

Appendix A - WSP Capability Statement



WSP Environment & Energy Capability Statement

UNITED
BY OUR
DIFFERENCE



CORPORATE PHILOSOPHY, STRUCTURE AND SERVICES

Our Vision

Our vision is to provide an independent, innovative and professional service whereby we strive to achieve a balance between environmental protection, social desirability and economic development.

WSP Environment & Energy (WSP) is a leading South African environmental consultancy with a broad range of expertise and over 20 years experience in the regional environmental market. Whilst we are operated by WSP Environmental Ltd, a global environment and energy consultancy listed on the London Stock Exchange (WSP Group plc), we are also committed to transformation in our operational region having achieved Level 4 BEE compliance in South Africa. As part of a global business we provide the regional marketplace with a dynamic blend of local and global expertise.

WSP's Environment and Energy has offices in Durban, Cape Town, Johannesburg and Pietermaritzburg. WSP is owned by WSP Group Africa Ltd, a 900-member strong subsidiary of WSP Group plc, an international FTSE 250 management, engineering and built environment consultancy, with 10,000 employees worldwide, which is listed on the London Stock Exchange. As part of WSP Group, we have access not only to a broad range of environmental and sustainability specialists, but to leading international engineers across the full range of disciplines: energy, electrical, civil, and structural, among others.

WSP has received a number of international awards for our contribution to sustainable development including the Acquisitions Monthly Environmental Advisor of the Year Award for 2010, and the Winner of the 2009 and 2010 Big Tick Award for Climate Change, awarded by the Prince of Wales's Business in the Community charity, based upon our global climate change consulting services to clients.





Our Values

Trust
Sharing and Supporting
Pride and Passion
Sustainability
Innovation

By incorporating our principles of Trust, Sharing and Support, Pride and Passion, Sustainability and Innovation into our day to day operations, we are able to deliver an independent, insightful and professional service to our clients to achieve a balance between environmental protection, social desirability and economic development.

Stronger regulatory control, market pressures, stakeholder awareness and global concerns, have caused businesses to adopt an innovative, proactive approach to the evaluation of environmental issues. The provision of sound environmental advice is therefore becoming an essential ingredient for progressive business management and success. By fully understanding our clients business, associated operations and requirements, and combining this knowledge with our strong legal and technical competence we are able to provide our clients with sound strategic advice and improved environmental performance.

We pride ourselves on our reputation for delivery and technical excellence and provide a broad range of environmental and energy related services across a range of economic arenas including the industrial, mining, financial, tourism and public sectors.

STAFF WELFARE

Creating the optimum social and environmental framework for staff is essential if we are to attract and retain the intellectual capital that sets our business apart from our competitors. We actively promote capacity building through staff and knowledge transfers between our international offices.



OUR SERVICES

WSP brings to the South African marketplace a dynamic blend of local expertise and global cutting-edge technology. Being part of a large global company, we are also able to draw on considerable international resources and expertise accumulated over many years.

We have a well established team of environmental scientists and our team can provide a range of environmental solutions to businesses in the following fields:

- Air Quality Management
- Asbestos Surveys
- Climate Change Adaptation and Mitigation Strategies
- Contaminated Land and Remediation
- Corporate Social Responsibility
- Due Diligence, Compliance and Liability Audits
- Energy Efficiency and Management
- Energy Project Development and Investment
- Environmental Engineering
- Environmental Management Systems
- Environmental Project Management
- Human Health and Ecological Risk Assessment
- Environmental Toxicology
- Environmental Training
- Geotechnical Investigations
- Groundwater Monitoring and Modelling
- Integrated Environmental Management
- Public Participation Programs
- Renewable Energy
- Surface Water Hydrology
- Sustainability Management Systems
- Sustainability Reporting
- Sustainable Solutions
- Waste Engineering
- Waste Management, Waste Characterisation and Delisting



There is a growing awareness that if an organisation or project is to succeed in the 21st century it will need to meet new challenges by working in partnership with key stakeholders and integrating social and environmental factors into business decisions alongside the more traditional economic issues. We deliver proactive sustainability solutions, offering real business benefits, which include reducing operating costs, protecting corporate reputations and meeting stakeholder aspirations in society.

