

Professional Resume of Neil Wilson

NAME: Neil WILSON

PROFESSION: Consulting & Research Ecologist & Environmental Scientist

FIRM: The Ecological Partnership (Pty) Ltd

YEARS WITH FIRM: 15

NATIONALITY: South African

POSITION IN FIRM: Director, Principal Ecologist, Lead Environmental Scientist & Principal Research Scientist

KEY QUALIFICATIONS, EXPERTISE & EXPERIENCE:

Neil Wilson has the following key qualifications, expertise & experience:

- ✚ Doctorate (PhD) in Zoology & Ecology, one Master of Science (MSc) degree in Zoology, another MSc degree in Palaeontology & Zoology, one Honours degree in Zoology & a Bachelor of Science (BSc) degree, majoring in Botany & Zoology.
- ✚ Professional member of the Southern African Institute of Ecologists & Environmental Scientists.
- ✚ 28 years of experience as an Ecologist & Wildlife Specialist with working knowledge of terrestrial, wetland & aquatic (freshwater, estuarine & marine) ecosystems.
- ✚ Successful completion of over 157 specialist ecological & environmental projects in different parts of Africa.
- ✚ Ecological & environmental impact assessments on small & large projects over 28 years.
- ✚ Zoological, botanical & ecological research experience over 28 years.
- ✚ International water conservation & demand management experience.
- ✚ Biology, botany & zoology lecturing, tutoring & teaching experience, including environmental education over 28 years.
- ✚ Strong grounding in quantitative & analytical techniques, including uni- & multivariate analyses.
- ✚ Specialised experience in ornithology, herpetology, biodiversity conservation, wildlife water demand & wildlife-based tourism.
- ✚ Collaboration with water & wildlife institutions.
- ✚ Extensive experience in environmental management & as an Environmental Assessment Practitioner over 13 years for a wide range of developments.
- ✚ Working knowledge of South African environmental & heritage policies & legislation.
- ✚ Provided critical comments on draft environmental legislation, including the National Biodiversity & Protected Area Bills.
- ✚ Experience in dealing with authorities & rural communities in South Africa, Botswana, Mozambique & Zimbabwe.
- ✚ Conducted environmental, ecological & biological work in South Africa, Botswana, Mozambique, Zimbabwe, United Kingdom & France.

Please note: All studies preceded by an asterisk (*) below have included wetland assessments ranging from large, extensive, complex studies to complex studies of moderate size to smaller studies of moderate complexity.

Present assignments include

1. **Specialist riparian, wetland, aquatic, terrestrial & biodiversity ecologist: Riparian, wetland, aquatic, terrestrial & biodiversity impacts for proposed sand mining on the Umkomaas River.* Jun-Sep 2015, KwaZulu-Natal (KZN), South Africa (SA).
2. *Specialist biodiversity ecologist: Biodiversity assessment for proposed Bhudlu bridge access road near Bhudlu on the KwaZulu-Natal & Eastern Cape border.* May-Sep 2015, KZN & Eastern Cape, SA.
3. **Specialist wetland, terrestrial & biodiversity ecologist: Wetland, terrestrial & biodiversity assessments for proposed middle income housing project in Cedarville, Eastern Cape.* Apr-Jun 2015, Eastern Cape, SA.

Past assignments include

LARGE, EXTENSIVE, COMPLEX PROJECTS:

1. **Specialist vegetation, wetland, riparian, aquatic & biodiversity ecologist: Ecological impact study for extensive water pipeline development in Nkanyezini.* Nov 2014 – Feb 2015, KwaZulu-Natal (KZN), South Africa (SA). Mr Nhlanhla Mabuza, Escongweni Engineers, tel: 031 – 512 5040.
2. **Specialist vegetation, wetland, riparian, aquatic & biodiversity ecologist: Ecological impact study for extensive water pipeline development in Manyavu.* Nov 2014 – Feb 2015, KZN, SA. Mr Nhlanhla Mabuza, Escongweni Engineers, tel: 031 – 512 5040.
3. **Specialist vegetation, wetland, riparian, aquatic & biodiversity ecologist: Ecological impact study for extensive water pipeline development in Manzamnyama.* Nov 2014 – Feb 2015, KZN, SA. Mr Nhlanhla Mabuza, Escongweni Engineers, tel: 031 – 512 5040.
4. **Specialist ecologist & environmental consultant: Ecological monitoring of sensitive habitats (vegetation, rivers, streams, wetlands & biodiversity) & implementation & compliance auditing of the EMP's for the extensive areas of the Vulamehlo & Izibonda rural housing projects.* May 2006 – Jun 2014, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
5. **Specialist ecologist & environmental consultant: Ecological monitoring of sensitive habitats (vegetation, rivers, streams, wetlands & biodiversity) & implementation & compliance auditing of the EMP's for the extensive areas of the Mathenjwa, Mngomezulu, Ngwenya, Nsinde & Nyawo rural housing projects.* Jul 2009 – Dec 2013, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
6. **Specialist riparian & terrestrial ecologist & environmental consultant: Ecological Baseline Study & Operational Phase Monitoring Programme for the construction of the Dikgatlong (Lower Shashe) Dam in north-eastern Botswana. Subcontracted by EHES for the Botswana Department of Water Affairs.* Jul – Sep 2006, Republic of Botswana. Prof. Francis Sefe, EHES, cell: +26 772 114 644.
7. *Specialist ecologist & environmental consultant: Vegetation survey (including threatened species) & sensitive habitat, riparian & biodiversity assessments (including threatened species), together with Environmental Scoping Study for the 38 km viewing road in the Emakhosini-Opathe Heritage Park, Emakhosini Valley (Valley of the Zulu Kings).* Jul 2004 - Oct 2005, Emakhosini Valley, KZN, SA.
8. *Wildlife specialist & ecological consultant: Quantitative assessment & study of wildlife & tourist water demand together with wildlife conservation for a review of the Botswana National Water Master Plan, taking the whole country from the present to 2030.* Feb - Apr 2005, Gaborone, Botswana.
9. **Specialist ecologist & environmental consultant: Assessment of Endangered Sand Forest, vegetation, non-perennial streams & biodiversity, & wetland delineation & functional assessment, together with Environmental Scoping Study for the Makhasa rural housing project in the buffer zone of the iSimangaliso Wetland Park, a World Heritage Site.* Aug 2004 - Oct 2005, Makhasa, The Big-Five False Bay. Municipality, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
10. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species) & sensitive habitat, riparian, wetland & biodiversity assessments, together with preparation of EMP for the extensive Izibonda rural housing project.* Oct - Nov 2004, Umuziwabantu Municipality, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
11. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species) & sensitive habitat, riparian, wetland & biodiversity assessments, together with preparation of EMP for the extensive Vulamehlo rural housing projects.* Oct - Nov 2004, Vulamehlo Municipality, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
12. **Specialist ecologist & environmental consultant: Ecological specialist assessment (vegetation, sensitive habitat, wetlands, streams, rivers & biodiversity assessments & determination of buffer areas for Talmage Pan, Amatikulu & Red Hill Nature Reserves) & preparation of EMP for the extensive Macambini rural housing projects.* Aug - Sep 2004, eNdongakusuka Municipality, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
13. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species), sensitive habitat, riparian, wetland & biodiversity (including threatened species) assessments & determination of buffer areas for Talmage Pan, Amatikulu & Red Hill Nature Reserves, together with Environmental Scoping Study for the extensive area of the Macambini rural housing projects.* Jul 2003 - Jul 2004, Macambini, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
14. *Specialist ecologist & environmental consultant: Vegetation, sensitive habitat, riparian & biodiversity assessments (including threatened species), together with Environmental Impact Assessment for the extensive Border Cave tourist hiking trail development.* May - Aug 2002, KZN, SA.
15. *Specialist ecologist & environmental consultant: Vegetation, sensitive habitat, riparian & biodiversity assessments, together with an environmental assessment for the extensive Mnweni tourist hiking trail*

- development.** Sep 2001 - Jun 2002, KZN, SA.
16. **Specialist ecologist: Extensive & highly complex biological & ecological impact assessment for the Mepanda Uncua & Cahora Bassa North Dam Project on the Zambezi & Luia Rivers.* Feb, Apr - Jun 2001, Zambezi & Luia River valleys, Mozambique. Mr John Hatton, Impacto, Maputo, Mozambique, tel: can be provided on request.
 17. **Specialist ecologist: Extensive & complex biological & ecological impact assessment for the Sasol gas cutline & wellhead development on the Mozambican coastal plain.* Mar - Apr 2001, Vilanculos-Save River area, Mozambique. Mr John Hatton, Impacto, Maputo, Mozambique, tel: can be provided on request.

COMPLEX PROJECTS OF MODERATE SIZE:

