



APPENDIX G: OTHER INFORMATION

APPENDIX G-1: ROUTE CO-ORDINATES

Alternative:

Alternative S1 (preferred or only route alternative)

Borehole Pipeline GWA3D – GWA11A – WTW (~1034m)

- Starting point of the activity
- Turning Point
- 250m
- Middle point of the activity
- 250m
- Turning Point / 250m
- Turning Point
- End point of the activity

Latitude (S):

Longitude (E):

33°	46.730'	25°	36.911'
33°	46.696'	25°	36.934'
33°	46.610'	25°	36.804'
33°	46.549'	25°	36.709'
33°	46.530'	25°	36.675'
33°	46.445'	25°	36.544'
33°	46.459'	25°	36.435'
33°	46.446'	25°	36.434'

Borehole Pipeline GWA1G – GWA12A – WTW (~870m)

- Starting point of the activity
- 250m
- Turning Point
- Middle point of the activity
- Turning Point / 250m
- Turning Point
- Turning Point
- End point of the activity

33°	46.747'	25°	36.514'
33°	46.636'	25°	36.614'
33°	46.622'	25°	36.627'
33°	46.543'	25°	36.626'
33°	46.502'	25°	36.630'
33°	46.445'	25°	36.544'
33°	46.459'	25°	36.435'
33°	46.446'	25°	36.434'

Borehole Pipeline GWA2B – GWA4D – WTW (~726m)

- Starting point of the activity
- 250m
- Middle point of the activity
- Turning Point
- 250m
- Turning Point
- End point of the activity

33°	46.665'	25°	36.085'
33°	46.558'	25°	36.184'
33°	46.515'	25°	36.223'
33°	46.488'	25°	36.250'
33°	46.480'	25°	36.304'
33°	46.459'	25°	36.435'
33°	46.446'	25°	36.434'

Discharge Pipeline WTW – Discharge Point (~850m)

- Starting point of the activity
- Turning Point
- Middle point of the activity
- 250m
- End point of the activity

33°	46.372'	25°	36.436'
33°	46.287'	25°	36.449'
33°	46.180'	25°	36.550'
33°	46.075'	25°	36.649'
33°	46.001'	25°	36.708'

“Innovation for Sustainable Development”

[†] Floor Room 274 • Beacon Hill • Hockley Close • Kind William’s Town • 5600 | Private Bag X0054 • 5605 • Republic of South Africa

Tel; 043 605 7099 • Fax: 043 605 7300 | Email: • Web: www.dedeat.gov.za

VERSION 1 dated 8 December 2014

**Potable Water Pipeline WTW – Coega Kop Reservoir
(~1500m)**

- Starting point of the activity
- Turning Point
- 250m
- 250m
- Middle point of the activity
- Turning Point
- 250m
- 250m
- Turning Point
- End point of the activity

33°	46.372'	25°	36.436'
33°	46.287'	25°	36.449'
33°	46.180'	25°	36.550'
33°	46.075'	25°	36.649'
33°	46.050'	25°	36.678'
33°	46.012'	25°	36.709'
33°	46.094'	25°	36.837'
33°	46.175'	25°	36.966'
33°	46.209'	25°	37.018'
33°	46.265'	25°	36.998'

APPENDIX G-2: IMPACT ASSESSMENT METHODOLOGY

IDENTIFICATION OF IMPACTS

Impacts were identified through the following means:

- a) Issues or concerns raised by Stakeholders (including Authorities) as well as Interested and Affected Parties
- b) Experience of the Environmental Assessment Practitioner (EAP), and observations made during the site visits
- c) Specialists
- d) Analysis of spatial data

SITE VISIT

Members of CEN IEM Unit visited the site in on 26 April 2016 to undertake a survey of the proposed development site. The site visit was used to determine the nature of the affected environment and to identify potential environmental issues of concern.

Based on the site visit and the information gathered, the EAP identified potential significant impacts that are associated with the proposed development.

CRITERIA USED TO ASSESS IMPACTS

The criteria used for the assessment of the potential impacts of the proposed project are described below. Cumulative impacts will be included as part of the impact assessment process. The predicted impacts are compared to the No-Go Alternative.

The “No-Go” Alternative entails that the proposed development is not undertaken, i.e. that no development as per the proposal is undertaken and the *status quo* remains.