CORPORATE SUSTAINABILITY

Our key capabilities and services include the following:

- Corporate Sustainability Strategy, Reporting and Verification
- Benchmarking Tools (e.g. Sustainability Assessment Technique)
- Sustainability and Value Management Systems
- Corporate Governance and Communicating with Stakeholders (King and Turnbull Reports)
- Community Enhancement and Corporate Citizenship
- Teambuilding and Employee Volunteering Programmes
- Green Procurement
- Energy Efficiency, Renewable Energy and Climate Change Strategies
- Waste Management and Eco-labelling
- Local, Regional and National Strategy Planning (e.g. Local Agenda 21 policy and plans)

Our Sustainability Assessment Technique (SAT) is designed to visually represent the assessment, and superimposed onto it are the impacts associated with a development. Used throughout the project life cycle, it will identify the threats and opportunities associated with the development.



A changing climate threatens those businesses that cannot adapt in an efficient manner. How businesses adapt can influence the longevity and profitability of your business. WSP assesses the climate change risk to business using holistic outlook taking into account economic, social and environmental factors. Incorporating business resilience, resistance and continuity plans will ensure your business can react positively to a business interruption and will be in a far better position to prevent, survive, prosper and gain an advantage over less prepared competitors.

CLIMATE CHANGE ADAPTATION AND MITIGATION STRATEGIES

WSP offers an integrated approach to business climate risk management, utilising global expertise across all spheres. Our offering can be adapted to meet the needs of your business.

Our basic capabilities include the following:

- Climate Risk and Opportunity Assessments
- Detailed Carbon Inventory Analyses
- Business Adaptation Strategy
- Assisting with Carbon Disclosure Project (CDP) responses
- Renewable Energy and Energy Efficiency
- Carbon finance services:
 - Assisting with access to specialised finance for sustainable energy investments.
 - Carbon Credit projects (Kyoto CDM, voluntary market etc.)
 - Supporting client transactions via carbon offset market.

FOOTPRINTING SERVICES

Responding to climate change can be best perceived as a journey, starting with Greenhouse Gas (GHG) inventory and acquiring an understanding your organisation's climate change risks. Further development of this response includes exploring the broader environmental impacts of products and embedding sustainability of one's of climate change specialists, but experts across various environmental disciplines, including sustainability, toxicology, ecology and waste management. WSP are specialists in the field of footprinting – from life cycle assessments for Apple's Macbook laptops, water footprinting for GlaxoSmithKline, ecological footprinting for the City of London or carbon emissions modelling for the South African recycled oil industry, we have a proven track record in developing solutions to our clients' sustainability needs.

WSP's footprinting services include:

- Comprehensive Product Life Cycle Assessment (LCA)
- End-to-End Carbon Footprinting and Carbon Labelling (PAS2050 methodology)
- Water Footprinting
- Ecological Footprinting



Understanding energy usage and potential efficiency gains within a business or industry sector is becoming increasingly important in a world of tightening legislative requirements and increased pressure from governments and business shareholders to lower carbon emissions resulting from production processes. We are able to operate in close co-operation with the WSP Energy Africa group and Green Buildings Business of WSP, and in house engineering teams to provide energy advice on efficiency options in line with the needs of individual business requirements.

ENERGY MANAGEMENT AND EFFICIENCY

Our integrated services include:

- Energy risk analysis
- Process alternatives assessment
- Business, industry or country specific assessments of energy efficiency potential
- Development of solution implementation plans

Specialist services offered by WSP Green Building Services include:

- Sustainability in the built environment consultants
- Consulting to professional team to assist in designing sustainable buildings
- Facilitate and administer Green Star accreditation process
- Architectural, urban and engineering background



Integrated Environmental Management (IEM) covers all aspects of environmental management in the project life cycle, from planning and design, to construction, operations, decommissioning and closure.

INTEGRATED ENVIRONMENTAL MANAGEMENT

We offer environmental services appropriate to all project phases such as:

- Risk assessments and fatal flaw analyses
- Scoping studies
- Route/site/process alternatives assessment
- Public participation programmes
- Environmental impact assessments
- Environmental management plans
- Environmental management programmes
- Environmental monitoring of construction and operational activities
- Closure plans

Our studies are all conducted according to the regulatory frameworks of the countries in which we operate, so that we can obtain regulatory approval for our clients. Internationally funded projects are carried out in the manner specified by the lending agency and to world standards of best environmental practice.

In particular, we have experience in the following business sectors:

- Mining
- Infrastructure development (power lines, pipelines, roads, telecommunications)
- Building construction
- Manufacturing
- Industry
- Eco-tourism
- Water development projects
- Waste disposal
- Community development



Public participation involves a process resulting in improved decision-making. The process should lead to a joint effort by stakeholders, technical specialists, the authorities and the proponent who work together to produce more informed decisions.