1. **Specialist riparian, wetland, aquatic, terrestrial & biodiversity ecologist: Riparian, wetland, aquatic, terrestrial & biodiversity impacts for proposed sand mining on the Mvoti River.* Mar-Apr 2015, KwaZulu-Natal (KZN), South Africa (SA).
2. *Specialist vegetation ecologist: Vegetation impact study for proposed sand mining on the farm Groothoek.* Nov 2014 – Feb 2015, KZN, SA.
3. *Specialist biodiversity ecologist: Biodiversity assessment for the upgrade of the Southern Wastewater Treatment Works in Durban.* Nov 2013 – Jan 2015, KZN, SA.
4. **Specialist vegetation, wetland, riparian, aquatic & biodiversity ecologist: Ecological impact assessment for proposed sand mining on the uMhlathuze River in the Ntambanana District.* Jul 2014 – Jan 2015, KZN, SA. Ms Nicole Mchunu, Bouvardia Green Consultancy, cell: 082 922 5334.
5. *Specialist plant ecologist: Vegetation assessment of threatened veld types in four proposed Sheepmoor power-line corridors outside Ermelo, Mpumalanga.* Jan – Aug 2014, Mpumalanga, SA.
6. *Specialist plant ecologist: Vegetation assessment of threatened veld type in a proposed Uitkoms-Antra power-line corridor outside Ermelo, Mpumalanga.* Jan – Aug 2014, Mpumalanga, SA.
7. **Specialist wetland & aquatic ecologist: Wetland & aquatic impact assessment of illegal sand mining on the Umgeni River in Durban.* Feb – Jun 2014, KZN, SA. Ms Katherine de Jong, Gibb Science & Architecture, tel: 031 – 267 8560.
8. **Specialist wetland ecologist: Wetland assessment for a low-cost housing development in Rosetta.* Jan – Jul, 2014, KZN, SA. Ms Sarah Fernandes, Kantey & Templer Consulting Engineers, tel: 031 - 266 6535.
9. **Specialist ecologist & environmental consultant: Ecological assessment (sensitive habitats, vegetation, wetlands & biodiversity) & environmental screening study for the extensive St Bernard's & Amandus Hill rural housing projects.* Feb 2011, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
10. **Specialist ecologist: Sensitive riparian & terrestrial habitat assessments (vegetation survey, threatened plant species & biodiversity) & wetland delineation & functional assessment for the Corby Hill Trust.* Aug – Nov 2010, KZN, SA. Mr Hennie Smit, environmental consultant, cell: 082 574 1295.
11. **Specialist wetland ecologist: Identification & delineation of wetlands, functional assessment & buffer determination for the proposed Lulubush Wildlife Estate on the Farm Mtante 13813, in the Big 5 False Bay Municipal Area, northern KwaZulu-Natal.* May - Jun 2009, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
12. **Specialist ecologist & environmental consultant: Ecological monitoring (Endangered Sand Forest, sensitive habitats, vegetation, wetlands & biodiversity) of World Heritage Site buffer (iSimangaliso Wetland Park) & implementation & compliance auditing of the EMP for the Makhasa rural housing project.* Aug 2007 – Jun 2009, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
13. **Specialist terrestrial & wetland ecologist: Ecological impact study (threatened species, threatened & sensitive habitats, vegetation, wetlands & biodiversity) for the laying of the SEACOM cable at Mtunzini. Subcontracted by SRK Consulting for SEACOM.* Jul – Sep 2008, Mtunzini, KZN, SA. Mr Marius van Huyssteen, SRK Consulting, tel: 031 – 279 1200.
14. **Specialist ecologist & environmental consultant: Assessment of Endangered Sand Forest, vegetation, non-perennial streams, wetlands & biodiversity, together with preparation of EMP for the Makhasa rural housing project in the buffer of the iSimangaliso Wetland Park, a World Heritage Site.* May - Jul 2006, Makhasa, The Big-Five False Bay Municipality, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
15. **Specialist ecologist & environmental consultant: Hippopotami activity & behavioural study together with wetland ecological & biodiversity assessments for the Mzingazi Residential Golf Estate development.* Oct 2005 - Jan 2006, Meerensee, Richards Bay, KZN, SA. WSP Environmental, tel: 031 – 240 8860.
16. *Specialist ecologist & environmental consultant: Vegetation survey (including threatened species) & riparian & biodiversity assessments (including threatened species), together with Environmental Scoping Study for the access road to Piet Retief's Memorial & Mgungundlovu in the Emakhosini-Opathe Heritage Park, Emakhosini Valley (Valley of the Zulu Kings).* May - Oct 2005, Emakhosini Valley, KZN, SA.

17. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species & habitat) & riparian, wetland & biodiversity assessments, together with Environmental Scoping Study for the Okhombe Cultural & Environmental Centre & tourist hiking camp development.* Jun 2004 - Oct 2005, Okhombe Valley, KZN, SA. Farmer Support Group, University of KZN (Pmb), tel: 033 – 260 5111.
18. **Specialist ecologist & environmental consultant: Vegetation (including threatened species), sensitive habitat & biodiversity assessments, together with Environmental Screening Study for the Bambanani Mchunu rural housing project.* Jul 2004, Umtshezi Local Municipality, KZN, SA.
19. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species) & riparian, wetland, sensitive habitat & biodiversity assessments, together with Environmental Screening Study for the extensive Izibonda rural housing project.* May 2004, Umuziwabantu Local Municipality, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
20. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species), riparian, wetland, sensitive habitat & biodiversity assessments, together with Environmental Scoping Study for a viewing road, parking area & walking trail in the Emakhosini Valley (Valley of the Zulu Kings).* Mar - Jun 2004, Emakhosini Valley, KZN, SA. Mr James van Vuuren, Amafa HQ, tel: 035 - 870 2050.
21. **Specialist ecologist & environmental consultant: Vegetation, sensitive habitat & biodiversity assessments (including threatened species), together with Environmental Scoping Study for an access road, parking area & walking trail to the grave of Chief Senzangakhona kaJama in the Emakhosini Valley (Valley of the Zulu Kings).* Mar - Jun 2004, Emakhosini Valley, KZN, SA.
22. **Specialist ecologist & environmental consultant: Ecological assessment (Endangered Sand Forest, sensitive habitats, threatened species, wetlands & biodiversity assessments) & Environmental Screening Study for the Makhasa rural housing project in the buffer zone of the iSimangaliso Wetland Park, a World Heritage Site.* Jan - Feb 2004, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
23. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species) & sensitive habitat & biodiversity assessments, together with Environmental Scoping Study for Top Lodge self-catering cottage development.* Nov 2003 - Jul 2004, northern Drakensberg foothills, KZN, SA.
24. **Specialist ecologist & environmental consultant: Ecological assessment (vegetation, riparian, wetland & biodiversity assessments) & Environmental Screening Study for the Buffelsdraai extension housing project.* Dec 2003, Buffelsdraai, KZN, SA. Mr Kevin Weerts, formerly GAEA Projects, tel: number can be supplied on request.
25. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species), sensitive habitat, riparian & biodiversity assessments (including threatened species) & wetland delineation & functional assessment, together with Environmental Impact Assessment for the Waterloo Extension 6 housing project.* Mar 2003 - Mar 2004, Waterloo, KZN, SA. Mr Kevin Weerts, formerly GAEA Projects, tel: number can be supplied on request.
26. **Specialist ecologist & environmental consultant: Hillside Aluminium fluoride monitoring project: Vegetation survey & riparian, wetland & biodiversity assessments (including threatened species) to determine the detrimental effects of fluoride on the flora & fauna.* Mar - Sep 2003, Richards Bay, KZN, SA. Mr Kevin Weerts, formerly GAEA Projects, tel: number can be supplied on request.
27. **Specialist ecologist & environmental consultant: Vegetation, sensitive habitat & biodiversity assessments (including threatened species), together with preparation of EMP for the P50/2 road upgrade.* Mar - May 2003, Nkandla, KZN, SA.
28. **Specialist ecologist & environmental consultant: Vegetation, sensitive habitat, riparian, wetland & biodiversity assessments (including threatened species), together with Environmental Screening Studies for the extensive Vulamehlo rural housing projects.* Sep - Oct 2003, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
29. **Specialist ecologist & environmental consultant: Vegetation, sensitive habitat, riparian, wetland & biodiversity assessments (including threatened species), together with Environmental Screening Study for the extensive Macambini rural housing projects.* Aug - Sep 2003, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
30. **Specialist ecologist & environmental consultant: Vegetation survey & sensitive habitat & biodiversity assessments (including threatened species), together with Environmental Impact Assessment for the Border Cave tourist accommodation development.* Aug - Sep 2002, KZN, SA.
31. **Specialist ecologist & environmental consultant: Vegetation survey & sensitive habitat, riparian, wetland & biodiversity assessments, together with environmental assessment for the Okhombe Cultural & Environmental Centre & tourist hiking camp development.* May - Jul 2002, KZN, SA. Farmer Support Group, University of KZN (Pmb), tel: 033 – 260 5111.
32. **Specialist ecologist & environmental consultant: Vegetation survey & sensitive habitat, riparian & biodiversity assessments, together with an Environmental Impact Assessment of free-ranging Zimbabwean cattle at Megwe camp in the northern Tuli Game Reserve.* Nov 2001, Tuli Block, Botswana.
33. **Specialist ecologist & environmental consultant: International water conservation & demand management*

survey for the IUCN. 2000, Pretoria, SA.

SMALLER PROJECTS OF MODERATE COMPLEXITY:

1. *Environmental consultant: Environmental close-out report for the Ntembisweni Rural Housing Project.* Apr 2015, KwaZulu-Natal (KZN), South Africa (SA).
2. *Specialist biodiversity ecologist: Biodiversity assessment for proposed residential development on Portion 3 of Lot 111, Northdene, eThekweni Municipality.* Apr – Jul 2014, KZN, SA.
3. **Specialist ecologist: Ecological impact study & biodiversity, riparian & wetland assessments for a residential development in Malvern.* Oct 2013 – Jan 2014, KZN, SA. Ms Monica Shange, Icebo Environmental Consultants, cell: 079 307 3282.
4. **Specialist wetland ecologist: Ecological impact study & wetland assessment for a residential development on Lot 5045, Tongaat (Westbrook).* Oct – Dec 2013; Jan – Apr 2014, KZN, SA. Ms Josette Oberholzer, EnviroPro, tel: 031 - 765 2942.
5. *Specialist ecologist & environmental consultant: Ecological assessment & rehabilitation of degraded land, together with preparation of Environmental Management Plan (EMP) for the Ibisi low income housing project.* Jun – Dec 2013, KZN, SA.
6. *Specialist ecologist & environmental consultant: Ecological assessment & rehabilitation of degraded land, together with preparation of Environmental Management Plan (EMP) for the Umzimkhulu 5 & 6 low income housing project.* Apr – Dec 2013, KZN, SA.
7. **Specialist ecologist: Remote sensing & riparian & wetland assessments for a residential development in Crestholme.* Oct – Nov 2013, KZN, SA. Mr Hayden Haywood, private client, tel: 031 – 776 4318.
8. **Specialist ecologist & environmental consultant: Biodiversity, sensitive habitat, vegetation, wetland & riparian monitoring, together with environmental compliance monitoring for the Elliotdale rural housing projects.* Dec 2012 – Dec 2013, Eastern Cape (EC), SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
9. **Specialist ecologist & environmental consultant: Specialist ecological assessment & rehabilitation of the Ngangelizwe wetland & riparian ecosystems.* Mar 2012 – Dec 2013, EC, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
10. **Specialist ecologist & environmental consultant: Ecological assessment of sensitive areas (wetlands, streams, rivers, terrestrial habitats & biodiversity) & preparation of EMP for the Macambini phase 2 rural housing project.* Apr - Jul 2013, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
11. **Specialist ecologist & environmental consultant: Ecological assessment of sensitive areas (wetlands, streams, rivers, vegetation, terrestrial habitats, biodiversity & palaeontology) & upgrading of EMP, together with ecological & environmental compliance monitoring for the Mdletshe rural housing project.* Nov 2011 – Jun 2013, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
12. **Specialist ecologist & environmental consultant: Ecological monitoring of sensitive areas (wetlands, streams, rivers, vegetation, terrestrial habitats & biodiversity) together with implementation & compliance auditing of the EMP's for the Macambini, Amambhedu, Amangcolosi, Ekushumayeleni, Hlope, Nodwengu, Makhasaneni & Njomelwane rural housing projects.* Aug 2007 – Jun 2013, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
13. *Specialist ecologist & environmental consultant: Ecological monitoring of threatened grassland & biodiversity together with implementation & compliance auditing of the EMP for the Enhlalakahle (Greytown) low income housing project.* Feb 2011 - Jun 2013, KZN, SA.
14. **Specialist ecologist & environmental consultant: Ecological assessment of sensitive areas (wetlands, streams, wetland delineation & functional assessment, wetland buffer determination, biodiversity & threatened species) & preparation of EMP for the Ngangelizwe multi-purpose community centre.* Feb - Apr 2012, Mthatha, Eastern Cape, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
15. *Specialist ecologist & environmental consultant: Vegetation & biodiversity assessments (including threatened species) & preparation of EMP for the Mqanduli multi-purpose community centre.* Feb - Apr 2012, Mthatha, Eastern Cape, SA.
16. **Specialist ecologist & environmental consultant: Wetland & biodiversity assessments & preparation of EMP for the Madadeni low income housing project.* Oct 2011, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
17. *Specialist ecologist & environmental consultant: Assessment of threatened grassland & biodiversity (including threatened species) together with preparation of EMP for the Enhlalakahle low income housing project.* Feb 2011, KZN, SA.
18. **Specialist ecologist & environmental consultant: Ecological assessment (wetlands & biodiversity) & environmental screening study for the Ezakheni B (Phases 1-4) housing project.* Jan – Feb 2011, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.