The impacts assessed by the specialists were also rated using the information provided in their reports. The specialist information was considered in terms of a formal quantification of the impact as per facets of the specific field highlighted by the specialist. In each case the specialist’s recommendations were converted into potential mitigation measures and linked in the EMP. The mitigation measures are summarised in the impact tables.

Nature:

The nature of the impact is the consideration of what the impact will be and how it will be affected. This description is qualitative and gives an overview of what is specifically being considered. That is, the nature considers ‘what is the cause, what is affected, and how is it affected?’.

Status of the Impact:

This describes whether the impact is positive (a benefit) or negative (a cost), or neutral.

Extent:

Whether the impact will occur on a scale limited to the immediate areas, footprint or site of the development activity or will the impact occur on a sub-regional (local), regional and/or national scale.

Description	Explanation	Scoring
Footprint / Site	The impact could affect the whole, or a significant portion of the site.	1
Local	Impact could affect the adjacent landowners and areas surrounding the site.	2
Regional	Impact could affect the wider area around the site, that is, from a few kilometres, up to the wider region.	3
National	Impact could have an effect that expands throughout a significant portion of South Africa – that is, as a minimum has an impact across provincial borders.	4

Duration:

Whether the lifetime of the impact will be of a short duration (0-5 years); medium term (5-15 years); long-term (>15 years), with the impact ceasing after the operational life of the development); or considered permanent where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.

Description	Explanation	Scoring
Short term	The impact will either disappear with mitigation or will be mitigated through a natural process, and will be relevant for 0 to 5 years.	1
Medium term	The impact will be relevant for 5 to 15 years.	2
Long term	The impact will continue or last for the entire operational lifetime of the development, but will be mitigated by direct human action or by natural processes thereafter (i.e. more than 15 years).	3
Permanent	This is the only class of impact that will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient (i.e. impact will remain after the operational lifetime of the project).	4

Intensity/Magnitude:

Whether the intensity (magnitude / size) of the impact is high, medium, low or negligible (very low / no impact). Where possible the intensity of impacts are quantified.

Description	Explanation	Scoring
Very Low	The impact alters the affected environment in such a way that the natural processes or functions are not affected.	2
Low	The impact alters the affected environment in such a way that the natural processes or functions are slightly affected.	4
Medium	The affected environment is altered, but functions and processes continue, albeit in a modified way.	6
High	Function or process of the affected environment is disturbed to the extent where the function or process temporarily or permanently ceases.	8

Probability:

The probability of the impact actually occurring as either improbable (low likelihood); probable (distinct possibility); highly probable (most likely) or definite (impact will occur regardless of preventative measures).

Description	Explanation	Scoring
Improbable	The possibility of the impact occurring is none, due either to the circumstances, design or experience.	1
Probable	There is a possibility that the impact will occur to the extent that provisions must therefore be made.	2
Highly Probable	It is most likely that the impacts will occur at some stage of the Development. Plans must be drawn up before carrying out the activity.	3
Definite	The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied upon.	4

Significance

The significance of impacts of the proposed project are assessed with the mitigation measures which will be included in the contractors specifications as well as with the additional mitigation measures recommended in this report being implemented. The significance of the identified impacts on the components of the affected environment (and where relevant, with respect to potential legal infringement) are described as:

No Impact: Where the project action will not cause any adverse or beneficial changes to the natural (biophysical), and/or social environment.

Impact of Low Significance: Where the project actions will result in minor short-term changes to the biophysical and/or socio-economic environment. The impacts will usually be restricted to the immediate area of the project action. The affected system should return to its natural or almost natural state in a short period of time (0 - 5 years). The impacts on human populations will be of a short duration and will not have any lasting consequences.

Impact of Moderate Significance: Where the project actions will result in moderate short-term or medium term changes to the biophysical and/or socio-economic environment. The effects of the impact could be experienced outside of the project action area and may be evident at a sub-regional or even a regional level. Minor indirect impacts may arise from the project action. The system should recover but it is unlikely that it will return to its natural state. Recovery would only take place in the medium term (5-15 years). Impacts on the human population will be felt after the project action is completed but are not severe and/or disruptive to their quality of life or economic well being.

Impacts of High Significance: Where the project actions will result in major long-term changes to the biophysical and/or socio-economic environment. The effects of the impact will be experienced outside of the project action area and may be evident at a regional, national and even at the international level. Secondary or indirect impacts may arise from the project action. The system may recover over the long-term (>15 years) but will not revert to its natural state. Impacts on human populations will be felt after the project action is completed. The impacts are of a long-term nature and are disruptive to the previous life style of the affected population.

