Gap analysis was also conducted as well as a BAT workshop for the FPSO design.

Salamander Energy Ltd (2014)

Project Director for Environmental Risk Assessment (ERA) and Environmental Management Plan (EMP) for 3D Seismic Survey Block PM 322, Straits of Malacca, Malaysia.

Sabah Shell Petroleum Company (2014)

Project Director - Environmental Impact Assessment for Ocean Bottom Cable Seismic Survey, offshore Sabah.

Confidential Client (2014)

Project Director - Coral survey to assess the condition and quality of the confirmed corals along the corridor of the proposed new pipeline route between CPCB-07 and CPDP-11.

Brunei LNG (2014)

Project Director - A scoping study, ESH baseline study, impact assessment and ESHMP for the extension of the existing cogeneration (COGEN) I units.

Petrofac Malaysia-PM304 Limited (2014)

Project Director - Environmental Risk Assessment, Environmental Management Plan and Health Risk Assessment for Decommissioning of CP1 facilities, offshore Terengganu.

Hess Oil and Gas Sdn Bhd (2014)

Project Director- ERA and EMP for Exploration/ Appraisal Wells Drilling in Blocks 302, 325 and 326 B, offshore Peninsular Malaysia.

JX Nippon Oil & Gas Exploration (Deepwater Sabah Limited) (2014)

Project Director - Environmental Management Plan and Environmental Risk Assessment for exploratory drilling in Block R and Block 2F, Offshore Sabah and Sarawak.

Confidential Client (2013 - 2014)

Project Director - IA on the environmental, social and public health impacts associated with an onshore/offshore 3D Seismic Survey.

Technip Geoproduction/Petronas (2013-2014)

Project Director - Environmental Impact Assessment and associated Environmental Baseline Survey for the Sepat Gas Development Project, Block PM313, Exclusive Economic Zone, Offshore Terengganu.

Coastal Energy KBM (2013)

Project Director - Environmental Impact Assessment and associated Marine Environmental Baseline Survey for the Kapal, Banang and Meranti (KBM) Cluster Fields Development Block PM 316, offshore Peninsular Malaysia.

Confidential Client (2013)

Project Director - An Environmental Impact Assessment (EIA) for the drilling of three (3) onshore exploratory wells in Block L, Tutong, Brunei Darussalam

Confidential Client (2012)

Project Director - Scoping study to identify the environmental, social and public health impacts associated with two onshore fabrication yards sites and preliminarily assess the significance of these impacts.

Sonaref (2012)

Technical Advisor - ESHIA for the Sonangol refinery in Angola comprising construction of a new refinery, Single Buoy Mooring and offloading wharf and jetty facility.

Confidential Client (2012)

Scoping study scoping to identify the environmental, social and public health impacts associated with an onshore/offshore 3D Seismic Survey and preliminarily assess the significance of these impacts; and scope the IIA

Confidential Client (2012)

Technical Advisor for Deepwater Environmental Baseline for offshore ESHIA West Australia

Chevron Angola (2012)

Technical Advisor for deepwater ESHIA

Statoil Angola (2012)

Technical Advisor for Environmental Risk Assessment for deepwater drilling including ENVID facilitator

Maersk Angola (2011)

Technical Advisor for deepwater drilling

Confidential Client (2012)

Project Director - Environmental Issue Identification/IA Scoping Study for a deepwater field development, South China Sea

Premier Oil Natuna Sea BV (2012)

Technical Advisor - Environmental Review/ALARP/BAT for the Naga Pelikan Field Development.

Premier Oil Natuna Sea BV (2012)

Technical Advisor - Environmental Review/ALARP/BAT for the Anoa Complex

Petronas Carigali Sdn Bhd (2012)

Project Director - Pre-, during and post-decommissioning environmental surveys together with an Environmental Management Plan for the decommissioning of two structures, South China Sea.

Talisman Malaysia Limited (2012).