Strong and independent facilitation, coupled with the necessary empathy for people's concerns, is required during meetings with stakeholders. At times, it is necessary to direct stakeholder concerns to the authorities rather than to the proponent.

STAKEHOLDER ENGAGEMENT

WSP offers comprehensive stakeholder engagement services, which include the following:

- Design of public participation processes
- Identification of stakeholders
- Compilation and maintenance of stakeholder databases
- Co-ordination and facilitation of public meetings, stakeholder workshops, multi-sectoral meetings and Open Houses/Days
- Compilation of proceedings of meetings and verification of issues
- Compilation of issues trails
- Liaison with authorities, clients and stakeholders to facilitate negotiations
- Report compilation detailing public participation process on projects


WSP provides strategic advice and operational support to a range of clients across five continents. We strongly believe that our team is at the forefront of Environmental Systems (EMS) in a way, which integrates environmental issues into existing business systems and operations.

ENVIRONMENTAL MANAGEMENT SYSTEMS AND TRAINING

In particular we can offer the following services:

- Raising awareness and providing information on the full range of EMS approaches and recognised standards (e.g. EMAS, ISO 14001:2004 series, OHSAS 18000 etc)
- Advanced training for EMS implementation and auditing
- System design, gap analysis and implementation on specific projects including the development of procedures
- Auditing throughout the development of an EMS and identification of the potential for system improvement and pre-preparation audits
- Development and review of legal registers
- Software based implementation tools and training
- Supply chain management protocols and coaching programmes
- Certified EMS Implementation Training Course
- Certified EMS Internal Auditors Training Course

Our EMS Team can draw on experience of EMS work across a broad range of economic sectors including: construction, manufacturing (e.g. BMW), mining, financial services, government agencies and departments and office based organisations.



The Air Quality Unit (AQU) offers in-depth experience in all phases of air quality management, from calculation of emissions inventories, developing and implementing monitoring programs, air quality modelling in support of Environmental Impact Assessments or permit applications to designing pollution abatement strategies and emission control systems.

AIR QUALITY MONITORING AND DISPERSION MODELLING

State of the art equipment, coupled with strategic modelling and risk assessment techniques enable WSP to evaluate problems accurately and engineer workable solutions to complex and potentially costly environmental issues.

Our core air quality management services include:

- Source, fence line and ambient air quality monitoring
- Air emissions inventories
- Atmospheric source-dispersion modelling
- Meteorological monitoring and data analysis
- Best practical available technology assessment
- Pollution controls system and cost-benefit analysis
- Quantitative health risk assessments for hazardous air pollutants
- Occupational health and safety monitoring
- Greenhouse emissions and carbon footprinting



The Contaminated Land Unit (CLU) in WSP offers consulting services, ranging from site assessment and investigation through to risk assessment, and contracting services ranging from environmental remediation and on-going monitoring to regulatory compliance and sign-off. At present, clean-up contracts can be planned as procured services via a tender process with WSP CLU acting as consultants or on the basis of a turnkey design and supply project.

LAND RESTORATION AND GROUND ENGINEERING

CONSULTING SERVICES:

- Contaminated land and geohydrological assessments
 - Desk top and feasibility studies
 - Full ground investigations
 - Design, implementation and management of groundwater monitoring systems
 - Soil and groundwater sampling and monitoring for organic and inorganic contaminants
 - Geohydrological and contaminant plume modelling
- Human health and risk assessment
 - Quantitative and qualitative risk assessment
 - Source, release mechanism, pathway receptor relationships
 - Determination of the need for remediation
 - Determination of site-specific remediation, goals and targets
 - Waste management
- Waste management strategy development
 - Waste classification, hazard rating and delisting
 - Landfill site assessment and investigation
 - Waste treatment option assessments
- Surface water hydrology
 - Surface water management plans
 - Runoff modelling
 - Water balances
 - Floodline assessments
 - Water licensing and water use registrations
 - Reserve determination
- Geotechnical investigations
 - Infrastructure and development
 - Foundation design engineering

CONTRACTING SERVICES:

WSP offers a full service remediation business, local and international, with a solution driven approach to remediation projects of all sizes and types.

We have a track record in negotiated settlements of environmental contamination issues and provide an integrated technical, financial, legal and environmental service to ensure the right solution.