Determination of significance will be made on the assumption that any mitigation and / or management measure, which is recommended, will be implemented by the developer.

The level of significance is expressed as the sum of the area exposed to the risk (extent), the length of time that exposure may occur over in total (duration), the severity of the exposure (intensity) and the likelihood of the event occurring (probability).

Significance value = (Extent + Duration + Intensity) x Probability.

A distinction will be made for the significance rating without the implementation of mitigation measures and with the implementation of mitigation measures. The purpose of mitigation measures is to reduce the significance level of the anticipated impact. Therefore, the reduction in the significance level after mitigation is directly related to the scores used in the impact assessment criteria. The effect of potential mitigation measures to reduce the overall significance level is also to be considered in each issues table (i.e. values with or without mitigation are presented).

Description	Explanation	Scoring
No / Very Low Impact	There is no impact or a very low impact.	1-9
Low	The impacts are less important, but some mitigation is required to reduce the negative impacts.	10-27
Moderate	The impacts are important and require attention; mitigation is required to reduce the negative impacts.	28-45
High	The impacts are of high importance and mitigation is essential to reduce the negative impacts	46-64

Mitigating Environmental Effects

Mitigation measures are technically and economically feasible measures that will mitigate a project's likely environmental effects. Mitigation is the elimination, reduction, or control of a project's adverse environmental effects, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or any other means.

Mitigation is used to address all adverse environmental effects, whether or not subsequent analysis determines that the effects are significant. The development of the mitigation measures commenced during the scoping assessment and many have become part of the project design. Relevant mitigation measures should form part of any contract for the project.

Degree of Confidence in Predictions:

The degree of confidence in the predictions, based on the availability of information and/or specialist knowledge.

Reversibility

Reversibility is the ability of the affected environment to recover from the impact. Examining whether the impacted environment can be returned to its pre-impacted state once the cause of the impact has been removed.

The degree to which the impact and risk can be reversed:

Yes: Affected environment is able to recover from the impact.

No: Affected environment is unable to recover from the impact, i.e. permanently modified.

Replaceability

Examining if an irreplaceable resource is impacted upon. Replaceability is an indication of the scarcity of the specific set of parameters that make up the affected environment. That is, if lost can the affected environment be (a) recreated, or (b) is it a common set of characteristics and thus if lost is not considered a significant loss.

The degree to which the impact and risk may cause irreplaceable loss of resources:

Yes: Affected environment is replaceable, i.e. an irreplaceable resource is not damaged or the resource is not irreplaceable / scarce.

No: Affected environment is irreplaceable.

Cumulative

A cumulative impact is an impact, which in itself may not be significant but may become significant if added to other existing or potential impacts emanating from other similar or diverse activities as a result of the project activity in question.

APPENDIX G-3: REFERENCE LIST

Aurecon, 2016. Bulk Water Infrastructure for the Coega Kop Well Field - Concept Design Report. Aurecon South Africa (Pty) Ltd.

Aurecon, 2016a. Personal Communication with Aurecon.

Bok, 2016. Coega Kop Wellfield Development Aquatic Habitat and Biota Study. Anton Bok and Associates.

Eastern Cape Biodiversity Conservation Plan (2007)

Louw, 2016. Vegetation Report - Development of the Coega Kop wellfield system and water treatment works in the Nelson Mandela Bay Municipality, Eastern Cape. CEN IEM Unit.

Mucina, L. and M.C. Rutherford (Eds.). 2006. The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African National Biodiversity Institute: Pretoria.

Nel, 2016. Coega Kop Well Field, Nelson Mandela Bay Municipality, Aquatic Impact Assessment. SRK.

NMBM Integrated Development Plan (June 2016, 15th edition

NMBM's Bioregional Plan (2014).

Groundwater Africa (2016). Exploration Drilling in the Coega Kop area of the Groot-Winterhoek – Coega Ridge TMG Aquifer.