Project Director - Desktop EIA for Exploration Drilling offshore East Malaysia

Petrofac (Malaysia-PM304) Limited (2012)

EIA Team Leader/Project Director - Environmental Impact Assessment and associated Marine Environmental Baseline Survey, and an Environmental Issues Identification (ENVID) Workshop for the West Desaru Field, Block PM-304, Offshore Peninsular Malaysia.

Brunei Shell Petroleum Company Sdn Bhd (2012)

Project Director - Hydrodynamic computational modelling of discharge of produced water from the Seria Crude Oil Terminal, Brunei Darussalam
Project Director - Hydrodynamic computational modelling of the dispersion of drilling waste discharges from offshore drilling platforms for Bugan and Bubut exploratory wells, offshore Brunei Darussalam.

Brunei Shell Petroleum Company Sdn Bhd (2012)

Project Director - Baseline and Post-Drilling Monitoring of the marine environment (physico-chemical and biological) in sensitive coral ecosystems off the coast of Brunei Darussalam

EMAS (2011-2012)

Project Director- Provision of Environmental Services to support the preparation of an Exit Plan for the dismantling and redeployment of an FPSO in the Gulf of Thailand.

IEV (2011-2012)

Project Director - Environmental Management and Monitoring for the decommissioning of two structures offshore Sabah, East Malaysia

Shell Eastern Petroleum Limited (2011-2012)

Technical Advisor - Scoping Report and Environmental Social and Health Management Plan for Pipeline Repair Project, Singapore

PHE ONW, Indonesia (2011)

Project Director - Review of the Existing PHE ONWJ Integrated Risk Matrix, Development of the Likelihood vs Severity Curves (L-S Curves) and Oil Spill Risk Assessment.

GMAPS Engineering Services Pte Ltd (2011)

EIA Team Leader/Project Director - A Preliminary Environmental Impact Assessment for the proposed dredging works at the Jasar Jetty which is located in Serasa, Brunei Darussalam.

Technip Geoproduction (M) Sdn Bhd (2011)

EIA Team Leader/Project Director - Environmental Impact Assessment and associated Marine Baseline Survey for the Dulang Phase II Field Redevelopment Project, Block PM6, Offshore Peninsular Malaysia

BP (2010)

Technical Advisor on behalf of BP to Oil and Gas UK Decommissioning Working Group 3 and preparation of a Global Legislation on Decommissioning Reference report.

Petrofac (Malaysia-PM304) Limited (2010)

Project Director - An EIA for the development of the Berantai Field, offshore Terengganu including conducting an ENVID and marine baseline survey to support the impact assessment.

Petrofac (Malaysia-PM304) Limited (2010)

Project Director - A supplementary EIA for the Phase 2 development of the Cendor Field, Block PM 304,

offshore Terengganu including conducting an ENVID and marine baseline survey to support the impact assessment.

Brunei LNG Sdn Bhd (2006)

Project Director – IA Scoping, Impact Assessment and associated Environmental, Social and Health Management Plan for BLNG Power Plant Rejuvenation Project Phase 2. The IA and ESHMP for Phase 1 of the Project were completed by ERM

Hess (Malaysia – SB 302) Limited (2009)

Project Director – Development of an Environmental Road Map for Belud Field Development, Offshore Sabah.

Premier Oil Vietnam (2009)

Technical Advisor – A Critical Environmental Review (e-ALARP) of the Block 12 development - Chim Sao and Dua Fields.

Premier Oil Indonesia (2009 -2010)

Technical Advisor – A Critical Environmental Review (E-ALARP) of the Gajah Baru Field

Confidential Client (2009 – 2010)

Project Director –An Environmental Impact Assessment (EIA) and associated Management Plan for the drilling of three (3) onshore exploratory wells in Block L, Tutong, Brunei Darussalam

Chevron (2009-2012)

Project Director – ESHIA for shore-based facility to support the offshore oil and gas industry offshore Thailand.

Shell Global Solutions (Malaysia) Sdn Bhd (2008 - 2010)

Project Director – An Environmental, Social and Health Impact Assessment for two proposed upgrades to Shell's Bukom Refinery in Singapore.