Services include:

- Site investigations
- Land option appraisals
- Commercial risk evaluation
- Material classification and treatment studies
- Technical and financial feasibility studies
- Laboratory and field trials
- Risk-based remediation design
- Regulatory authority consultation
- Remediation contracting



LIABILITY TRANSFER

The outsourcing of environmental liabilities using Active Transfer™ allows a business to eliminate environmental liabilities without losing control of its assets. WSP is partnered with Willis and is capable of providing risk management, environmental engineering and financial modelling to provide a cost effective and permanent solution.

DUE DILIGENCE, COMPLIANCE AND PRE-ACQUISITION AUDITING

As southern Africa becomes more and more part of the 'Global Village', increased awareness of environmental liabilities facing business and the risks associated with sub-standard environmental performance, will intensify. Our auditing services are designed to assess all the environmental risks and liabilities associated with commercial and industrial businesses and their assets, including identifying any latent environmental damage, regulatory non-compliance and third party liabilities.

ENVIRONMENTAL FINANCE

WSP advises on business and project risks presented by environmental and operational issues. Using quantitative techniques favoured by financial analysts, models and forecasts are generated to assess, for example, the cost of environmental liabilities, asset impairment issues, or the impacts of future regulation and policy on the project or business enterprise.

We can therefore quantify risk, whether adverse or positive, in monetary terms and develop financial tools that when integrated with technical solutions from other parts of the business, lead to the development of a total risk management solution. This manifests itself in the implementation of strategies ranging from basic control measures through to elaborate financing tools, such as captive insurance and alternative risk transfer (ART).



The WSP is utilising its expertise in environmental sustainability and the built environment to provide consulting advice to clients on optimal planning / urban design for sustainable outcomes. WSP, along with traffic engineers, housing specialists and economists, have been involved with the development of Local Area Plan (LAP) projects for various municipalities within South Africa.

SUSTAINABLE MASTERPLANNING

Our client offerings within this field include:

- Environmental guidance from conceptual planning to detailed design.
- Development Risk Assessment, Including 'No-go' Options.
- Strategic Environmental Impact Assessment & Identification of opportunities.
- Development Parameters Assessment.
- Integrated Assessment GIS and Mapping.
- Land-use management (LUMs) advice.
- Project implementation plans.



CONTACT US:

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Appendix B - EAP CVs



Brent Holme

Senior Consultant
WSP Environment & Energy South Africa

Career Summary

Brent is a senior environmental consultant with five years' consulting experience. He has been project manager on a number of large environmental authorisations for predominately industrial and mining clients. Brent has extensive integrated environmental management experience, including, environmental impact assessments, environmental management programmes, environmental monitoring, compliance auditing and monitoring, waste management, environmental training, project management and general environmental support.

His areas of expertise include *inter alia*:

- Integrated environmental management and environmental authorisations (basic assessments and environmental impact assessments);
- Environmental Management programme amendments;
- Environmental risk assessments;
- Stakeholder engagement;
- Environmental legal compliance;
- Environmental compliance monitoring, including environmental performance assessment report monitoring;
- Waste management, including waste management license authorisations and developing industry waste management plans;
- Environmental support services; and
- Project management.

Please note – only a selection of relevant projects in particular areas of expertise have been detailed below.

Professional Qualifications

Education and Training

- Environmental Law Course – Centre for Environmental Managers at the University of Potchefstroom, 2010;
- BSc (Hons): Geography, with Environmental Sciences – University of Johannesburg, 2006; and
- BSc: Geography and Environmental Management – University of Johannesburg, 2006.

Selected relevant experience

Project experience

INTEGRATED ENVIRONMENTAL MANAGEMENT

Ongoing, Yzermyn Underground Coal Mine, Atha Mining Services (Pty) Ltd, South Africa

Environmental impact assessment and the development of an environmental management programme report in accordance with the National Environmental Management Act (No. 107 of 1998), the Minerals and Petroleum Resources Development Act (No. 28 of 2002), the Equator Principles and the International Finance Corporation requirements for a 2,500 hectare greenfields coal mine near Wakkerstroom in Mpumalanga Province.

2012, Anglo Platinum Tar Dams Remediation Project, Anglo American Platinum Limited, South Africa

Project involved the necessary environmental authorisation required for the removal and remediation of four tar residue dams within the Rustenburg Platinum Mines mine lease area near Rustenburg, North West Province. Basic assessment process was required in order to receive authorisation for the decommissioning of the dams and to receive a waste management license for the remediation activities associated with the tar dams project.