APPENDIX G-4: AFFIRMATION BY THE EAP, ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

1. AFFIRMATION BY EAP

I, **LUCILLE BEHRENS** of **CEN IEM UNIT**, the independent Environmental Assessment Practitioner (EAP) responsible for compiling the Basic Assessment Report, hereby affirm the following in accordance with the requirements of the EIA Regulations, 2014:

- a) To the best of my knowledge, the information on the proposed development as included in this Basic Assessment Report is correct.
- b) Comments and inputs from stakeholders and Interested and Affected Parties (I&APs) have been included and considered within this Basic Assessment Report.
- c) Inputs and recommendations from the specialist reports, where relevant; have been included within this Basic Assessment Report.
- d) Correspondence with the EAP and I&APs during the public participation process undertaken by CEN IEM Unit to date, is included in this Basic Assessment Report. This correspondence includes information provided to I&APs and any responses by the EAP to comments or inputs made by I&APs.

2. ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

The following assumptions, uncertainties and gaps in knowledge were identified for this process:

EIA Process

The EIA process is multi-disciplinary, which was informed by the project team. It is thus necessary to presume that the information as provided to the project team to date by external sources is accurate, appropriate and correct.

Data shown in the maps was supplied by various sources and was used after it was reviewed and verified where considered necessary. Verification was, however, restricted to available sources of information only.

The findings and recommendations from the specialist studies have been considered as part of the impact assessment and mitigation measures respectively.

Public Participation Process

Every effort was made to contact and provide written notification to all stakeholders and adjacent landowners within the study area. Information presented by the stakeholders is presumed to be accurate and presented timeously with respect to the process at hand.

APPENDIX G-5: CV'S OF EAP

CEN
Integrated Environmental Management Unit
36 River Road
Walmer
Port Elizabeth
6070
South Africa



Telephone: 041 - 581-2983 / 581-7811

Fax: 0865042549

Email: steenbok@aerosat.co.za / lucille@environmentcen.co.za

Reg No: 1996/032402/23

CURRICULUM VITAE

LUCILLE BEHRENS

Name of Firm	CEN Integrated Environmental Management Unit
Date of birth	20 August 1976
Position in Firm	Senior Environmental Scientist
Specialisation	Environmental Management
Nationality	South African
Years of experience	12
HDI Status	White female, no disabilities
Languages	English, Afrikaans

KEY QUALIFICATIONS

Lucille has 12 years' experience in the Environmental Management field. Lucille has undertaken a number of Environmental Impact Assessments (i.e. Basic Assessments; Scoping and EIA) under the EIA Regulations of 2006 and 2010. Her roles have included being the Environmental Assessment Practitioner (EAP), Assistant EAP, Project Manager and Environmental Scientist for EIA related projects. Her responsibilities have included undertaking environmental assessments, compilation of regulated EIA's (i.e. scoping reports, EIA reports, Basic assessments and EMPs) and incorporating specialists into the EIA team for any required specialist studies. Lucille has also undertaken and been involved with the regulated public participation process required for EIAs.

Her experience in compiling environmental management plans relate to construction, maintenance operations and wildlife management. Lucille has been involved in environmental compliance monitoring and auditing (environmental control officer) on a number of construction sites and borrow pits. She has also gained experience in GIS mapping.

Lucille has also been involved in waste studies and sustainable development projects, for example green procurement, elimination of illegal dumping strategies and water conservation and demand management plan.

EDUCATION

Qualification	Institution	Year
BSc (Hons) (Environmental Monitoring and Modelling)	UNISA	2008
BSc (Environmental Management)	UNISA	2005
BA (Hons) (Criminology)	University of Pretoria	1998
BA	University of Pretoria	1997

COURSES & CONFERENCES

Course / Conference	Date
Management Training Session – Nelson Mandela Metropolitan University: Business School	2006
The Environment And the Project Cycle	March 2008
Technical and Business Report Writing	March 2009
Institute of Waste Management South Africa – Eastern Cape Mini Conference	August 2009
Project Management, Incl. MS Projects	March 2010
Legal Workshop on the Key Implications of the National Environmental Management: Integrated Coastal Management Act	April 2010
Environmental Awareness and Legal Liability for Management	May 2010
Green Star SA Accredited Professional Course	September 2011
WASTECON	October 2012
Contaminated Land Workshop	February 2013
Water Law in South Africa Workshop	August 2013
Institute of Waste Management of Southern Africa – Eastern Cape Conference: The Green Revolution	September 2013
National Wetlands Indaba	October 2013
IWRM, the NWA, and Water Use Authorisations, focusing on Water Use License Applications – Procedures, Guidelines, IWWMP's and Monitoring, Carin Bosman Sustainable Solutions	September 2014