Shell Global Solutions (Malaysia) Sdn Bhd (2008)

Project Director – Impact Assessment for PRL Refinery Upgrade Project, Pakistan. An Impact Assessment Study for the PRL Refinery Upgrade Project in Pakistan

Brunei LNG Sdn Bhd (2008-2009)

Project Director – Nearshore Environmental Monitoring Study for Brunei LNG. An environmental monitoring study of the nearshore environment in front of the BLNG plant in Lumut, Brunei Darussalam

Sarawak Shell Berhad (2008-2009)

Project Director - An EMP was prepared for the proposed field development of the Cili Padi Gas Field, offshore Sarawak.

Sarawak Shell Berhad (2008-2009)

Project Director – To conduct an environmental monitoring programme for Scheduled Waste Storage Facility in Labuan Supply Base and Labuan Crude Oil Terminal.

Sarawak Shell Berhad (2008)

Project Director – Environmental Impact Assessment (EIA) Study for Cili Padi Gas Field Development Project, Offshore Sarawak.

Nations Petroleum Brunei Ltd. (2008)

Project Director – Environmental and Social Management and Monitoring plan (ESMMP) for an onshore seismic survey in Brunei Darussalam.

Loon Brunei Limited and Nations Petroleum Limited (2008).

Project Director - Environmental and Social Baseline Survey for proposed 3-Dimensional Seismic Survey over a 350km² onshore area in Tutong District, Brunei Darussalam

Nations Petroleum Company Limited (2007)

Project Director - Environmental and Social Baseline Study in support of a proposed 3-Dimensional Seismic Survey in Block L, Tutong District, Brunei Darussalam.

Thailand - Chevron, PTTEP, Hess, DMF and ONEP (2007-2008)

Technical Advisor - BPEO Decommissioning Guideline for Offshore Oil and Gas Facilities in Thailand, for representative of the oil and gas industry in Thailand (ie. Chevron, PTTEP) and regulatory authorities (ie. DMF and ONEP). The project involved preparing a Guideline on the application of BPEO to the offshore decommissioning of oil and gas facilities in Thailand.

Murphy Oil Sabah (2006-2007)

Project Director - Environmental impact assessment for offshore Sabah, inclusive of marine and coastal baseline survey for a proposed pipeline linking Murphy's deepwater Kikeh field and the Labuan Crude Oil Terminal on Labuan

PETRONAS Carigali Sdn Bhd (2006-2007).

Project Director - Environmental impact assessment for Proposed Angsi – TCOT Crude Oil Pipeline, Exclusive Economic Zone, Offshore Peninsular Malaysia

Brunei Shell Petroleum Project (2006-2007)

Project Director - Impact Assessment for Mampak Block 4 Field Development, offshore Brunei Darussalam. An Integrated (Environmental, social and health) impact assessment of the proposed development of a gas field offshore Brunei.

Brunei Shell Petroleum (2006-2007)

Project Director - Initial Screening, Scoping and Constraints Assessment for Bugan Phase 2 Field Development offshore Brunei Darussalam, The field is located in an area surrounded by sensitive coral ecosystems.

Brunei Shell Petroleum (2006-2007)

Project Director - Impact Assessment for the proposed on and offshore field development of the Seria North Flank, Brunei Shell Petroleum, including marine baseline monitoring for the on- and offshore development of the Seria North Flank field area of Brunei.

Department for the Marine, Natural Resources and Communications, Republic of Ireland (2006 - 2007)-

Project Director - First and Second Irish Offshore Strategic Environmental Assessment for. Project director including active participation in Steering Group Meetings, presentations at public consultation meetings, contributing to environmental assessment sections and overall review of baseline environment report and SEA report

Transaction Services – Due Diligence and Finance Environmental and Social Management Systems**Confidential Client (2017)**

Senior Marine Specialist - Environmental and Social Due Diligence (ESDD) of a Petroleum Mooring System (GPMS) operations to evaluate compliance with applicable international environmental and social standards and Client's E&S requirements.