19. **Specialist ecologist & environmental consultant: Ecological assessment (vegetation, wetlands, streams & biodiversity) & Environmental Screening Study for the Mimosadale Ward 3 housing project.* May 2010, KZN, SA. Mr Rob Welman, formerly Stedone Developments, cell: 082 922 7012.
20. *Specialist ecologist & environmental consultant: Ecological assessment of sensitive habitats & biodiversity, together with preparation of EMP for Top Lodge self-catering cottage development.* Aug - Oct 2005, Babangibone Tourism Development Node, northern Drakensberg foothills, KZN, SA.
21. *Specialist ecologist & environmental consultant: Vegetation, riparian & biodiversity assessments (including threatened species), together with preparation of Operational & Conservation Environmental Management Plan for The Ledges self-catering cottage development.* Aug 2004 - Sep 2005, northern Drakensberg foothills, KZN, SA.
22. *Specialist ecologist & environmental consultant: Specialist input for possible access roads to The Berghouse & for neighbouring golf estate development.* Oct 2004 - Feb 2005, northern Drakensberg foothills, KZN, SA.
23. *Specialist ecologist & environmental consultant: Riparian & vegetation assessments (including threatened species) for Interested & Affected Parties regarding illegal up-market housing development at 93 Bellairs Drive.* Oct - Dec 2004, North Riding, Gauteng, SA.
24. **Specialist ecologist & environmental consultant: Vegetation survey (including threatened species) & riparian, wetland, sensitive habitat & biodiversity assessments, together with preparation of EMP for Lot 134 Kingsburgh Housing Development.* Sep 2004, eThekweni Municipality, KZN, SA. Mr Brian Bell, Stedone Civils, tel: 031 – 713 0750.
25. *Specialist ecologist & environmental consultant: Vegetation, riparian & biodiversity assessments (including threatened species), together with Environmental Screening Study for the Woody Glen housing project.* Sep 2003, Mpumalanga, KZN, SA.
26. *Specialist ecologist & environmental consultant: Ecological & environmental site reports & comments on a wide range of developments for conservation organisations.* Jul 2001 – present, KZN, SA.

EDUCATION:

1. Doctor of Philosophy (Zoology & Ecology: Research & thesis), Royal Holloway, University of London, 1994
2. Master of Science (Zoology: Research & thesis), University of Pretoria, 2001
3. Master of Science (Palaeontology & Zoology: Research & thesis), University of Cape Town, 1987
4. Bachelor of Science Honours (Zoology), University of the Witwatersrand, 1985
5. Bachelor of Science (Zoology & Botany majors), University of Cape Town, 1981
6. Toastmasters International Competent Communication Course (CC1-10), June 2013
7. ESKOM environmental screening course, May 2002

PROFESSIONAL & OTHER SOCIETIES:

1. Southern African Institute of Ecologists & Environmental Scientists: Professional Member
2. South African Council For Natural Scientific Professions
3. International Association of Impact Assessors (South African branch)
4. Association for the Study of Animal Behaviour, United Kingdom
5. Endangered Wildlife Trust
6. BirdLife South Africa
7. World Conservation Union
8. World Wildlife Fund
9. African Conservation Foundation
10. Conservation International
11. Fauna & Flora International
12. Endangered Wildlife Trust

13. Botanical Society of South Africa
 14. South African Council for Educators
 15. Toastmasters International
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A more detailed company profile & professional resume can be sent on request.

CONSULTANT CURRICULUM VITAE

NAME : ALLISON GIRD

EDUCATION :

National Diploma Chemical Engineering (UNISA) - In Progress

Matric (Groote Schuur High school) - 2005

WORK EXPERIENCE:

2012 Joined ISHECON as Risk Assessor-in training.

2008 - 2011 Assistant Manager at Vodacom.
Part time BCom Accounting student.

2007 Project assistant at Alec tire services.

PROCESS SAFETY EXPERIENCE :

Quantitative Major Hazard Installation Risk Assessments ***(Input into Risk Assessments, under supervision)***

2012 - 2015 Gauteng:

Crest Chemicals Midrand, Revlon Isando, ABB Powertech Pretoria.

Natal:

Vitafoam Mount Edgecombe, Illovo Meerbank, Illovo Glendale, Crest Chemicals Prospecton, Tongaat Hulett's Maidstone, Assmang Cato Ridge, Transnet Durban RoRo Terminal, Protea Chemicals Jacobs, National Blood Services Pinetown, Shell Depot Ladysmith.

Others:

NWK Lichtenberg.

2012 - 2015 **Hazard and Operability Studies (HAZOP)**
(Scribe)

Natref Clean Fuels 2 Hazop Study 2
BME Dryden Emulsion Plant Hazop Study 3
GSK Kenya Hazop Study 3

Failure Modes, Effects And Criticality Analysis (FMECA) ***(Scribe and input into report, under supervision)***

2012 - 2015

AEL Modderfontein FMECA –Number 11 Nitric Acid Plant



Stuart Thompson is an Associate in the Industry, Energy and Mining Unit. He has 9 years experience and is a specialist in the field of air quality assessments. Qualified as an Applied Environmental Scientist (BSc. Hons) and a Member of the National Association for Clean Air (NACA) and the South African Society for Atmospheric Sciences (SASAS). He has managed and contributed to a variety of project in South Africa, as well as further afield on the African continent, including Tanzania, Malawi, DRC, Mozambique, Mauritius, Swaziland, Zambia, Sierra Leone and Botswana on assessments ranging from large-scale commercial developments and Power Generation Projects to numerous mining operations, undertaking work from management plans, impact studies and carbon foot-printing. He spent 6 months at the Royal HaskoningDHV head office in Amersfoort, Netherlands, working on several projects for the European Union, as well as acting as a specialist technical advisor for a large scale environmental project in India

Curriculum Vitae Stuart Thompson

Associate

Industry and Energy

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Email: stuart.thompson@rhdhv.com

Nationality

South African

Years of Experience

9 year(s)

Years with Royal HaskoningDHV

8 year(s)

Professional memberships

Society South African Geographers,
South African Geophysical Association, M07/007
National Association for Clean Air,
South African Society of Atmospheric Sciences
Air Pollution Information Network - Africa, Life time
Membership
Astronomical Society for SA, Committee Member, THO003

Qualifications

2004 BSc (Hons) Environmental Science, University of Natal,
South Africa

2003 BSc Geography - Environmental Science, University of
Natal, South Africa

Professional experience

Letseng Air Quality Impact Study, Lesotho

Client: ERM Southern Africa (Pty) Ltd

Position: Project Manager

Brief Description: Air Quality Impact Assessment for the Letseng Diamond Mine Project Kholo.

Assigned Tasks: Specialist input into mining process, 3D wind profiling for micro-climatic adjustment, report compilation and project manager.

Project Value: R162,000.00

Air Quality and Noise Assessment for Baobab Resources Tete Iron Ore Mine, Tete, Mozambique

Client: Coffey Environmental Australia (Pty) Ltd

Position: Project Manager

Brief Description: Coffey Environments has requested that SSI provide a quotation for an Air Quality and Noise Impact Assessment for a proposed iron ore mine in Mozambique. The proposed project covers an area of 632 km² and is located immediately north of the provincial capital of Tete and shares licence boundaries with Vale and Riversdale's mega coal projects. The project is strategically located to access abundant, low tariff hydro-electric power from existing and developing schemes on the Zambezi River. The ports of Beira and Nacala are being refurbished, as are all the corridors through to Tete.

Assigned Tasks: Project Manager, Air Quality Assessment and Air Quality Specialist input into report.

Project Value: R132,000.00

Air and Water Quality Assessment for Maputo Coal Terminal, Maputo, Mozambique

Client: Hatch Africa (Pty) Limited

Position: Project Manager

Brief Description: Air Quality and Water Quality work specific work with specific reference to enable Grinrod to extend these into monitoring programme prior to construction as well as into the future

phases.

Assigned Tasks: Air Quality Monitoring

Project Value: R116,945.00

South Africa Environmental Outlook 2012 Chapter Writers, Pretoria, South Africa

Client: Department Environmental Affairs & Tourism

Position: Specialist

Brief Description: Review of Environmental Management in South Africa since the last 2006 Outlook review.

Assigned Tasks: Contributing Author

Project Value: R200,000.00

Environmental Impact Assessment (EIA) for Humansrus Concentrating Solar Thermal Power Plant, South Africa

Client: SolarReserve South Africa

Position: Specialist

Brief Description: Air quality study for the construction and operation of a concentrated Solar power plant near Upington

Assigned Tasks: Air Quality Specialist

Project Value: R193,762.50

Environmental and Social Impact Study (ESIA) for Envalor Lda in Mozambique, Beira, Mozambique

Client: Envalor Lda

Position: Specialist

Brief Description: Appointed to obtain environmental authorisation to develop plantations, generate electricity and produce Ethanol from sugarcane and sweet sorghum, as well as the production of food crops.

Assigned Tasks: Air Quality Study - Specialist

Project Value: R2,535,604.48

La Mercy Air Quality Monitoring, La Mercy, South Africa

Client: Airports Company South Africa

Position: Specialist

Brief Description: Air Quality Monitoring to determine baseline conditions in order to produce a monitoring strategy and management plan for the La Mercy International Airport prior to Airside Licence Issue. This included wind profiling for take-off and landing.