PROFESSIONAL MEMBERSHIP / REGISTRATION

Institution Name	Membership	Year Joined
International Association of Impact Assessments (South Africa)	Member (No. 2668)	2010

EMPLOYMENT RECORD
August 2013 – Present: CEN IEM Unit

On 1 August 2013, Lucille joined the CEN Integrated Environmental Management Unit as **Senior Environmental Scientist**. Her responsibilities include:

- Project management,
- Environmental Impact Assessments (basic assessment, scoping and EIA and associated public participation),
- Co-ordinating and assessing specialist studies,
- Environmental Management Plans/Programmes,
- Environmental Compliance Monitoring,
- GIS mapping.

July 2007 – July 2013: BKS (Pty) Ltd / AECOM SA (Pty) Ltd

On 1 October 2012 Lucille was appointed as a **Senior Environmental Scientist** for the Infrastructure and Management Sector of BKS in Port Elizabeth after BKS and its subsidiaries rebranded on 1 November 2012 to become AECOM SA (Pty) Ltd. Her responsibilities included:

- Project management, including financial management on projects,
- Environmental Impact Assessments (basic assessment, scoping and EIA and associated public participation),
- Co-ordinating and assessing specialist studies,
- Environmental Management Plans/Programmes,
- Environmental Compliance Monitoring,
- Waste and Sustainability Strategies,
- Business development focusing within the Eastern Cape, KwaZulu Natal.
- GIS mapping.

In 2009, Lucille was promoted to **Senior Environmental Scientist** and was responsible for project management, environmental impact assessments (basic assessment, scoping and

EIA and associated public participation), environmental management plans, environmental compliance monitoring, waste and sustainability strategies within the Eastern Cape.

In 2007, Lucille joined BKS (Pty) Ltd as an **Environmental Scientist**. Her responsibilities included undertaking environmental impact assessments (basic assessment, scoping and EIA and associated public participation), compiling environmental management plans and undertaking environmental compliance monitoring.

August 2000 – June 2007: Shamwari Game Reserve (Mantis Collection)

Lucille was the **Wildlife / Environmental Co-Ordinator** for Shamwari Game Reserve (Mantis Collection) from November 2003 – June 2007. During this time, her responsibilities included the following:

Compiling environmental management plans for construction operations and wildlife management for reserves in South Africa, United Arab Emirates and Morocco. Undertaking environmental compliance monitoring of construction sites within game reserves. Monitoring environmental aspects (e.g. water usage) within Mantis game reserves and organising related wildlife permits.

In November 2001, Lucille transferred to the Wildlife Department as the PA to the Wildlife Director.

In 2000, Lucille joined Shamwari Game Reserve and during this time her roles included Personal Assistant to the General Manager, Switchboard Operator and Reservationist.

June 1999 – July 2000: Formax

Computer room supervisor, Data Capturer

1997: University of Pretoria

Practical Tutor, Information Science Department

EXPERIENCE RECORD – SELECTED PROJECTS

ENVIRONMENTAL IMPACT ASSESSMENTS:

- Basic Assessment for the Proposed Coega Kop Wellfield and Water Treatment Works – *NMBM*
- Basic Assessment for the Proposed Recreational Water Park in Uitenhage - *Ntlangani Group of Companies*
- Scoping and EIA for the Proposed Kei Road Water Treatment Works and Conveyance – *Aurecon*
- Basic Assessment for the Upgrading of the Emsengeni Access Road, Kirkwood – *LA Consulting Engineers*
- Basic Assessment for the Proposed Stormwater Management Infrastructure in Colchester, Nelson Mandela Bay Municipality - *NMBM*
- Basic Assessment for the Proposed Hydro Power projects in Somerset East - *Navitas*
- Basic Assessment for the Proposed Alexandria Community Health Centre - *Archworxs*
- Scoping & Environmental Impact Assessment for the Kei Road Water Conveyance (pipeline and water treatment works) - *Aurecon*
- Basic Assessment for the St Francis Stormwater Upgrade - *Aurecon*
- Basic Assessment for the Patensie Prison WasteWater Treatment Works - *Aurecon*
- Basic Assessment for the Proposed SACE Ranger PV Plant, Uitenhage – *SACE*.
- Basic Assessment of the Proposed Clearing of Vegetation for Fence Construction at SAPS Training Institute, Addo, Sundays River Valley Municipality – *Engineering Advice & Services*.
- Basic Assessment for Construction and Operation of a Filling Station with Rest and Retail Facilities, an Agri-Business Retail / Wholesale Facility adjacent to the Nanaga Farm Stall on the Remainder of Portion 8 Nanaga Hoogte No 229, Sundays River Valley Municipality – *Pantheon Trust*