2011, Kalahari Solar Power Project, Group Five Infrastructure (Pty) Ltd, South Africa

Environmental Impact Assessment under Equator Principle guidelines for a 500 MW generating plant, powered by a concentrated solar power farm covering 1600 ha and a solar technology research centre, on the farm Kathu 465 near the town of Kathu, Northern Cape.

2011, Kleinkopje Colliery 2A Pollution Control Dam Relocation Project, Anglo Operations Limited; Kleinkopje Colliery, South Africa

Under took an environmental impact assessment and environmental management programme report in accordance with the relevant South African legislation for the relocation of Kleinkopje Colliery's existing 2A Pollution Control Dam. The project involved the relocation of the dam, installation of a reverse osmosis plant and the construction of two additional pollution control dams within Kleinkopje Colliery's mine lease area, near Witbank, Mpumalanga Province.

2009, Upgrading of BMW's Rosslyn Plant, BMW South Africa (Pty) Ltd, South Africa

Environmental authorisation was required in order to upgrade BMW's existing manufacturing plant for the production of BMW's new 3-Series motor vehicles, in Rosslyn Industrial Area, Gauteng Province. Authorisation was received in 2009 and construction for the upgrade of the plant commenced in 2010.

2009, Anglo Platinum Operations Procedure, Anglo American Platinum Limited, South Africa

Compiled the Operations Procedure for Anglo Platinum which assists managers in assessing the scopes of work required for projects. The procedure is a guideline which identifies the phases and what is required in each phase associated with an environmental authorisation.

2009, Landfill Gas Utilisation Project, Ener-G Systems (Pty) Ltd, South Africa

Environmental impact assessments were required prior to the installation of plants that utilise methane gas generated as a result of waste decay on landfills, which is flared to produce electricity. Ener-G Systems undertook separate authorisation processes for five landfill sites in and around Johannesburg, Gauteng Province.

ENVIRONMENTAL MANAGEMENT PROGRAMME DEVELOPMENT

2012, Waterval Smelter Slag Stockpile and Secondary Mill Project, Anglo American Platinum Waterval Smelter, South Africa

Scoping and environmental impact assessment in order to amend Waterval Smelter's existing environmental management programme report for the inclusion of the existing slag stockpile and new secondary slag mill. The environmental and socio-economic aspects of each component of the project was assessed in order to develop an environmental management programme report amendment document for the Waterval Smelter, near Rustenburg in North West Province.

2012, Stockyard Dam Relocation Project, Anglo Operations Limited: New Vaal Colliery, South Africa

Compiled an environmental management programme report for the relocation of the Stockyard and KSP dams on New Vaal Colliery's mining area, near Sasolburg, Free State Province. Due to the localised nature of the project, WSP was granted exemption from undertaking the stakeholder engagement process for the project by Free State Department of Mineral Resources.

2008, Tau Lekoa Mine Waste Rock Dump Screening Plant, AngloGold Ashanti: Tau Lekoa Mine, South Africa

Involved with the environmental management programme report amendment for the Tau Lekoa Mine Waste Rock Dump Screening Plant near Klerksdorp, North West Province.

COMPLIANCE MONITORING AND AUDITING

2008 – 2012, InvestChem Annual Environmental Compliance Monitoring, InvestChem (Pty) Ltd, South Africa

Conducted annual environmental compliance auditing for InvestChem's Sulphonation Plant in Kempton Park, Gauteng Province. The monitoring included InvestChem's compliance to various commitments contained in their environmental management programmes and conditions within their environmental authorisations (records of decision). The findings and observations are recorded and reported to InvestChem.

2009 – 2012, Various Performance Assessment Reporting for Anglo Operations Limited's Mines, Anglo American Operations Limited, South Africa

Undertook various environmental management programme report – performance assessment reports for Anglo Operation Limited Mines. Mines included Greenside Colliery, Landua Colliery, Kleinkopje Colliery, Isibonelo Colliery, New Vaal Colliery, New Denmark Colliery and Kriel Colliery. The assessments are a requirement of the Minerals and Petroleum Resources Development Act (No. 28 of 2002) and reports were compiled and submitted to the Department of Mineral Resources.

2011, AngloGold Ashanti West Wits and Vaal River Performance Assessment Report, AngloGold Ashanti, South Africa

Undertook an assessment of AngloGold Ashanti's West Wits and Vaal River's operations' environmental management programme reports. The assessment included the development of an electronic auditing tool, assessment and compilation of recommendations for each operation.

