

Curriculum vitae: Mrs K DE BRUYN

Name : **DE BRUYN, KAREN**
 Date of Birth : 12 December 1987
 Profession/Specialisation : Environmental studies and management
 Years with Firm : 4
 Nationality : South African
 Years experience : 5

Key qualifications

Karen is an environmental scientist with four years' experience in the environmental management field. She has a wide range of experience in undertaking environmental processes for small and medium to large-scale developments, ranging from renewable energy projects, civil projects, general waste-related projects to mining projects.

As a project leader, Karen is responsible for the overall project management as well as report writing and has been involved with numerous environmental investigations, including environmental impact assessments (EIAs), environmental management plans (EMPs) and environmental management programmes (EMPs).

Karen is a certified natural scientist with the South African Council for Natural Scientific Professions (SACNSP), a member of the International Association for Impact Assessments South Africa (IAIASA) as well as an associate member of the Institute of Waste Management of Southern Africa (IWMSA).

She holds a Master of Philosophy degree in Environmental Management and a Bachelor of Science degree in Conservation Ecology, both obtained from the University of Stellenbosch in South Africa.

Employment record

03/2011 - Date Aurecon, Environmental Assessment Practitioner (EAP)
 02/2010 - 02/2011 Anèl Blignaut Environmental Consultants, Junior Environmental Assessment Practitioner (EAP)

Experience record

Environmental impact assessment (EIA) for three 10MW photovoltaic facilities proposed for Mariental, Omaruru and Okahandja (Namibia) 01/2014 - Date. *Technical Staff Member.* Aurecon was appointed to select three preferred sites of a possible nine through a multi-criteria decision-making (MCDM) model to assess in the environmental impact assessment (EIA) process. The specialist assessments informed the scoping study and the environmental management plan (EMP). Responsible for the management of tasks, review of specialist reports as well as report writing including a scoping report, chapter on the MCDM site selection process and EMP. Involved for 2 person-months. (Namibian Power Corporation).

Basic assessment for the previously approved 100MW De Aar 1 wind energy facility (Northern Cape Province, South Africa) 01/2014 - Date. *Project Leader.* This project entailed the assessment of potential impacts on surface water features which were omitted from the previously authorised 100MW wind energy facility near De Aar. Responsible for management of the process, report compilation, review of specialist reports and public participation process. Involved for 4 person-months. (Mulilo Renewable Energy (Pty) Ltd).

Implementation of the environmental authorisation for the 100MW Klipgats Pan solar energy facility (Northern Cape Province, South Africa) 11/2013 - Date. *Project Leader.* Mulilo Renewable Energy was awarded preferred bidder status for a 100MW photovoltaic facility near Copperton and required assistance with the implementation of the environmental authorisation, including updating the environmental management plan (EMP). Responsible for management of tasks, addressing concerns and questions from the client and updating of the EMP. Involved for 1.5 person-months. (Mulilo Renewable Energy (Pty) Ltd).

Implementation of the environmental authorisation for the 100MW Hoekplaas solar energy facility (Northern Cape Province, South Africa) 11/2013 - Date. *Project Leader.* Mulilo Renewable Energy was awarded Preferred Bidder Status for the 100MW photovoltaic facility near Copperton and required assistance

with the implementation of the environmental authorisation, including updating the environmental management plan (EMP). Responsible for management of tasks, addressing concerns and questions from the client and updating of the EMP. Involved for 1.5 person-months. (Mulilo Renewable Energy (Pty) Ltd).

Revision of environmental specifications for the rehabilitation and replacement of water and sewer networks in the City of Cape Town (Western Cape Province, South Africa) 10/2013 - 11/2013. *Technical Staff Member.* Aurecon was appointed to review and update the standard environmental specifications typically used for the repair and replacement works of water and sewer pipelines. The review was undertaken to ensure compliance with best practice and legislative requirements. Responsible for report writing. Involved for 0.5 person-months. (City of Cape Town).

Due diligence for a potential development of Erf 24034, Bellville (Western Cape Province, South Africa) 06/2013 - 07/2013. *Technical Staff Member.* This project entailed the screening of Erf 24034 for the development of a business park in terms of relevant environmental legislation and biophysical features of the site. Responsible for report compilation and gathering of information in terms of the status quo of the site and legislative requirements. Involved for 0.5 person-months. (GrowthPoint Properties).