- Scoping and EIA, and Water Use Licence Application for the Proposed Malabar Phase 2 Extension 6 Housing Development - *NMBM*
- Basic Assessment and Water Use Licence Applications for Proposed Gqunu Village Bridge Crossing and Road Upgrades - *Department of Land Reform and Rural Development*.
- Scoping and Environmental Impact Assessment (Environmental Authorisation and Waste Management Licence) for a proposed private GLB+ Waste Disposal Facilities in Springs– *Vereeniging Refractories*

ENVIRONMENTAL MANAGEMENT PROGRAMMES:

- Coastal Management Programme for the Nelson Mandela Bay Municipality
- Environmental Management Programme for Existing Gravel Borrow Pits for Routine Road Maintenance - *EC Department of Roads & Public Works*
- Environmental Management Plan: Port Elizabeth Airport Storm Water – *ACSA*
- Borrow Pit / Quarry Authorisation Application: Elandsdrift Dam - *Department of Water Affairs*

ENVIRONMENTAL COMPLIANCE MONITORING:

- Environmental Control Officer: Construction of the Kuyga Rising Main – *Hatch Goba*
- Environmental Control Officer: Upgrading of Access Roads in Moses Mabida, Kirkwood – *LA Consulting Engineers*
- Environmental Control Officer: Upgrading of Stormwater Infrastructure in Summerstrand – *Hatch Goba*
- Environmental Control Officer: Upgrading of Roads and Stormwater in Nomathamsanqa, Addo – *LA Consulting Engineers*
- Environmental Control Officer: Fonteins Hoek Quarry For The Upgrading Of The Elandsdrift Barrage - *Department of Water Affairs*
- Environmental Control Officer: Rehabilitation of the Churchill Pipeline at the Van Stadens River Mouth, Phase 2 - *Nelson Mandela Bay Municipality*
- Environmental Control Officer: Construction of Recreational Facilities for Van Der Kemp's Kloof Nature Reserve - *Nelson Mandela Bay Municipality*
- Environmental Control Officer: Upgrading of Gravel Roads and Stormwater in Cluster E – *Letsunyane Associates*
- Performance Assessment of 9 Borrow Pits in the Kouga Local Municipality - *Cacadu District Municipality*

SUSTAINABILITY PROJECTS:

- Environmental Screening Assessment for Portion 62 of Ongegunde Vryheid No 746, St Francis – *Aurecon*
- Water Conservation and Demand Management Plan for the Dube TradePort, including King Shaka International Airport – *Dube TradePort*
- Environmental Management System for the Nelson Mandela Bay Municipality 2010 Multi-Purpose Stadium – *Nelson Mandela Bay Municipality*
- Strategy for the Elimination of Illegal Dumping and Maintenance of Municipal Land - *Nelson Mandela Bay Municipality*
- Green Procurement Plan for the Nelson Mandela Bay Municipality - *Nelson Mandela Bay Municipality*
- Helenvale Waste Study - *Cabitech Project Managers*

Michael Cohen

CEN Integrated Environmental Management Unit
36 River Road
Walmer, Port Elizabeth. 6070

Telephone: (+27) 041-581-2983
Facsimile: 086 504 2549
E-mail: steenbok@aerosat.co.za

Date of Birth:

18 January 1945

Nationality:

South African

Languages:

English (mother tongue), Afrikaans (good)

Qualifications:

B.Sc. (Zoology, Psychology. Wits. RSA).
B.Sc. (Hons) (Wildlife Management. U Pretoria).
M.Ag. (Wildlife and Fisheries Ecology: Texas A&M). (1973)
D.Sc. (Wildlife Management. U Pretoria). (1988)

Institutions:

South African Council of Natural Scientists (SACNAS)
Professional Member - Institute of Ecologists and Environmental Scientists

Member - International Association for Impact Assessment - South African Chapter

Member of IUCN Commission on National Parks and Protected Areas. (CNPPA) (1994 -1996)