Confidential Client (2016)

Technical Reviewer- Health, Safety, Security and Environment (HSSE) Vendor Due Diligence Review of onshore and offshore exploration & production operations including assets for retirement located in Asia Pacific.

Confidential Client (2016)

Technical Reviewer- Environmental & Social Due Diligence for Project involving the potential buy-out of the Marine Services Division from its current corporate shareholder. It involved review of information

available from public domain and the data room, the desktop-based evaluation of documentation, interviews and on-site inspections.

Confidential Client (2014)

Technical Advisor - Environmental Review of offshore facilities comprising platforms and Floating Production Storage Offtake vessel under Asset Transfer, offshore China. The assessment provided an independent determination of material environmental and social risks associated with the field assets. The assessment was carried out against the requirements of applicable laws and regulations. It involved review of information available from public domain and the data room, the desktop-based evaluation of documentation, interviews and on-site inspections offshore.

Dialog (2014)

Project Director - an assessment of Equator Principles compliance on behalf of the project company (the borrower) for a greenfield coastal tank farm facility with associated marine structures - loading/unloading jetties.

Confidential Client (2014)

Project Reviewer - environmental due diligence (EDD) services for the proposed acquisition of up to 30% of Target upstream Malaysian assets, The assignment involved desktop based review of project documents (including impact assessments and monitoring data) and a field survey and inspection of the assets including oil wells, connecting pipelines, FPSO and gas pipeline to shore. The overall objective of this project was to provide an assessment of the material liability issues in relation to key environmental and safety issues.

Workshops**Sasol Exploration & Production International (SEPI), December 2016**

Facilitator for Mitigation Workshop for the Sasol Pipeline and FSO ESIA Project.

Confidential Client, October 2016

Chairman for Decommissioning Strategic Assessment Scoping Workshop, South China Sea

Idemitsu, October 2016

ENVID Facilitator for Block 05-01b/01c Field development, offshore Vietnam.

Idemitsu, August 2016

Facilitator for BAT Brainstorming Workshop for Block 05-01b/01c Field development, offshore Vietnam.

BG Tanzania, April 2016

ENVID Facilitator for two Blockwide EIAs

Sasol Exploration & Production International (SEPI), January 2016

ENVID Facilitator for the Sasol Pipeline and FSO ESIA Project.

Hess, July 2015

ENVID Facilitator and Technical Reviewer for the Scoping Study for the Tano Deepwater Field Development, Offshore Ghana.

Brunei Shell Petroleum, August 2014

Facilitator for Mitigation Workshop for Marine Construction Yard.

Cobalt International Energy, August 2014

Facilitator for ENVID/BAT Workshop for Cameia FPSO, Angola

Aker Engineering International, August 2014

Facilitator for an Environmental Issues Identification Workshop for Wellhead platforms, offshore Peninsular Malaysia.

Aker Engineering International, August 2014

Facilitator for an Environmental Issues Identification Workshop for Bergading CPP, offshore Peninsular Malaysia.

Brunei Shell Petroleum, June 2014

Facilitator for IA Scoping Workshop for BSJV Jetty and Wharf Facilities, Brunei.

Confidential Client May 2014

Facilitator for IA Scoping Workshop for Ocean Bottom Cable Seismic Survey, offshore Sabah.

Brunei LNG, March 2014

Facilitator for IA scoping study for the extension of the existing cogeneration (COGEN) I units in Brunei.