Environmental impact assessment (EIA) for four 75MW photovoltaic facilities proposed for Badendorst Dam Farm (Northern Cape Province, South Africa) 03/2013 - Date. *Technical Staff Member.* The environmental impact assessment (EIA) assessed four 75MW photovoltaic projects and associated infrastructure proposed for one farm. Responsible for report compilation, review of specialist reports and public participation process. Involved for 8 person-months. (Mulilo Renewable Energy (Pty) Ltd).

Environmental impact assessment (EIA) for three 75MW photovoltaic facilities proposed for Du Plessis Dam Farm (Northern Cape Province, South Africa) 03/2013 - Date. *Technical Staff Member.* The environmental impact assessment (EIA) assessed three 75MW photovoltaic projects and associated infrastructure proposed for one farm. Responsible for report compilation, review of specialist reports and public participation process. Involved for 8 person-months. (Mulilo Renewable Energy (Pty) Ltd).

Social and environmental impact assessment (SEIA) for the proposed mining of the Z20 uranium deposit. (Erongo Region, Namibia) 10/2012 - 10/2013. *Technical Staff Member.* Aurecon was appointed to manage a social and environmental impact assessment (SEIA) for the proposed mining of the Z20 uranium deposit and the infrastructure corridor linking the mine to the Rössing plant. Responsible for compilation of the scoping, the SEIA and environmental management plan (EMP) reports. Involved for 4 person-months. (Rössing Uranium Limited).

Update to environmental and social impact assessment (ESIA) for the construction of the Ministry of Staff houses at Ombika Gate (Etosha National Park, Namibia) 06/2012 - 08/2012. *Technical Staff Member.* The Millennium Challenge Account Namibia (MCA-N) is supporting the Ministry of Environment and Tourism (MET) with regard to infrastructure improvements in Etosha National Park (ENP). An environmental and social impact assessment (ESIA) study in 2010 by Aurecon identified and assessed all environmental and social impacts and developed required mitigation measures for all identified environmental issues for the site on the eastern side of the Ombika Gate (Ombika East). Both the site selection report and the follow-up site specific ESIA study were formally approved and environmental clearance granted by MET in accordance with the Environmental Management Act (EMA) of 2007. However, MET has formally requested that an alternate site on the west side of the road (Ombika West) be included in the assessment for the new staff village at Ombika (Okaukuejo Gate). Responsible for updating the ESIA report, assisting with report writing, presenting results to Interested and Affected Parties (I&APs), site visits and informing adjacent landowners of the additional study. Involved for 1 person-month. (Ministry of Environment and Tourism).

Construction phase environmental management programme (EMP) for the proposed office building for SANRAL on Erf 39688, Upper Oakdale (Western Cape Province, South Africa) 04/2012 - 05/2012. *Technical Staff Member.* SANRAL required additional office space and proposed to develop a business park that would involve the construction of an office building of approximately 3000 m²; widening of the existing Mispel road, additional access roads, landscaping, lighting, parking bays, security and signage. The environmental management programme (EMP) provided a link between the identified impacts and the environmental management required during project implementation. Responsible for compiling the EMP, liaising with client and site visits. Involved for 1 person-month. (South African National Roads Agency Limited (SANRAL)).

Integrated waste management plan and Section 24 G process to address the illegal waste disposal

activities at Strandfontein High School, Mitchell's Plain (Western Cape Province, South Africa) 02/2012 - Date. *Technical Staff Member.* The Department of Environmental Affairs and Development Planning (DEA&DP) Directorate: Environmental Compliance and Enforcement, issued Strandfontein Secondary School with a warning letter based on the illegal waste disposal activities on Erf 14927. In response to these illegal activities, the DEA&DP intervened and all disposal activities were ceased. An integrated waste management Plan (IWMP) was compiled and a Section 24 G process in terms of NEMA is being undertaken. Responsible for report compilation, liaising with authorities and site visits. Involved for 6 person-months. (Western Cape Education Department).

Environmental impact assessment (EIA) for 75MW Paarde Valley photovoltaic facility (Northern Cape Province, South Africa) 11/2011 - 09/2013. *Technical Staff Member.* A 75MW photovoltaic facility was proposed for Paarde Valley Farm with the aim to bid this project in order to receive independent power producer status from Eskom. Responsible for compiling the scoping and EIA reports, conducting PPP and liaising with all stakeholders. Involved for 6 person-months. (Mulilo Renewable Energy (Pty) Ltd).