Assigned Tasks: Monitoring

Project Value: R180,000.00

Beira Coal Terminal (Air), Mozambique

Client: DHV Mozambique

Position: Project Manager

Brief Description: Air Quality Impact Assessment for EIA purposes for the Proposed Beira Coal Terminal in Mozambique

Assigned Tasks: Overall Project Management and quality control

Project Value: R230,382.00

Air Quality Impact Assessment for the Bio-ethanol Plant in Mozambique, , Mozambique

Client: Coastal and Environmental Services (CES)

Position: Project Manager

Brief Description: Air Quality Impact Assessment for the proposed Bio-ethanol production facility and power generation unit to be built in Mozambique.

Assigned Tasks: Specialist Studies - Air Quality Impact Assessment and report compilation and overall project management duties.

Project Value: R80,640.00

Bio-ethanol Mozambique, Sierra Leone

Client: Coastal and Environmental Services (CES)

Position: Project Manager

Brief Description: Air Assessment for the Bio-ethanol production facility and power generation unit to be

built in Sierra Leone

Assigned Tasks: Impact assessment and report compilation

Project Value: R80,640.00

Risk Assessment for the setting up of a Coal Transit Station at Mer Rouge, Port Louis, Mauritius

Client: Central Electricity Board

Position: Project Manager

Brief Description: Risk Assessment for the setting up of a Coal Transit Station at Mer Rouge, Mauritius.

Assigned Tasks: Overall project management, and climatic assessment and 3D wind profiling for Air quality study

Project Value: R598,259.25

Environmental Impact Assessment for the Reclamation of old tailings in Carltonville (Air), Carltonville, South Africa

Client: Enviroserv Waste Management (Pty) Ltd

Position: Project Manager

Brief Description: Air Quality Impact Assessment for the reclamation of mine tailings

Assigned Tasks: Project Management duties, review of reports, technical input into assessment report

Project Value: R144,160.00

Environmental Impact Assessment for the underground coal gasification in Amersfoort Area, Amersfoort, South Africa

Client: Eskom Holdings SOC Limited

Position: Specialist

Brief Description: Undertaking the Environmental Impact Assessment process for (EIA, Waste Management License, Water Use License), for the Underground Coal Gasification (UCG) project for Eskom Holdings

Assigned Tasks: Specialist Studies undertaken required for Environmental Impact Assessment (EIA) processes

Project Value: R3,700,909.01

Assigned Tasks: Air Quality Audits to ensure construction requirements as set out in the environmental authorisation

Project Value: R11,737,749.47

National Radar Network Upgrading, Pretoria, South Africa

Client: South African Weather Service

Position: Specialist

Brief Description: The South African Weather Services (SAWS) awarded SSI a R13.5 million contract to assist in the acquisition and upgrading of its national radar. The recapitalization program of SAWS comprises of the acquisition of 12 new weather surveillance radar devices and associated peripheral equipment.



Curriculum Vitae

Nicole Singh

Environmental Consultant
Industry and Energy

T: +27117986000

F: +27117986005

Email: nicole.singh@rhdhv.com

Nicole Singh is currently working as an Environmental consultant in Air Quality for Royal HaskoningDHV. Qualified with a BSc degree in Biological sciences from the UKZN in 2009. Being extremely analytical and technically minded, this career path suited her well.

Nicole has 3 years experience within the Environmental field particularly with; Status Quo reports, state of the environment reporting, Pollution planning, Atmospheric impact assessments and air quality monitoring. Associated tasks also include report writing, reviewing and project management.

Prior to this, Nicole worked as a Nutrient analyst for UKZN from June 2009 till June 2010. Her responsibilities included statistically analysing nutrient samples for chemicals for national leading institutes such as UKZN, UCT, ACEP and ORI. Nicole then went on to work as a Specialist in Air Quality for SGS. Her main responsibilities were managing air quality projects for clients such as SASOL, Eskom, Anglo- American and Anglo Coal

Nationality

South African

Years of Experience

2 year(s)

Years with Royal HaskoningDHV

2 year(s)

Professional memberships

None

Professional experience

City of Joburg, State of Environment Outlook; Gauteng South Africa

> 2014

> SACN

> Project Value: R1, 228,070.18

Air quality specialist assigned with the task of compiling the 2013 state of environment outlook chapter focusing on the state of ambient air quality within the City of Joburg.

■ Air quality specialist

■ Assigned Tasks: Air Quality outlook chapter

T01.PTA.00055

Air Quality Impact Assessment for the Duel Coal Project located in Limpopo, South Africa.

> 2014

> Jacana Environmental cc

> Project Value: R 76,800.00

RHDHV was appointed by Jacana Environmental cc to undertake an air quality impact assessment for the proposed open cast mine located in Limpopo. The study aims to assess the baseline environmental impacts associated with the construction, operation and eventual decommissioning of the site. Dispersion modelling simulations was undertaken to determine the possible impacts the proposed project would have on the surrounding environment.

■ Project manager and Air Quality specialist

■ Assigned Tasks: Air quality impact assessment

I10.JNB.400051

Air Quality Impact Assessment for the Leandra Coal Project located in Mpumalanga, South Africa.

> 2014

> Jacana Environmental cc

> Project Value: R 105, 660.00

RHDHV was appointed by Jacana Environmental cc to undertake an air quality impact assessment for the proposed open cast mine located in Mpumalanga. The study aims to assess the baseline environmental impacts associated with the construction, operation and eventual decommissioning of the site. Dispersion modelling simulations was undertaken to determine the possible

impacts the proposed project would have on the surrounding environment.

■ Air Quality specialist

■ Assigned Tasks: Air quality impact assessment and dispersion modelling simulations

I10.JNB.400049

Installation of Dust fallout monitoring equipment and installation at the Kao Diamond Mine, Lesotho.

> 2014

> Strom Mountain Diamonds (Pty) Ltd

> Project Value: R 48,600.00

RHDHV was requested by Storm Mountain Diamonds to supply them with dust fallout monitoring equipment appointed by Jacana Environmental cc to undertake an air quality impact assessment for the proposed open cast mine located in Limpopo. The study aims to assess the baseline environmental impacts associated with the construction, operation and eventual decommissioning of the site. Dispersion modelling simulations was undertaken to determine the possible impacts the proposed project would have on the surrounding environment.

■ Project manager and Air Quality specialist

■ Assigned Tasks: Air quality impact assessment

I10.JNB.400051

Eon Consulting Busby Renewable Project, South Africa

> 2013

> Farmsecure

> Project Value: R40, 000.00

It is our standing that the air quality aims to assess the baseline environmental impacts associated with construction operational and decommissioning` of the proposed biomass combustion plant located in Amsterdam Mpumalanga

■ Project Manager

■ Assigned Tasks: Fatal flaw assessment

I10.JNB.400005

Eon Consulting Lazy Bend AQ, South Africa

> 2013

> Farmsecure

> Project Value: R40, 000.00

It is our standing that the air quality aims to assess the baseline environmental impacts associated with construction operational and decommissioning of the proposed biomass combustion plant located in Amsterdam Mpumalanga

■ Project Manager

■ Assigned Tasks: Fatal flaw assessment

I10.JNB.400006

Verref Landfill Air Quality Study, South Africa

> 2013

> AECOM SA (Pty) Ltd

> Project Value: R 72, 380.00

Air Quality Study

■ Project Manager

■ Assigned Tasks: Modelling and buffer zone delineation

I10.JNB.400004

Appointment of Professional Services: Development of an Environmental Pollution Control Plan, South Africa

> 2012

> Amathole District Municipality

> Project Value: R395, 260.00

Development of Environmental Pollution Control Plan for the Amathole District Municipality

■ Air Quality Specialist

■ Technical input

E02.ELS.000030

GGV AQIA, South Africa

> 2012

> Jacana Environmental cc

> Project Value: R80, 050.00

Air Quality Impact Assessment and Buffer Zone Delineation Study for the Veffef/Tonk Meter Landfill site

■ Project Manager

■ EIA and modelling

E02.JNB.001293

Komati Power Station S24G Rectification Application Ash Dam, South Africa

> 2012

> Iliso Consulting (PTY) Ltd

> Project Value: R65, 200.00

The project entails the assessment of several unauthorised activities which have begun at the Komati Power Station near Middelburg. The project would therefore involve an air quality impact assessment to provide specialist input into the S24G rectification application.

■ Project Manager

■ Technical data collection, report compilation and rectification application processing.

E02.JNB.001285

Meyerton Waste Water Treatment Works (Air Quality Assessment), South Africa

> 2012

> MSA Geoservices (Pty) Ltd

> Project Value: R86,400.00

Air Quality Impact Assessment and a determination of the Buffer Zone Study for the Meyerton Waste Water Treatment Works.

■ Air Quality Specialist

■ Air Quality Modelling and data collection.

E02.JNB.001280

Western Cape State of Environment Report (SOER), South Africa

> 2012

> Western Cape Department of Environmental Affairs and Development Planning

> Project Value: R938,200.00

Compilation of the first update of the State of Environment Report (SOER) for the Western Cape.

■ Environmentalist

■ Air Quality specialist

E02.CPT.000330

Waste Management License and Atmosphere Emissions License for an Animal Incinerator, South Africa

> 2012

> NSL Distributors CC

> Project Value: R355, 680.00

SSI was appointed by the JV of NSL Distributors and Plumbing Sewage Solutions to conduct an Air Quality Impact Study (required for the Emission Licence application) and obtain a Waste Management Licence for animal carcass incinerator, located in Middledrift in the Eastern Cape.

- Environmentalist – Air Quality Specialist
 - Assigned Tasks: Modelling and Atmospheric emissions license application
- E02.ELS.000006

Environmental Assessment Services and Water Use Licence Application for the Proposed BRT Line 1, South Africa

- > 2012
- > A-M Consulting Engineers (Pty) Ltd
- > Project Value: R551, 250.00

Appointment for conducting all the General Environmental Assessment Services and Public Participation Process work related to the managing the process in obtaining the required environmental authorisation and Water Use Licence for the relevant authorities, for the proposed BRT Line.

- Environmentalist
 - Assigned Tasks: Support during the Public participation process
- E02.JNB.001167

Environmental Impact Assessment for the Sasol Secunda Growth programme 1B Proposed Retrofitting of Gas Turbines, South Africa

- > 2011
- > Sasol Technology (Pty) Ltd
- > Project Value: R302, 175.00

Environmental Impact Assessment for the Sasol Secunda Growth Programme 1B.

