Land Restoration and Ground Engineering

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36 000 employees

offices

WSP is one of the world's leading engineering professional services consulting firms. We are technical experts and strategic advisors including engineers, technicians, scientists, architects, planners, surveyors and environmental specialists, as well as other design, program and construction management professionals. We design lasting solutions in the Property & Buildings, Transportation & Infrastructure, Environment, Industry, Resources (including Mining and Oil & Gas) and Power & Energy sectors as well as project delivery and strategic consulting services. With 36 000 people in 500 offices across 40 countries, we engineer projects that will help societies grow for lifetimes to come.

In Africa, WSP, Environment & Energy, is a leading environmental consultancy with a broad range of expertise and over 22 years' experience in the regional market. As part of a global business, we provide the marketplace with a dynamic blend of local knowledge and global expertise. While we form part of WSP Global Inc, we are also committed to transformation in our operational region, with 26% Broad Based Black Economic Empowerment (BBBEE) ownership.

A clear understanding of engineering requirements is required to ensure efficient and effective geotechnical design. We design and complete geotechnical investigations alongside continuous engagement across project teams to gather geotechnical information accurately and in the most pragmatic manner.

We are capable of implementing projects from preliminary desktop appraisals site assessments and investigation phases through detailed risk assessment, remediation and ongoing monitoring to regulatory compliance and sign-off.

We work across the mining, industry, agriculture, energy, infrastructure, transport and property sectors – demonstrating technical depth and excellence in each and every project.





countries

2



Future Questions

Can we help societies thrive in a world we do not control?

Can we anticipate the unforeseeable, perceive the unexplainable, and plan something unbelievable?

Can we design the unthinkable?

Can we think international and still act local?

Nurture sustainable societies, connect communities, and seize opportunities?

Can we trace horizons, hold true to our ambitions, and hold ourselves accountable?

Can we design a place, where our friends, families and neighbours, can thrive?

What if we can?

WSP

Our Services

Land Restoration and Ground Engineering

WSP has an established record of accomplishment in providing advice and certainty to clients locally and internationally, covering a diverse range of sectors, relating to soil and groundwater contamination issues, as well as geotechnical solutions. We conduct site investigations to identify and manage risks, plan, implement and audit necessary remediation works to protect our clients from a legal, cost and balance sheet liability perspective as well as possible threats to their reputation. Further, we undertake a range of geotechnical investigations and appraisals to ensure appropriate engineering solutions are adopted.

Contaminated land carries uncertainty, financial risk and potentially substantial liability for all stakeholders involved in site management, sale and (re)development. We work closely with our clients to reduce these risks, build trust and provide complete reassurance.

We are capable of implementing projects from site assessment and investigation phases through detailed risk assessment, remediation and ongoing monitoring to regulatory compliance and sign-off.

Our global reputation for combining practicality, innovation and experience with an understanding of commercial, institutional, legal and technical demands means our clients receive excellence as standard in all our solutions. Our approach is based on a strong understanding of the key drivers affecting petrochemical, industrial, mining, corporate, infrastructure, property and development businesses, and includes:

- Contaminated Land Liability and Risk Assessment
- Geochemistry and Fate/Transport Modelling
- Remediation and Validation
- Rehabilitation Planning
- Toxicology
- Ground Gas Risk Assessment
- Environmental Monitoring
- Land Capability Assessment
- Geotechnical Investigation

Our track

record

We work consistently on high profile, diverse and complex projects for many local and internationally recognised clients.

Department of Environmental Affairs

Engen Petroleum Ltd

Exxaro Base Metals

Namibian Port **Authority**

Confidential Client

Total South Africa

Confidential Client

To enable Part 8 of the National Environmental Management: Waste Act, the DEA appointed us to derive guidelines and standards for the management and remediation of contaminated land, namely The Framework for the Management of Contaminated Land. The Framework has three sections that form the foundation of regulatory policy and practical implementation of the NEM: WA with regards to land contamination.

We developed remediation strategies for distinct areas at Island View at the Port of Durban in South Africa. The strategies were developed based on the production of specific Conceptual Site Models, collection and appraisal of critical information and undertaking of robust quantitative risk assessment with supportive modelling. Subsequently, we performed an appraisal of remedial technologies and, in conjunction with Engen's objectives, provided final engineering design and specifications for the adopted remedial system.

We carried out a contaminated land assessment at Zincor, Gauteng, South Africa, based on known historical impacts of various metals and other inorganics to both soils and groundwater. The assessment involved the development of a Conceptual Site Model with subsequent risk assessment and development of outline measures for remediation.

We were appointed as the geotechnical consultant for a new container terminal at the Port of Walvis Bay, Namibia. Specific responsibilities assigned to us were for geotechnical analysis, specification for marine structures, dredging and reclamation works, as well as tender adjudication and contract negotiation.

We were appointed by an international home appliance manufacturer to assist in conducting a contaminated land assessment of a manufacturing facility in Benoni, South Africa. The assessment involved the usage of state of the art contaminated land investigation techniques to develop a proven Conceptual Site Model and risk assessment within a short time frame. Through dedicated scientific research, a suitable remediation plan has been developed for implementation taking into account the site's unique setting and characteristics.

We were appointed to complete contaminated land assessments at nine depots/ terminals throughout South Africa with associated risk assessments. Subsequently, we developed costings appraisals for each of the facilities, providing Total with an indication of potential financial liability associated with a range of prospective scenarios considering possible remedial requirements and corrective actions.

borehole.

As part of a large industrial plant development, we performed a comprehensive investigation of the geotechnical and hydrogeological conditions on the proposed construction site. This included a Ground Penetrating Radar and Electromagnetic Induction study, trial pitting and rotary core borehole drilling, laboratory testing of rock and soil samples and yield testing of a newly developed water supply

Our Clients

Our extensive experience and expertise enables us to provide a consistent quality of advice and regularly support many local and international organisations, including:

- Airports Company South Africa _
- _
- Anglo American AngloGold Ashanti
- ArcelorMittal
- Atlantis Foundries _
- Barloworld Group _
- BHP Billiton _
- Cipla Medpro _
- City of Tshwane _
- Columbus Stainless _
- De Beers _
- Denel Group _
- Department of Environmental Affairs _
- _ Dormac
- Electrolux _
- Engen Petroleum _
- Eskom Holdings
- eThekwini Municipality
- Exxaro _
- FFS Refiners _
- Foskor _
- Fuchs Lubricants _
- Group Five _
- Impala Platinum
- Industrial Development Corporation
- JT International _
- Kwikot _
- Lonmin _
- Mpact _
- Namibian Port Authority _
- NATCOS _
- NATREF _
- Nedbank _
- Rappa Holdings _
- Rohm & Haas _
- SA Calcium Carbide _
- Sappi Southern Africa Ltd _
- SAPREF _
- Sasol Group _
- Scaw _
- Schlumberger _
- Shell _
- Tongaat Hulett _
- Total _
- Transnet _
- Unilever _
- WBHO Construction _



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