Basic assessment for the 19MW Du Plessis Dam photovoltaic facility (Northern Cape Province, South Africa) 11/2011 - 09/2013. *Technical Staff Member.* A 19MW photovoltaic facility was proposed for Du Plessis Dam Farm with the aim to bid this project in order to receive independent power producer status from Eskom. Responsible for compiling the scoping and EIA reports, conducting PPP and liaising with all stakeholders. Involved for 4 person-months. (Mulilo Renewable Energy (Pty) Ltd).

Environmental impact assessment (EIA) for 135MW Badenhorst Dam photovoltaic facility (Northern Cape Province, South Africa) 11/2011 - 09/2013. *Technical Staff Member.* A 135MW photovoltaic facility was proposed for Badenhorst Dam Farm with the aim to bid this project in order to receive independent power producer status from Eskom. Responsible for compiling the scoping and EIA reports, conducting PPP and liaising with all stakeholders. Involved for 6 person-months. (Mulilo Renewable Energy (Pty) Ltd).

Determination of future rehabilitation costs associated with existing landfill sites (Regional, South Africa) 05/2011 - Date. *Technical Staff Member.* The project entailed the determination of associated future rehabilitation costs of existing landfill and solid waste disposal sites in line with GRAP 17 requirements. Where licences and permits were lacking, the minimum requirements for rehabilitation as developed by Department of Water Affairs during 1998 were used to ensure compliance. The costing included provision for the relevant environmental processes, civil works and post decommissioning monitoring. Responsible for report writing, finances and management of specialists. Involved for 6 person-months. (Mubesko Africa).

Basic assessment process for the upgrade of Distillery Road in Wellington (Western Cape Province, South Africa) 04/2011 - Date. *Technical Staff Member.* Drakenstein Municipality was aiming to upgrade a 1.4km section of Stokery Road, starting 200m from the intersection with Main Road 27, Champagne Street, up to the intersection with Main Road 219, Main Street. The geometric layout was upgraded from a 9.2m surfaced road to a 14.8m surfaced road, with 1.8m surfaced sidewalks. This allows for two 3.4m lanes per direction to accommodate the left and right turning of heavy vehicles, and for safer pedestrian usage. The stormwater system upgrade included a concrete culvert to replace the current unlined channel on the western side. Responsible for completing the application form, the basic assessment report (BAR) and the environmental management plan (EMP). Involved for 6 person-months. (Drakenstein Local Municipality).

Operational phase management plan of the Sandown Shoprite Checkers in Parklands (Western Cape Province, South Africa) 04/2011 - 05/2011. *Technical Staff Member.* As a prerequisite to get the building plans for the Sandown Shoprite Checkers approved, an operational environmental monitoring programme (OEMP) had to be submitted to the City of Cape Town. The OEMP addressed key issues of on-site stormwater management, landscaping and management of a portion of public open space and a retention pond containing floating islands. Responsible for compiling an operation phase management plan. Involved for 1 person-month. (Shoprite Checkers).

Borrow pit inspection in Oudtshoorn (Western Cape Province, South Africa) 03/2011 - 03/2011. *Technical Staff Member.* The project entailed assisting with the screening evaluation of potential borrow pit sites in the Oudtshoorn Municipal District. The three potential borrow pit sites were assessed in a high level screening process according to suitability from an environmental perspective to take it to the next level of geological investigation. Responsible for assisting the team leader with the compilation of the feedback/screening report of the potential sites that were investigated, and assisting with field work. Involved for 0.5 person-months.

Education

2011 : MPhil Environmental Management, University of Stellenbosch, South Africa
 2009 : BSc Conservation Ecology, University of Stellenbosch, South Africa

Career enhancing courses

2013 : Introductory course to Portuguese, Alliance Française
 2013 : Project Management, University of Cape Town (UCT), South Africa
 2012 : Certificate in Business Writing for Professionals, University of Cape Town (UCT), South Africa

Professional affiliations

Associate Member, Institute of Waste Management of Southern Africa (IWMSA)
 Member, International Association for Impact Assessments South Africa (IAIASA)
 Certified Natural Scientist, South African Council for Natural Scientific Professions (SACNSP)

Languages

	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

Publications

De Bruyn K, and Pretorius D, 2013. "Addressing contemporary recycling problems inherited by poor planning". International Association of Impact Assessments Conference.

Referees

Company	Contact Person	Telephone nr.
Anèl Blignaut Environmental Consultants	Anèl Blignaut	+27 82 751 9596/ anel@dpeng.co.za

By my signature below I certify the correctness of the information above and my availability to undertake this assignment.

Signature of Staff Member

Date