- Environmentalist
 - Assigned Tasks: EIA, Air Quality impact assessment and modelling.
- E02.PTA.000407

Qualifications

2010 BSc Biological Science, University of Kwa Zulu Natal, South Africa

Proposed Position: Archaeologist / Heritage resources manager
Name of Firm: eThembeni Cultural Heritage
Name of Staff: Leonard Outram van Schalkwyk
Profession: Archaeologist / Business Director
Date of Birth: 7 July 1959
Years with Firm: 11
Nationality: South African

Membership of Professional Societies:

Association of Southern African Professional Archaeologists (ASAPA)
ASAPA Council Member - Cultural Resources Management Portfolio (CRM): 2011-2013
ASAPA CRM Section - listed as Principal Investigator
Amafa aKwaZulu-Natali accredited heritage practitioner
South African Heritage Resources Agency's Archaeological Permit Advisory Committee (2004)
South African member of International Scientific Committee for Archaeological Management, elected by ICOMOS-SA Executive (1999 - 2000)
Provincial Representative: South African World Heritage Convention Committee (1998 - 2000)
Southern African Museums Association (1984 -1999)

KEY QUALIFICATIONS AND RELEVANT EXPERIENCE

Mr van Schalkwyk has 25 years of professional experience as a practising archaeologist and heritage resource manager in South Africa, Botswana and Mozambique. His research interests have focussed on the Iron Age of southern Africa, while his management specialisations are heritage impact assessments, community liaison and ancestral grave management.

Mr van Schalkwyk's key heritage management, tourist guide training and research initiatives include:

- Principal Investigator - survey and excavation of heritage resources in Richards Bay Minerals' concession areas, KwaZulu-Natal, including oral history recording programme with traditional wisdom keepers to ensure appropriate mitigation. Procedures regarding discovery, retrieval and re-interment of human remains negotiated satisfactorily.
- Member of Ministerial Monuments Task Group committee to formulate KwaZulu-Natal Heritage Act No 10 of 1997.
- Implementation of the cultural resources management plan for the uKhahlamba Drakensberg Park (CURE), focussing on rock art management.
- ICOMOS (SA) observer for uKhahlamba Drakensberg Park World Heritage Site assessment.
- Maloti / Drakensberg Transfrontier Conservation and Development Area project for the Global Environment Facility of the World Bank.
- Mnweni Valley cultural landscape management, northern uKhahlamba / Drakensberg - cultural tourist guide training, development of integrated land use and cultural heritage management plan, co-ordination of displays for interpretive centre.
- Reichenau Mission, southern uKhahlamba / Drakensberg - cultural tourist guide training; permaculture design workshop, compilation of infrastructural development plan with local community, including establishment of a community Trust, upgrade of access roads, building restoration, skills training and empowerment.
- Specialist report on coastal zone management of KwaZulu-Natal for Environmental Evaluation Unit of the University of Cape Town.
- Lead consultant - cultural resources assessment of uThukela Water Scheme for Department of Water Affairs and Forestry and Institute of Natural Resources.
- Heritage Practitioner on revised N2 (S) Toll Road EIA report for CCA Environmental Consulting Services.
- Heritage Practitioner on Xolobeni Mining Application (Pondoland) for Ground Water Consulting.
- Fencing and stabilisation of excavated deposits at Border Cave, Ingwavuma district, KZN.
- Curation and stabilisation of excavated MSA deposits at Sibudu Cave for the ACACIA Project, University of Witwatersrand.
- Co-Director of research project with University of Manitoba, Canada on Early Iron Age of KwaZulu-Natal at Ndondondwane. Fieldwork and analysis ongoing.
- Excavation of middens at King Shaka's KwaBulawayo iKhanda in collaboration with Gavin Whitelaw (Natal Museum).
- Co-Director, Isandlwana Archaeological Project, with Glasgow University Archaeology Research Division
- Cultural heritage management of greater Chobe Conservation area in Botswana - production of policy document for submission to World Wildlife Fund.

Mr van Schalkwyk has completed more than 900 heritage impact assessments and specialist studies in southern Africa particularly South Africa, Botswana and Mozambique. Please refer to the eThembeni company profile for a recent selection of projects.

Mr van Schalkwyk's community liaison experience includes:

- Dube and Mkhwanase communities – cultural heritage and ancestral graves management for Richards Bay Mining
- Mbonambi and Sokhulu communities - negotiated mitigation and future practice regarding exposure of human remains by Richards Bay Minerals' mining activities on ancestral lands.
- Bhekeshowe Traditional Authority - investigated feasibility of developing King Shaka's KwaBulawayo site as a tourist destination.
- Khovokeni and Mvutshane communities at Kosi Bay - investigated feasibility of declaring Tsonga fish traps as significant cultural landscape.
- Communities affected by Paris Dam - negotiation of appropriate mitigation for exhumation and reinterment of ancestral graves.
- Mngomezulu Traditional Authority - negotiated management of Border Cave archaeological site.
- Nxamalala and Bhengu Traditional Authorities - investigated declaration of archaeological conservancy in lower uThukela River Basin.
- Mpungose Traditional Authority - negotiated extended boundaries of Ondini Historical Reserve.
- Mangwebuthanani Traditional Authority - negotiated establishment of Isandlwana Historical Reserve.

EDUCATION

1992 MA Archaeology (University of Cape Town)
 1983 BA Honours Archaeology (University of Stellenbosch)

EMPLOYMENT RECORD

December 2000 to present
 Partner in eThembeni Cultural Heritage, an independent organisation specialising in heritage impact assessments, ancestral grave management and integrated environmental management.

November 1996 to December 2000
 Assistant Director (Research, Professional Services and Compliance) of Amafa aKwaZulu-Natali, in charge of ten professional and administrative staff, including archaeologists, anthropologists, architects and database managers.

November 1992 to October 1996
 Archaeologist with the KwaZulu Monuments Council and Principal Professional Officer (Research Division) in charge of six professional and administrative staff. Responsible for Museum and Interpretive Centre co-ordination in KwaZulu-Natal.

February 1986 to October 1992
 Professional Officer and officer-in-charge at Ondini Museum in Ulundi with KwaZulu Monuments Council, responsible for supervising archaeological excavations and reconstruction of King Cetshwayo's Ondini Royal Residence; management of Historical Reserve and Nguni cattle herd; development of Ondini Museum and its tourist facility and provincial site interpretation.

July 1983 to January 1986
 Field Director of Early Iron Age archaeological research project in lower uThukela Valley.

December 1978 to June 1983
 Ranger / Naturalist in Kruger National Park.

December 1977 to February 1978
 Field Research Assistant in Hluhluwe / iMfolozi Game Reserve.

LANGUAGES	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent
Zulu	Good	Poor	Poor

A detailed listing of publications is available on request

Certification

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

A handwritten signature in black ink, appearing to read "L.O. Schalkwyk". The signature is written in a cursive style with some capital letters.

Leonard Outram van Schalkwyk



Curriculum Vitae

Kirshen Naidoo

Market Segment Leader Water Technology

T: +27 11 798 6000 Ext. 6214

M: +27 83 775 6799

F: +27 11 798 6005

Email: kirshen.naidoo@rhdhv.com

Kirshen has a Chemical/Process Engineering background and is currently employed as Market Segment Leader: Industrial Water at the Woodmead Office of Royal HaskoningDHV in Johannesburg.

His responsibilities include market segment development, business strategy development, preparation of tenders, leadership, client focus, project management, process engineering and consultancy services on industrial water projects.

Kirshen has a wide range of international exposure to industrial projects. He has worked in London and North East U.K. where he was involved primarily in oil & gas projects. Upon returning to South Africa in 2008, he worked in the nuclear industry in hazardous Fluorine, HF and isotope production plants. Since joining Royal HaskoningDHV in 2010 he has been actively involved in all phases of industrial projects with local and international clients. His experience includes conceptual and feasibility studies, through to basic and detailed engineering design, construction and operation of process plants.

Nationality

South African

Years of Experience

9 year(s)

Years with Royal HaskoningDHV

4 year(s)

Professional memberships

Institution of Chemical Engineers (IChemE) (U.K.);
South African Institution of Chemical Engineers (SAICHE);
Engineering Council of South Africa (ECSA);
Project Management Institute (PMI).

Qualifications

2006 BSc Chemical Engineering, University of KwaZulu-Natal,
South Africa

Employment experience

Royal HaskoningDHV (Pty) Ltd, South Africa / Netherlands

Position (s): Market Segment Leader, Project Manager, Process Engineer.

Period: 2010 to date

Responsibilities:

- Market Segment Leader in the Water Technology division of Royal HaskoningDHV.
- Project Manager / Project Engineer on industrial projects for clients in The Netherlands and South Africa.
- Process Engineer in the Industry, Energy & Mining division of Royal HaskoningDHV (Rotterdam and South Africa offices).
- Process design, simulation, consultancy and project engineering services in various engineering projects within the Oil & Gas, Chemical and related industries.
- Desalination plant (O&M) studies on behalf of the WRC (Southern Cape).
- Process design for petrochemicals and veg oil storage terminal (Project Arjuna) for Vopak Asia (Jakarta, Indonesia)
- Site manager & operations manager for CO₂ softening (water treatment) plant for Sasol (Sasolburg).
- Debottlenecking utilities study for Safripol (Sasolburg).
- PSV capacity sizing evaluations for Natref (Sasolburg).
- Hazop studies for Abengoa Bioenergy (Europoort – The Netherlands).
- Project engineer on Verwater Midex project (The Netherlands).
- Feasibility studies for Sasol FT4/5 catalyst plants (Sasolburg).
- Heat exchanger design & simulations for BAM (The Netherlands).
- Process design of Vapour Recovery Units for Hestya Energy (Germany).
- PVV sizing, vent line simulations for Odfjell Rotterdam Terminal (Botlek - The Netherlands).

- Process design of multi-purpose plasticiser (MP3) plant for Emerald Kalama Chemical (Europoort – The Netherlands).
- Hydraulic design for storage tank farm for Argos Oil (Europoort - The Netherlands).
- Process design for effluent treatment plant for Kuwait Petroleum (Europoort - The Netherlands).
- Mass & Energy balances for Aluchemie (Botlek - NL).

Nuclear Energy Corporation of SA (NECSA):

Pelchem

Position: Chemical Plant Engineer

Period: 2009 to 2010

Responsibilities:

- Ensure that the Fluorine plant is running at optimum capacity with minimum downtime.
- Problem solving on all aspects of an engineering nature.
- Evaluating & improving the HF recovery system in the Fluorine Production Plant.
- Engineering calculations including mass & energy balances, line sizing, equipment sizing, heat exchanger design calculations, ASPEN simulations.
- Optimization projects to improve capacity, production, safety and quality while minimizing plant downtime & operating costs.
- Generating and implementing Engineering Change Proposals (ECPs) on the Fluorine Plant.
- Maintain and improve plant equipment, product lines, raw materials & product specifications.
- Ensure all relevant plant documents and drawings are updated and maintained.
- Assist in incident investigations (design reviews/HAZOP analysis) and implement actions of an engineering nature if required.

Nuclear Technology Products (NTP)

NTP is a subsidiary of Necsa and is a global leader in the production and supply of quality nuclear radiation-based products and services worldwide.