2009 and 2011, Performance Assessment Reporting for Anglo Platinum's Rustenburg Section (Mining and Processing), Anglo American Platinum Limited, South Africa

Assessed compliance to the various environmental management programme reports for the mining and processing operations at Anglo American Platinum's Rustenburg Section Mines, near Rustenburg in the North West Province. The assessment is a requirement of the Minerals and Petroleum Resources Development Act (No. 28 of 2002) and reports were compiled and submitted to the Department of Mineral Resources.

2009, Environmental Compliance Audit, General Electrics, South Africa

This project included the compilation of the environmental component of the annual fire, safety and health, and environmental audit for General Electric's facilities in Midrand.

2008 – 2010, NORA Collector and Processing Audits, ROSE Foundation, South Africa

Audited collectors and reprocessing oil plants for compliance to operating procedures developed by the ROSE Foundation during 2008 to 2010. Where non-conformance was observed, recommendations were made to assist the collectors and plants.

2008 – 2009, Sasolburg Roads Upgrade Project, Basil Read and WSP Civil and Structures, South Africa

Conducted environmental compliance monitoring for the Sasolburg P10/1 and P83/1 roads project near Sasolburg, Free State Province. The audit included compliance to the environmental management plan and environmental authorisation for the upgrading of the roads and associated infrastructure, including a number of bridges.

WASTE MANAGEMENT**2012, Industry Waste Management Plan, Transnet Rail Engineering, South Africa**

Developed an industry waste management plan for Transnet Rail Engineering's Koedoespoort (Gauteng, North West and Limpopo Provinces) and Durban (KwaZulu Natal) Regions. The project involved the identification of existing waste management practises within the regions (baseline conditions), assessment of the baseline conditions against legal requirements and best practices in order to develop objectives and targets for the gaps and issues identified. A waste management standard for each region was developed to assist with the implementation of the objectives and targets.

2012, Spray Drying Facility, InvestChem (Pty) Ltd, South Africa

Undertook a basic assessment process required for a waste management license for InvestChem's Spray Drying Facility in Kempton Park, Gauteng Province. The Spray Drying Facility utilises spent effluent rich in sodium sulphate and sodium sulphite generated from the sulphonation process, which is sent through a drying facility where water is vaporised and a sodium sulphate product is produced, which is sold as an additional commodity.

2011, Non-mineral Waste Guideline, Anglo American Limited, South Africa

Developed Anglo American's Non-mineral Waste Guideline that is being used for all of Anglo American's operations globally. The guideline assists relevant responsible personnel involved with Anglo American projects and 'managed operations' with effective non-mineral waste management. This involves a guideline relating to waste minimisation, classification, handling, storage and disposal of non-mineral waste thereby ensuring environmental protection at all Anglo American project areas and 'managed operations'.

2010, Resource Recovery Facility, Veolia Environmental Services (Pty) Ltd, South Africa

The compilation of an environmental impact assessment and waste license application for a resource recovery facility to be used primarily for the recycling, re-processing and treatment of a range of liquid and solid waste streams.

2010, Integrated Waste Management Plan, Anglo Platinum Limited, South Africa

The project incorporated the development of a baseline waste management report and an integrated waste management plan that included waste management standards, a waste management procedure and an implementation plan for the mine and processing facilities in Rustenburg.

**Kim Allan**

Business Development Manager
WSP Environment & Energy South Africa

Career Summary

Kim is a senior associate with 10 years' consulting experience in South Africa, Namibia, Zimbabwe and the United Kingdom, and is the Business Development Manager for WSP Environment & Energy. She is responsible for managing and coordinating national business development as well as the implementation of the Key Account Management Programme, an initiative aimed at building and leading key client service delivery teams, coordinating services and regions and diversifying and growing client relationships.

Kim has been project manager on a number of large environmental authorisations for predominately industrial and mining clients. She has extensive integrated environmental management experience, including, environmental and social impact assessments, environmental management programmes, environmental management systems (ISO:14001) and systems development, environmental monitoring, closure planning, compliance auditing, waste management, environmental training and project management.

Her areas of expertise include *inter alia*:

- Integrated environmental management;
- Environmental risk assessments;
- Stakeholder engagement;
- Environmental legal compliance;
- Environmental audits;
- Environmental training;
- Waste management;
- Contaminated land studies; and
- Systems development and management.