Salamander Energy March 2014

Facilitator for IA an Environmental Issues Identification (ENVID) Study to identify the Environmental, Public Health and Social (EHS) issues/ risks associated with the initial seismic survey in Block PM322

Hess Oil and Gas Sdn Bhd, February 2013

Facilitator for an Environmental Issues Identification Workshop for Full Field Development, offshore Peninsular Malaysia

Shell Deepwater Borneo Ltd, January 2013

Facilitator for Scoping Workshop for Offshore Field Development

INPEX Ichthys FPSO Project (Subsea Production Systems) January 2013

Facilitator for an Environmental Issues Identification Workshop

Brunei Shell Petroleum, December 2012

Facilitator for Scoping Workshop for Onshore 3D seismic campaign

Brunei Shell Petroleum, December 2012

Facilitator for Scoping Workshop for Marine Construction Yard

Angola Statoil, November 2012

Facilitator for an Environmental Issues Identification Workshop for Deepwater drilling, offshore

INPEX Ichthys FPSO Project (Turret, November 2012

Facilitator for an Environmental Issues Identification Workshop

Tullow October 2012

Facilitator for BAT and ENVID for Deepwater Field Development, Offshore Ghana

Dua Field Development, Premier Oil Vietnam, August 2012

Facilitator for Environmental ALARP/BAT Workshop

Confidential Client Development, June 2012

Facilitator for an Environmental Issues Identification Workshop for Deepwater Field Development, South China Sea

Shell Chemical Seraya Pte Ltd, May 2012.

Facilitator for Scoping Workshop for Ethylene Oxide facility in Singapore.

Hess Oil and Gas Sdn Bhd, May 2012

Facilitator for an Environmental Issues Identification Workshop for Early Production System Field Development, Malaysia

Premier Oil Indonesia, January 2012

Facilitator for Environmental ALARP/BAT Workshop for Anoa Phase 4

Premier Oil Indonesia, February 2012

Facilitator for Environmental ALARP/BAT Workshop for Naga Pelikan Field Development

Thailand (Confidential Client), November 2011
Facilitator for an Environmental Issues Identification Workshop for Decommissioning Project Offshore
Sabah for IEV Sdn Bhd, November 2011
Facilitator for an Environmental Issues Identification Workshop for Decommissioning Project Offshore

Petrofac Malaysia Limited, October 2011
Facilitator for an Environmental Issues Identification Workshop for West Desaru Field Development, Malaysia

Brunei Shell Petroleum, October 2011.
Facilitator for an IA Scoping Workshop for Champion Field Brunei

FPSO Decommissioning Project, Singapore, October 2011
Facilitator for a Scoping Workshop

Petrofac Malaysia Limited, Woking January 2011
Facilitator for an Environmental Issues Identification Workshop for Berantai Field, Malaysia for.

PC Muriah Limited, August 2010
Chairman for Environmental Issues Identification workshop for Kepodang Field, Indonesia

Brunei Darussalam, April 2010
Facilitator for IA Scoping Workshop, Brunei LNG Sdn Bhd.

Petrofac Malaysia, Kuala Lumpur 24 March 2010
Facilitator for ENVID for Cendor Phase 2,

BHPBilliton Vietnam, Kuala Lumpur, February 2010
Facilitator for IA Scoping Workshop,

Premier Oil Vietnam, December 2009
Facilitator for Environmental Review of Conceptual Design for Chim Sao Field Development

Premier Oil Indonesia, November 2009
Facilitator for Environmental Review of Conceptual Design for Gajah Baru Field Development.

Statoil Hydro Indonesia, August 2009
Facilitator for IA Scoping Workshop

Shell Petroleum July 2009.
Facilitator for IA Scoping Workshop, Brunei

Workshop for Technip, 2007
Chairman for an Environmental Issues Identification

Lundin Britain Limited, Aberdeen, December 2006.
Chairman for an Environmental Issues Identification Workshop
Faroe Petroleum, Aberdeen, May 2006.
Chairman for an Environmental Issues Identification Workshop

Amerada Hess Ltd, Aberdeen, March 2006.
Chairman for an Environmental Issues Identification Workshop

Petronas Carigali, Myanmar, February 2006.
Chairman for an Environmental Issues Identification Workshop

Hurricane Exploration plc, Alton, February 2006.
Chairman for an Environmental Issues Identification Workshop

Exmar Oil and Gas Ltd, Aberdeen, November 2005.
Chairman for an Environmental Issues Identification Workshop