- Prepare a basic engineering package for the construction and operation of a new Molybdenum (Moly-99) plant to be built in Australia.
- Document all engineering aspects of the existing Moly-99 plant.
- Prepare PFDs, PIDs, valve / line / equipment lists, engineering memos and process descriptions based on the operation and design of the existing facility as part of the basic engineering package.
- Conduct design reviews and HAZOP studies for the new plant package.

Online Design & Engineering Ltd (U.K.), South Africa

Position: Process Engineer

Period: 2007 to 2008

Responsibilities:

- Undertake process related engineering projects / contracts from local clients such as BP Dimlington, Centrica Storage Ltd, Millennium Chemicals, Talbotts Biomass Energy, which are involved in the oil & gas, bio-fuels & chemical production industries.
- Liaise with clients, project engineers, project managers, third party contractors and other engineering disciplines to produce project deliverables within schedule, budget and scope of project design.
- Project deliverables include carrying out associated process design calculations, sizing of process vessels & equipment, development of project P&IDs, associated line & tie in lists, equipment specification sheets, technical enquiry documents and project process detailed design documents.

Key Skills

- Strong leadership and managerial qualities.
- Excellent communication, team work and customer service skills.
- Extensive analytical, problem solving, math and IT skills.
- Process design and project engineering experience at a multinational engineering consultancy based in Rotterdam, The Netherlands (Royal HaskoningDHV).
- Experience in nuclear projects at a large nuclear research facility (NECSA) and plant operations within hazardous fluorochemical plants (Pelchem) and isotope production plant (NTP).
- Process design and project management in various small to medium engineering projects at a multi-disciplinary engineering consultancy based in the U.K. (Online Design & Engineering Ltd).
- Experienced in: MS Word, Excel, PowerPoint, Adobe Professional, Visio, Linux, TeamCenter, MathCad, Matlab, Caddie, Fix 32, SCADA/PLC software & other Windows based applications.
- Simulation packages: Aspen Plus, Hysys, HTRI, PIPENET.

Additional Courses:

- Certified Associate in Project Management (CAPM) – PM-Ideas (PMI).
- Construction regulations/OHSAct Training (2013).
- Distillation in Practice Course (2012) – George de Bruyn (Antwerp, Belgium).
- Management of Engineering Projects (2012) – TU Delft (NL).
- Project Management Basics Course (2011) – Royal Haskoning Academy (NL).
- Communication Skills (2012) – Royal Haskoning Academy (NL).

- VCA-VOL Safety for Supervisors (2011) – PBNA (NL).
- Radiation Workers Course (2010) – Nuclear Energy Corporation of SA (NECSA).
- Chemical Workers Course (2009) – Nuclear Energy Corporation of SA (NECSA).
- Behaviour Based Accident Prevention Process (BAPP) Course (2009) – Nuclear Energy Corporation of SA (NECSA).



**Royal
HaskoningDHV**
Enhancing Society Together



Curriculum Vitae Siva Chetty

Water Technology: Management
and Operations
Water

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Email: siva.chetty@rhdhv.com

Siva Chetty is a Principal consultant, registered Professional Engineer and an accredited green building professional for Royal HaskoningDHV, a specialist in the field of wastewater treatment and management, air quality management, waste management, and environmental engineering. He has worked within local government in Durban, SA, for 23 years in the field of wastewater treatment and environmental management. He has a B.Sc in Chemical Engineering from University of Kwa-Zulu Natal and a M.Sc in Environmental Management from the Imperial College of London(UK).

During 2004, he was appointed Deputy Head: Pollution Control and Risk Management in the eThekweni Health Unit.

During 2002, he was appointed Programme Manager of the National Cabinet endorsed South Durban Basin Multi-Point Plan. The successful implementation of this plan by the government has achieved more than 70% reduction in industrial pollution in the South Durban Basin.

Nationality

South African

Years of Experience

25 year(s)

Years with Royal HaskoningDHV

2 year(s)

Professional memberships

Engineering Council of South Africa, PrEng No. 950644

The Green Building Council of South Africa, Accredited Green Building Professional

Qualifications

2000 MSc Environmental Management, Wye College, United Kingdom

1987 BSc Chemical Engineering, University of Natal, Durban, South Africa

Professional experience

Pre-Feasibility Study for CNG for Tshwane BRT, South Africa

- > Start Date: 2013
- > Client Name: City of Tshwane Metropolitan Municipality
- > Project Value: R0.00

Brief Description: High level feasibility study for the use of compressed natural gas (CNG) in the bus fleet of the Tshwane Rapid Transit (TRT) system

Position:

Assigned Tasks:

I10.DUR.900001

Wiggins Waterworks - Ozone Plant Rehabilitation, South Africa

- > Start Date: 2013
- > Client Name: Umgeni Water
- > Project Value: R500,000.00

Brief Description: Feasibility study including: consultation with stakeholders, data collection, site inspections and assessment, assessment of options, regulatory and statutory requirements.

Position: Project Manager

Assigned Tasks: Investigation into ozonation system, cooling water system, thermal destruction unit, condition assessment of pipework and mechanical installations, electrical, instrumentation and PLC control system.

W01.DUR.000147

Carbon Footprint Model for Water and Wastewater Services, South Africa

- > Start Date: 2013
- > Client Name: Vitens E Vides International BV
- > Project Value: R72,000.00

Brief Description: Carbon Footprint Model for Water and Wastewater Services.

Position: Project Manager

Assigned Tasks: Developed the Carbon Footprint do it yourself (DIY) tool. The Carbon Footprint DIY tool is an excel based model that determines the Carbon Dioxide Equivalent Green House Gases for a Water utility or a sub unit of a water utility (e.g. single or multiples of wastewater

treatment works or water treatment plants). The DIY Model is macro driven and can be run from a PC with excel software.

W01.DUR.000183

Basic Assessment (BA) for Mondi Richards Bay Mill Expansion, South Africa

- > Start Date: 2013
- > Client Name: Mondi Ltd
- > Project Value: R238,700.00

Brief Description: Mondi Richards Bay intend to upgrade their paper manufacturing plant from 750 to 820 tons per annum. The upgrade involves de-bottlenecking operations and process optimisation. In terms of the Environmental Legislation, a Basic Assessment is required. The project also includes Traffic Impact Assessments, Air Quality Impact Assessment, Public Participation as well as stakeholder engagements.

Position: Project Principal

Assigned Tasks: Final reviewer of Basic Assessment Report, Quality Controlling on the project and processes. Specialist input into air quality management. Presented air quality chapter to IAPs meeting held in Richards Bay. Contributed to assessment of TRS related odour impacts at Mondi.

E02.DUR.000494

Appointment of Professional Services: Development of an Environmental Pollution Control Plan, South Africa

- > Start Date: 2012
- > Client Name: Amathole District Municipality
- > Project Value: R395,260.00

Brief Description: Development of Environmental Pollution Control Plan for the Amathole District Municipality

Position: Project Principal

Assigned Tasks: Directed the development of the Environmental Pollution Control Plan for the Health and Protection Services Directorate in the Amathole District Municipality. The objective of the Environmental Pollution Control Plan is to respond to the priority issues relating to

air, water and waste pollution in the District and to develop a preventative strategy to minimise pollution in the District.
E02.ELS.000030

Mondi Richards Bay Atmospheric Impact Assessment and Air Emission Licence Application, South Africa

> Start Date: 2012

> Client Name: Mondi Ltd

> Project Value: R150,400.00

Brief Description: Finalisation of the Atmospheric Emission Licence for Mondi and Undertaking of the Atmospheric Impact Report for the Boiler Plant

Position: Project Manager

Assigned Tasks: Overall Project Management, client and authority liaison and atmospheric impact report preparation. The Phase 1 work covered the completion of the Atmospheric Emissions Licence (AEL) application for the Mondi Paper Mill in Richards Bay. The Phase 2 work involved the atmospheric impact report on the power boiler emissions at Mondi.

E02.DUR.000591

Environmental Impact Assessment (EIA) and Waste Management Licence for the Matimba Ash Disposal Facility, South Africa

> Start Date: 2012

> Client Name: Eskom Holdings SOC Limited

> Project Value: R3,430,630.00

Brief Description: Environmental Impact Assessment and waste management license for Matimba ash disposal facility.

Position: Environmentalist

Assigned Tasks: EIA Support and licensing application

E02.JNB.001222

Appointment as Consultant for the proposed Material Recover Facility for the University of Pretoria, South Africa

> Start Date: 2012

> Client Name: University of Pretoria

> Project Value: R93,100.00

Brief Description: University of Pretoria appointed consultant to investigate the proposed establishment of a Material Recovery Facility (MRF).

Position: Project Manager

Assigned Tasks: Undertaken technical and economic feasibility study for a materials recovery facility (MRF) at the University of Pretoria (20 ton per day). The work covered project management: Waste Management Specialist, options analysis, economic modelling, material balance, client liaison, Net Present Value analysis and Quality Control.

E02.PTA.000388

City of Tswane: Review Intergrated Waste Management Plan (IWMP), South Africa

> Start Date: 2012

> Client Name: City of Tshwane Metropolitan Municipality

> Project Value: R437,536.00

Brief Description: Review of Integrated Waste Management Plan for the City of Tshwane.

Position: Project Manager

Assigned Tasks: Co-ordinated the finalisation of the IWMP for City of Tshwane. The work covered status quo review, gap analysis, development of alternatives and plan development.

E02.CPT.000263

Environmental Management Framework for the Ilembe District Municipality, South Africa

> Start Date: 2012

> Client Name: Ilembe District Municipality

> Project Value: R1,331,304.00

Brief Description: Preparation of an EMF to provide strategic guidance and inform development initiatives by providing an environmental framework and strategic environmental management plan.

Position: Project Principal

Assigned Tasks: Waste management and air quality specialist . Compiled the status quo report for waste management and air quality management in the Ilembe District Municipality (IDM). Provided input into desired

state report covering air quality and waste management within the environmental management framework for IDM. E02.PTA.000338

Lesotho Sludge Containment - EMP, Lesotho

> Start Date: 2011

> Client Name: Brilliant CI-Dynamo Tech JV

> Project Value: R1,000,000.00

Brief Description: Design of 120 000m cubed sludge storage facility for textile waste with associated leachate collection and drainage systems in Lesotho.

Position: Project Manager

Assigned Tasks: Strategy development for the containment of wastewater sludges derived from textile based industry in Lesotho. The work covered project management, setting out ground water monitoring requirements, input into design and procurement. Developed an environmental management plan (EMP) to protect surface and ground water. Conceptualised a process for sludge containment so that impact to the environment is minimised.