Professional Qualifications

Education and Training

- Advanced Environmental Management Training Course - Aldo Leopold Institute, 2003;
- BSc (Honours) – Environmental Law and Environmental Management, University of the Witwatersrand, 2002;
- Microsoft Certified Systems Engineer - Training Connection, 1999; and
- BSc – Zoology and Environmental Science, University of Cape Town, 1998.

Professional Memberships

- Registered Environmental Assessment Practitioner with the Interim Certification Board, 2011; and
- Member of the Institute of Environmental Management and Assessment - Accredited Trainer, 2010.

Selected Relevant Experience

Project experience

INTEGRATED ENVIRONMENTAL MANAGEMENT

2011, Lower Orange Hydro Electric Power Scheme, NamPower, Namibia

An environmental pre-feasibility study to ascertain whether there were any environmental fatal flaws associated with the construction of nine mini hydro power stations along the Lower Orange River catchment between Moddersdrift in the west to Skuitdrift in the east.

2011, Kalahari Solar Power Project, Group Five Infrastructure (Pty) Ltd, South Africa

Environmental Impact Assessment under Equator Principle guidelines for a 500 MW generating plant, powered by a concentrated solar power farm covering 1600 ha and a solar technology research centre, on the farm Kathu 465 near the town of Kathu, Northern Cape.

2010, Revision and Alignment of Environmental Management Programme Reports, AngloGold Ashanti Limited, South Africa

The review and update of AngloGold Ashanti's approved Environmental Management Programme Reports for its West Wits and Vaal River Operations in accordance with the Regulations promulgated in terms of the Mineral and Petroleum Resources Development Act (No. 28 of 2002).

2009, Environmental Impact Assessment for a Waste Shredding Facility, Lafarge Industries South Africa (Pty) Ltd, South Africa

The project involved the completion of an environmental impact assessment and waste management license application for the development of a facility for the sorting, shredding, blending and packaging of waste for transportation to Lichtenburg for use as alternative fuel in the cement kilns.

2008, Environmental Impact Assessment for Ethylene Purification Unit 5, Sasol Chemical Industries Limited, South Africa

Additional volumes of C2 material have been produced by Sasol Synfuels developments in Secunda. The existing C2 separation facilities will not be able to cope with this additional load on an ongoing basis, and therefore an environmental impact assessment was undertaken for the new EPU5 separation facility.

2008, Environmental Management Programme Amendment for the Precious Metals Refinery Expansion, Anglo Platinum Limited, South Africa

This project involved the development of an Environmental Management Programme Amendment for the proposed Precious Metals Refinery expansion programme that aimed to increase the throughput from 3.5 million oz per annum to 5.0 million oz per annum finished metal by the year 2014.

2008, Environmental Management Programme Amendment for the Waterval Phase 4 Ore Expansion, Anglo Platinum Limited, South Africa

This project involved the development of an Environmental Management Programme Amendment for the proposed ore replacement project to extend the life of Waterval Shaft by approximately ten years by supplementing the existing Central Shaft with the proposed West Shaft and its associated infrastructure.

2008, Environmental Management Programme Amendment for the Waterval Slag Furnace No. 2, Anglo Platinum Limited, South Africa

As Anglo Platinum will exceed the existing slag cleaning furnace design capacity installed at the Waterval Smelter Complex an Environmental Management Programme Amendment was completed for the proposed installation of a new slag cleaning furnace.

2007, Environmental Management Programme Amendment for Additional Ventilation Shafts, Anglo Platinum Limited, South Africa

One comprehensive Environmental Management Programme Amendment for the establishment of approximately 15 new ventilation shafts (upcast and downcast) along with main fan systems and refrigeration plants for the Waterval, Bleskop, Boschfontein, Brakspruit and Townlands Mines.

2007, AngloGold Ashanti Limited – Environmental Management Programme Amendment Tau Tona and Savuka Waste Rock Dumps, South Africa

This project comprised a comprehensive Environmental Management Programme Amendment for the establishment and operation of a crushing and screening plant adjacent to the Tau Tona Waste Rock Dump and an additional crushing facility at the existing Savuka Waste Rock Dump within the West Wits Operations in Carltonville.

ENVIRONMENTAL MANAGEMENT SYSTEMS (ISO 14001:2004)**2008, EMS Planning, Denel Land Systems, South Africa**

This project entailed the Phase 1: EMS Initiation and Phase 2: EMS Preparation / Planning, which typically forms the 'Planning' component of an ISO 14001:2004 EMS for Denel Land Systems.