E02.DUR.000476

South Africa Environmental Outlook 2012 Chapter Writers, South Africa

> Start Date: 2011

> Client Name: Department Environmental Affairs & Tourism

> Project Value: R200,000.00

Brief Description: Review of Environmental Management in South Africa since the last 2006 Outlook review.

Position: Project Manager

Assigned Tasks: Review of Air Quality Management in South Africa over the last 7 years in terms of the Drivers, Pressures, State, Response (DPSAR) Framework.

E02.PTA.000354

Project Facilitation and EMP for the Lesotho Sludge Containment, Lesotho

> Start Date: 2011

> Client Name: Brilliant CI-Dynamo Tech JV

> Project Value: R150,000.00

Brief Description: Design of a 120 000m cubed sludge storage facility for textile waste with associated leachate collection and drainage systems.

Position: Project Manager

Assigned Tasks: Developed an environmental management plan (EMP) to protect surface and ground water. The EMP incorporated a monitoring and reporting protocol.

E02.DUR.000429

SA Calcium Carbide, South Africa

> Start Date: 2011

> Client Name: SA Calcium Carbide

> Project Value: R160,000.00

Brief Description: Process the Atmospheric Emission Licence (AEL) permit requirements for the SACC plant.

Position: Project Manager

Assigned Tasks: Assisted South African Calcium Carbide (SACC) in obtaining authorisation to proceed with AEL application. SACC sought to construct the Power Plant from energy rich flue gas as part of the SACC process. Phase 1 relates to engagement with the local authority to start the process of construction. Phase 2 will follow with finalising the AEL, Air Quality assessment and Phase 3 will be AEL for Ballengeigh Plant

E02.DUR.000395

Environmental and Social Impact Study (ESIA) for Envelor Lda in Mozambique, Mozambique

> Start Date: 2011

> Client Name: Envalor Lda

> Project Value: R2,535,604.48

Brief Description: Appointed to obtain environmental authorisation to develop plantations, generate electricity and produce Ethanol from sugarcane and sweet sorghum, as well as the production of food crops.

Position: Specialist

Assigned Tasks: Specialist Freshwater Ecology, Water Quality.

E02.JNB.000900

MCA Lesotho Health Clinic ECO, Lesotho

> Start Date: 2010

> Client Name: TBWB JV

> Project Value: R4,500,000.00

Brief Description: Design, renovation, re-configuration, expansion and construction to fully functional, hygienic and structurally fit for purpose 102 health centres throughout the Kingdom of Lesotho.

Position: Project Principal

Assigned Tasks: Project Principle, oversight of the Environmental Compliance Reports, Water quality monitoring at several clinics in Lesotho. Provided measures on spring and ground water protection. Developed the appropriate strategy and methodology for toxic asbestos waste management.

E02.DUR.000319

Sundumbili Waste Water Treatment Works upgrade and extension, South Africa

> Start Date: 2010

> Client Name: Ilembe District Municipality

> Project Value: R88,000,000.00

Brief Description: Upgrading and rehabilitation of Waste Water Treatment works for 12MI/d to 18MI/d

Position: Engineer Design

Assigned Tasks: Process design configuration for the 12 MI/d extension. The process design elements included design of primary sedimentation tanks, activated sludge

process with nutrient removal and chemical dosing system for colour removal. The net sludge production for the ultimate 24 MI/d plant was estimated and the determination of the drying bed area was undertaken.
W01.DUR.000084

Environmental Impact Assessment for the underground coal gasification in Amersfoort Area, South Africa

> Start Date: 2008

> Client Name: Eskom Holdings SOC Limited

> Project Value: R3,700,909.01

Brief Description: Undertaking the Environmental Impact Assessment process for (EIA, Waste Management License, Water Use License), for the Underground Coal Gasification (UCG) project for Eskom Holdings

Position: Project Manager

Assigned Tasks: Prepared the integrated water and waste management plan (IWWMP) for the Underground Coal Gasification (UCG) process for Eskom. The extent of the assessment covered ground water, surface water, geo-hydrology and agriculture. Developed process flow diagrams. Provided expert input on the potential re-use of condensate effluent as irrigation water.

E02.JNB.000308



Curriculum Vitae

Kim Moonsamy

Social Specialist

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Kim Moonsamy has a postgraduate degree in Anthropology. She has been a consultant in the social assessment field for 16 years with experience in a variety of qualitative and quantitative research methods in social anthropology, human resources, business and social impact assessments locally and internationally.

Kim has international exposure in the mining field, having undertaken social impact assessments and social auditing projects in countries such as Namibia, Zambia, Kenya, Botswana, Mozambique, Brazil and Australia. In the past five years she has specialised in projects requiring that Worldbank, and specifically International Finance Corporation compliance measures, be fulfilled. She has also acted as the specialist for the socio-economic impact studies and the development of subsequent management plans such as Sustainable Development plans, Community Development plans and Human Resources Development plans.

In South Africa, Kim has undertaken many Social and Labour Plans (SLPs) for mines including projects for mines involved in diamond, chrome, manganese, copper, platinum and coal mining.

Nationality

South African

Years of Experience

16 year(s)

Years with Royal HaskoningDHV

2 year(s)

Professional memberships

Professional experience

Ingula Specialist Audits, South Africa

> Start Date: 2013
> Client Name: Eskom Holdings SOC Limited
> Project Value: R472,980.00
Brief Description:
Position: Specialist
Assigned Tasks: Auditing and reporting
T01.JNB.000533

Basic Social Assessment for Mookodi Integration Phase 2, South Africa

> Start Date: 2012
> Client Name: SiVest SA
> Project Value: R84,400.00
Brief Description: Appointed by Sivist to provide specialist input into the Environmental Report consisting of the social Impact Assessments, Baseline Assessment and Socio-economic Impact Assessment (housing, mining, oil and gas sectors) as well as Social Risk Assessment.
Position: Project Manager
Assigned Tasks: Site Visits, development of social impact report.
E02.DUR.000608

Social Impact Assessment for PV Plant and Wind Farm, Renosterberg, De Aar, South Africa

> Start Date: 2012
> Client Name: SiVest SA
> Project Value: R106,000.00
Brief Description: The Social Impact Assessment involves supporting the environmental Impact assessment process for the proposed PV and Wind Farm application in the De Aar region in the Northern Cape. It gives direction to the present baseline conditions and the impact of changes that could occur on nearby communities or residents should the project be approved. Social sensitivity maps are expected.
Position: Project Manager
Assigned Tasks: Social Impact Assessment data collection and report compilation.
E02.DUR.000604

SEIA (Social Economic Impact Assessment) for Gamma and Kappa - Nzumbululo Heritage, South Africa

> Start Date: 2012
> Client Name: Nzumbulo Heritage Solutions
> Project Value: R166,000.00
Brief Description: Royal HaskoningDHV was appointed to undertake a social economic impact assessment for the proposed Kappa Omega 765kV Transmission Power line in the Western Cape Province.
Position: Project Manager
Assigned Tasks: Undertaking the Social Economic Impact study, data and report compilation, as well as training up junior staff on SEIA's.
E02.DUR.000535

Social Economic Impact Assessment for Eskom 765kV Power line from Kappa to Omega - Nzumbululo Heritage Solutions Pty Ltd, South Africa

> Start Date: 2012
> Client Name: Nzumbulo Heritage Solutions
> Project Value: R149,800.00
Brief Description: Royal HaskoningDHV was appointed to undertake a social economic impact assessment for the proposed Kappa Omega 765kV Transmission Power line in the Western Cape Province.
Position: Project Manager
Assigned Tasks: Undertaking the Social Economic Impact study, data and report compilation, as well as training up junior staff on SEIA's.
E02.DUR.000536

Lesotho Resettlement Action Plan Audit (RAP), Lesotho

> Start Date: 2012
> Client Name: Nonyana Hoohlo & Associates (Pty) Ltd
> Project Value: R192,000.00
Brief Description: Entailed a resettlement audit of 16 communities which had been the beneficiaries of

Millennium Challenge Account – Lesotho (MCA-L) projects in either the land regularisation, health or water supply sectors. Worldbank Operational Procedure 4.12 (on involuntary resettlement), is the standard to which compliance is measured and reported.

Position: Project Manager

Assigned Tasks:

E02.DUR.000601

Feasibility Study for Archival Management and 20 Libraries, South Africa

> Start Date: 2012

> Client Name: Gauteng Fund Project Office

> Project Value: R4,026,607.00

Brief Description: To conduct a comprehensive feasibility study; reviewing amongst other deliverables, the most suitable procurement approach for the development of a request for proposal (RFP) for the design and construction of the archive facility and the 20 libraries

Position:

Assigned Tasks:

M01.JNB.000012

Basic Social Assessment for Mogale Gate, Gauteng Province, South Africa

> Start Date: 2012

> Client Name: SiVest SA

> Project Value: R38,400.00

Brief Description: Establishment of conference centre and staff lodge at Mogale Gate within the Cradle of Humankind requires a Social Study for the Basic Assessment.

Position: Project Manager

Assigned Tasks: Overall Project Management and quality control

E02.DUR.000567

Environmental Assessment Services for the proposed BRT Line 1, South Africa

> Start Date: 2012

> Client Name: A-M Consulting Engineers (Pty) Ltd

> Project Value: R2,204,086.00

Brief Description: Conducting all the General Environmental Assessment Services and Public Participation Process work related to the managing the process in obtaining the required environmental authorisation for the relevant authorities, for the proposed BRT Line.

Position:

Assigned Tasks:

E02.JNB.001167

EIA for a 50mw Photovoltaic Plant, South Africa

> Start Date: 2011

> Client Name: Basekhu Capital

> Project Value: R991,632.00

Brief Description: EIA for the proposed 50 MW photovoltaic power plant in Mpumalanga

Position:

Assigned Tasks:

E02.JNB.001139

Environmental Impact Assessment (EIA) for a 75MW Photovoltaic Plant, South Africa

> Start Date: 2011

> Client Name: Basekhu Capital

> Project Value: R875,961.00

Brief Description: Undertake an Environmental Impact Assessment (EIA) for the proposed Construction of a 75MW Photovoltaic plant located in Gauteng.

Position: Specialist

Assigned Tasks:

E02.JNB.001174

EIA for a 75MW Photovoltaic Plant, South Africa

> Start Date: 2011

> Client Name: Basekhu Capital

> Project Value: R0.00

Brief Description:

Position:

Assigned Tasks:

E02.JNB.001160

Social Economic Impact Analysis for the southern logistics hub and inland port, South Africa

> Start Date: 2011
> Client Name: Blue IQ Investment Holdings (Pty) Ltd
> Project Value: R0.00
Brief Description:
Position: Project Manager
Assigned Tasks:
E02.DUR.000394

> Start Date: 2011
> Client Name: Envalor Lda
> Project Value: R2,535,604.48

Brief Description: Appointed to obtain environmental authorisation to develop plantations, generate electricity and produce Ethanol from sugarcane and sweet sorghum, as well as the production of food crops.
Position: Specialist
Assigned Tasks: Socio specialist
E02.JNB.000900

Environmental and Social Impact Study (ESIA) for Envalor Lda in Mozambique, Mozambique

Employment experience (if applicable)

> (Name of former Employer)
> Period worked, Position Held
> Specific duties within the project / position held

Qualifications

- 2012** Social Auditing - SA 8000, JRLA
- 2002** Diploma MPD (Management Development Programme), UNISA
- 2000** Diploma BAM (Business Administration and Management), Damelin
- 1999** BA (Hons) Anthropology, UNISA
- 1996** BA Anthropology and Psychology, University of Durban Westville



Curriculum Vitae Yolan Pillay

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Yolan Pillay has six years experience in the planning, management, design and implementation of a variety of transportation projects. He is currently completing his studies towards his Masters in Engineering (MSc.) in Transportation at the University of Kwazulu Natal (UKZN). He is a registered as a Candidate Engineer with Engineering Council of South Africa and the South African Institution of Civil Engineering

He is passionate about Public Transport and Non-Motorised transport and traffic modelling. He has recently undertaken a study tour to South America to familiarise himself on the use of Bus Rapid Transport (BRT) and Rapid Rail in Brazil, Argentina and Uruguay. He has also completed a course on Bus Planning and Operations Management at the University of Cape Town.

He is skilled in Civil Designer, AutoCAD, as well as the SIDRA (intersection analysis) and AIMSUN.

Nationality

South African

Years of Experience

6 year(s)

Years with Royal HaskoningDHV

6 year(s)

Professional memberships

South African Institution of Civil Engineering,
Engineering Council of South Africa,

Professional experience

Traffic Impact Assessment for Mondi Richards Bay Mill Expansion, South Africa

- > Start Date: 2013
- > Client Name: Mondi Ltd
- > Project Value: R238,700

Brief Description: Mondi Richards Bay intend to upgrade their paper manufacturing plant from 750 to 820 tons per annum. The upgrade involves de-bottlenecking operations and process optimisation. In terms of the Environmental Legislation, a Basic Assessment is required. The project also includes **Traffic Impact Assessments**, Air Quality Impact Assessment, Public Participation as well as stakeholder engagements.

Position: Specialist

Assigned Tasks: Traffic Impact Assessment input.
E02.DUR.000494

KwaDukuza Beach Nodes, South Africa

- > Start Date: 2013
- > Client Name: Kwadukuza Municipality
- > Project Value: R415,000

Brief Description: Comprehension Assessment of beach node with development proposals.

Position: Traffic Engineer

Assigned Tasks: Traffic Engineering Assessment and Design Proposals
T01.DUR.000114

eThekwini Freight & Logistic Plan, South Africa

- > Start Date: 2012
- > Client Name: eThekwini Municipality
- > Project Value: R5,284,000

Brief Description: The project entails the development of a set of interventions that will essentially address freight and logistics infrastructure and operations within eThekwini municipal area, minimise logistics costs, and enhance the city's industrial opportunities and competitiveness by strengthening the regional hub role of the port of Durban.

Position: Assistant Project Manager and Traffic Engineer

Assigned Tasks: Assist the Project Manager in managing the local team and sub-consultant. Undertake Traffic Engineering Assessment, Proposals and Design
T01.DUR.000118

Alford Avenue Signalisation, Ramsgate, South Africa

- > Start Date: 2012
- > Client Name: KwaZulu-Natal Department of Transport
- > Project Value: R620,866

Brief Description: Signalisation of intersection of two major provincial roads in Margate.

Position: Traffic Engineer

Assigned Tasks: Traffic Signals Design
T01.PZB.000293

Durban North Rail Corridor, South Africa

- > Start Date: 2012
- > Client Name: Passenger Rail Agency of South Africa
- > Project Value: R1,256,746

Brief Description: Pre-feasibility study Rail corridor in the Durban North Corridor

Position: Engineer Transportation

Assigned Tasks: Transportation Planning
R01.JNB.000018

Umzimkhulu Transport Sector Plan, South Africa

- > Start Date: 2012
- > Client Name: Umzimkhulu Municipality
- > Project Value: R500 000

Brief Description: All Municipalities are required to prepare an integrated Transport Plan every five years.

Position: Project Manager/Transport Planner

Assigned Tasks: Undertook the Transport Planning aspect of the Transport Plan including collating the draft and final Document.

T01.PZB.000286

Annual Intergrated Transport Plan, South Africa

> Start Date: 2012
> Client Name: eThekweni Municipality
> Project Value: R200 000
Position: Project Manager/Transport Planner
Assigned Tasks: Undertook the Transport Planning aspect of the Transport Plan including collating the draft and final Document.
T01.DUR.000117

Adhoc Support to KZN DOT, South Africa

> Start Date: 2012
> Client Name: KwaZulu-Natal Department of Transport
> Project Value: R4,463,481.00
Brief Description: Design of auxilliary lanes. Road upgrade of P47 through Melmoth. Design of roundabouts.
Position: Traffic Engineer
Assigned Tasks: Assessment of current and future traffic with proposed design upgrades
T03.PZB.000080

Liberty Midlands Mall - Traffic Operational Study, South Africa

> Start Date: 2011
> Client Name: Liberty Life Properties (Pty) LTD
> Project Value: R108,000.00
Brief Description: Liberty Midlands Mall - Traffic Operational Study
Position: Traffic Engineer
Assigned Tasks: Developed the Traffic Model of the external road network using Aimsum to proposed interventions to reduce congestion in the area.
T01.PZB.000253

Emona Sunhills - TIA, South Africa

> Start Date: 2011
> Client Name: eThekweni Municipality
> Project Value: R60 000
Brief Description: Emona Sunhills Development is a proposed low cost housing development in Tongaat, North of Durban being implemented by the eThekweni

Municipality. The Traffic Impact Assessment is a requirement of a new development to uidentifiy the impact on the immediate road network.

Position: Traffic Engineer
Assigned Tasks: Traffic Impact Assessment
T01.DUR.000097

Matatiele Public Transport Study, South Africa

> Start Date: 2011
> Client Name: Brava Developments
> Project Value: R300 000
Brief Description: Matatiele Informal trading & public transport study.
Position: Traffic Engineer
Assigned Tasks: Assessment of the exiting CBD and proposals and interventions to reduce congestion using traffic Engineering Principals
T01.PZB.000229

Margate Urban Renewal Project, South Africa

> Start Date: 2011
> Client Name: Hibiscus Coast Municipality
> Project Value: R25,000,000.00
Brief Description: Urban renewal of Margate Central Business District.
Position: Traffic Engineering Specialist
Assigned Tasks: Assessment of the exiting CBD and beach nodes. Proposed interventions to reduce congestion during peak holiday periods.
T01.DUR.000052

Intergrated Transport Plan Alfred Nzo Municipality, South Africa

> Start Date: 2011
> Client Name: Alfred Nzo District Municipality
> Project Value: R350 000
Brief Description: All Municipalities are required to prepare an integrated Transport Plan every five years.
Position: Project Manager/Transport Planner

Assigned Tasks: Undertook the Transport Planning aspect of the Transport Plan including collating the draft and final Document.

T01.DUR.000053

N3 Bypass Study, South Africa

> Start Date: 2011

> Client Name: South African National Roads Agency SOC Limited

> Project Value: R15,000,000,000

Brief Description: Preliminary design for the capacity upgrade to section 2 and 5 of the N3 near Pietermaritzburg (KwaZulu Natal) entailing the provision of additional lanes, interchange upgrades, land acquisition, etc.

Position: Traffic Engineer

Assigned Tasks: Aimsum Traffic Models as part of the Road Capacity Analysis

T01.PZB.000207

Burger Street Traffic Impact Assessment, South Africa

> Start Date: 2011

> Client Name: Ziningi Properties (Pty) Ltd

> Project Value: R36,763.00

Brief Description: Perform a traffic impact assessment for a proposed office/commercial development on the corner of Chief Albert Luthuli and Burger Street in PMB.

Position: Traffic Engineer

Assigned Tasks: Traffic Impact Assessment

T01.PZB.000212

Rehabilitation of Main Road between Bellville Road and Limpus Road, South Africa

> Start Date: 2010

> Client Name: eThekweni Municipality

> Project Value: R48,500,000.00

Brief Description: Rehabilitation of Main Road (Bellville Road to Limpus Road)

Position: Geometric Engineer

Assigned Tasks: Geometric Realignment Design and drawings

T01.PZB.000167

Clermont KwaDabeka Urban Regeneration Plan, South Africa

> Start Date: 2009

> Client Name: Future Works

> Project Value: R80,000,000

Brief Description:

Position: Traffic Engineer

Assigned Tasks: Traffic Engineering Assessment

T01.DUR.000024

Durban City Beautification, South Africa

> Start Date: 2009

> Client Name: eThekweni Municipality

> Project Value: R110,000,000

Brief Description: Upgrading of key areas around the Moses Mabida Stadium and the Durban beach front as part of the 2010 World Cup Preparations

Position: Assistant Resident Engineer

Assigned Tasks: Supervision of Construction works

T01.DUR.000004

Johannesburg Road Agency - Upgrading of Gravel Roads, South Africa

> Start Date: 2007

> Client Name: MLA Consortium

> Project Value: R0.00

Brief Description: Upgrading of rural roads in Midrand

Position: Geometric Engineer

Assigned Tasks: Geometric Design and Drawings

TA1.BCB.105260

P496 - John Ross Highway, South Africa

> Start Date: 2005

> Client Name: KwaZulu-Natal Department of Transport

> Project Value: R910,000,000.00

Brief Description: Geometric, drainage and intersection design for the doubling of the existing 15km long 2 lane provincial main road to a 4 lane dual carriageway provincial main road between Empangeni and the major port of Richards Bay. The Nseleni Floodplain, Link and Nsezi River Bridges comprise a 1,2 km long portion of this Brief Description: The project entailed both the design and construction phase of the upgrading of gravel to asphalt surface roads with provision of appropriate storm-water infrastructure for the Rabie Ridge township on the Gauteng Midrand.

Brief Description: The project entailed both the detail design and construction phase of the provision of storm-water pipelines and portal culverts in Tladi, Soweto and North Riding in Johannesburg.

project. Construction of roadworks, doubling of rail grade separations and numerous box culverts are also included.

Position: Traffic Engineer

Assigned Tasks: Traffic Signal Design

TA1.BCP.102480

Qualifications

2007 BSc Eng Civil Engineering, University of KwaZulu-Natal