2007, EMS Legal and Compliance Auditing, City of Johannesburg, South Africa

An internal compliance audit was undertaken for the completion of the development and implementation phases for the City of Joburg's EMS.

COMPLIANCE AUDITING**2011, Environmental Performance Assessment, AngloGold Ashanti Limited, South Africa**

A formal assessment and verification audit of the Vaal river and West Wits Environmental Management Programme Reports was conducted in accordance with Regulation 55 of the Mineral and Petroleum Resources Development Act (No. 28 of 2002).

2010, National Legacy Report, Department of Environmental Affairs, South Africa

The National Legacy Report project included a comparison with international best practice, an analysis of greening events, practical applications of the municipal greening business plans and strategies, results and progress of greening initiatives implemented and conclusions and predictions of greening legacy associated with the FIFA 2010 event.

2009, Environmental Compliance Audit, General Electrics, South Africa

This project included the compilation of the environmental component of the annual fire, safety and health, and environmental audit for General Electric's facilities in Midrand.

2003/2004, Annual Legal Compliance Audits, South Africa

Annual compliance audits for a number of organisations, including, Mondi, Sappi, Impala Platinum, Ticom, South Africa National Parks and Phinda Private Game Reserve.

ENVIRONMENTAL TRAINING**2008, Environmental Awareness Training, Anglo Platinum Limited, South Africa**

The environmental awareness training course was specifically designed to meet Anglo Platinum's requirements and included an introduction to environmental legislation, policies and procedures and project specific environmental authorisation requirements.

2007, EMS Internal Auditors Training, Consol Glass (Pty) Ltd, South Africa

The internal auditor course provided the employees of Consol Glass knowledge and practical experience in EMS auditing within the industrial sector. The course was designed to meet the auditor training requirements in the International Standards ISO 14001:2004 and Auditing Standard ISO 19011 that incorporate the requirements of ISO 14010 –12. The course is accredited in the UK by the Institute of Environmental Management and Assessment (IEMA).

2003/2004, Train-the-Trainer, South Africa

The development and facilitation of employee and train-the-trainer courses for a number of organisations, including: Mondi, PFG, Sasol and FFS Refiners.

WASTE MANAGEMENT

2010, Enstra Mill Waste Management Licensing, Sappi Manufacturing (Pty) Ltd, South Africa

Environmental authorisation in the form of a waste management license was obtained for three waste sites at the Enstra Mill in Springs.

2010, Integrated Waste Management Plan, Anglo Platinum Limited, South Africa

The project incorporated the development of a baseline waste management report and an integrated waste management plan that included waste management standards, a waste management procedure and an implementation plan for the mine and processing facilities in Rustenburg.

2010, Environmental Authorisation for a Waste Resource Recovery Facility, Veolia Environmental Services South Africa (Pty) Ltd, South Africa

The compilation of an environmental impact assessment and waste license application for a resource recovery facility to be used primarily for the recycling, re-processing and treatment of a range of liquid and solid waste streams.

CLOSURE PLANNING

2010, Closure Management Plan, Rio Tinto Group, Murowa Diamonds (Private) Limited, Zimbabwe

Development and compilation of a closure management plan for the Murowa Diamond Mine, in Zimbabwe, with specific focus on waste, water, soil, biodiversity, contaminated land, community liaison, closure targets, selection criteria, risk assessment and closure cost estimate. Socio-economic and biophysical environmental factors were identified and assessed to ensure optimal solutions for all stakeholders were provided for in the advent of mine closure.

CONTAMINATED LAND

2005/2006, United Kingdom

Kim was the commercial manager for a contaminated land consultancy based in Brighton, in the United Kingdom. There she was involved in contaminated land reporting, environmental insurance broking, detailed desk-based reports, fully interpreting and risk-rating all commercial reports, consulting with local authorities and undertaking site investigations.

SYSTEMS DEVELOPMENT AND MANAGEMENT

2003/2004, South Africa

Kim was involved in the creation, development and management of two separate on-line legal registers: the environmental suite and the health and safety suite. The online systems include a legal register, full text of the legislation, legal updating service to all users via e-mail, links with client specific aspects and risks, legal compliance statistics based on audit results, integrated aspects register, integrated permit register and a comprehensive resources database containing policies, application forms, court cases, government contact details and published guidelines.