Member of IUCN World Commission on Protected Areas (1997 – current)

Honorary Member of the Institute of Environment and Recreation Management of Africa 1995

Appointed to the Board of the Institute of Ecologists and Environmental Scientists - April 1997-May 2000

Referee to environmental assessment practitioners applying to the Interim Certification Board for Environmental Assessment Practitioners (ICB) for professional certification (2001 - present)

Appointed to the Council of the Provincial Heritage Resource Authority. Ministry of Sport, Arts and Culture. Province of the Eastern Cape 2003 (Resigned)

Professional History:

May 1996 – Present

Environmental Consultant: CEN Integrated Environmental Management Unit

July 1995 - May 1996

Director: Eastern Cape Nature Conservation. Ministry of Economic Affairs, Environment and Tourism. Left to start own consultancy business

January 1993 - June 1995

Regional Director: Cape Nature Conservation. Eastern Cape Region

October 1985 - December 1992

Deputy Director: Environment. Chief Directorate: Environmental Conservation
Directorate: Environmental Management Department of Environment Affairs

July 1983 - September 1985

Assistant Director: Environment Chief Directorate: Environmental Conservation
Department of Environment Affairs

March 1981 - July 1983

Chief Professional Officer Chief Directorate: Environmental Conservation Department of
Environment Affairs

June 1978 - February 1981

Regional Ecologist: Transvaal Nature Conservation Division: Eastern Region (TPA)

August 1976 - May 1978

Officer-in-Charge. Suikerbosrand Nature Reserve Transvaal Nature Conservation
Division (TPA)

1972 - July 1976

Research Assistant Eugene Marais Chair of Wildlife Management University of Pretoria

Specialist Courses:

- ✿ 1993 Completed the certificate course in Public Management at the University of Pretoria. The certificate was awarded Cum Laude
- ✿ 1989 Completed course in Practical Techniques in Environmental Impact Assessment conducted by the Environmental Evaluation Unit at the Graduate School of Business, University of Cape Town
- ✿ 1973 Completed the International Seminar on the Administration of National Parks and Equivalent Reserves held in the United States, Canada and Mexico
- ✿ 1973 Completed short course in Tropical Ecology while at Texas A & M University

International Experience:

- ✿ Nominated as a member of an international team to evaluate the professional

activities of the Nature and National Parks Protection Authority of Israel
(Evaluation was to be conducted during November 2000)

- ✿ 1994 - Represent South Africa as Scientific Councillor on the Convention on Migratory Species - Nairobi, Kenya
- ✿ 1994 - Alternate delegate for South Africa at the Conference of the Parties of the Convention on Migratory Species - Nairobi, Kenya
- ✿ 1994 -Member of the negotiations team for the African Eurasian Waterfowl Agreement - Nairobi, Kenya
- ✿ 1993 -Represent South Africa as Scientific Councillor on the Convention on Migratory Species - Bonn, Germany
- ✿ 1992 -Visit to Israel to hold preliminary discussions on a bilateral agreement on Nature and Environmental Conservation
- ✿ 1992 -Participate in the IV World Congress on National Parks and Protected Areas - Caracas - Venezuela - Present two papers at the Congress and participate in numerous working groups on a wide range of protected area issues
- ✿ 1991 - 1995 South African Representative on the Scientific Council for the Convention on Migratory Species
- ✿ 1990 -Visit to England and Israel (met with a variety of nature and environmental conservation organisations) for discussion on joint projects and for discussions on national and regional protected area systems plans
- ✿ 1989 -Member of South African delegation to the XV Antarctic Treaty meeting, Paris
- ✿ 1988 -Delegate to the 17th IUCN General Assembly - Costa Rica
- ✿ 1986 -Seminar on Environmental Education - Israel

Specialisation in Firm:

Integrated Environmental Management, Environmental Impact Assessment, Rural Development, Natural Resource Planning and Management

Recent Experience:

Environmental Impact Assessment:

2006 – To Present - Selected Projects

- ✿ Scoping Exercise for a Proposed Pilot Aquaculture Operation for the Grow-Out of *Penaeus vannamei* Prawn Larvae For Commercial Purposes Within the Coega Industrial Development Zone at Port Elizabeth Eastern Cape Province Ballastrada Trade and Investments (Pty) Ltd, Trading as SeaArk Africa
- ✿ Environmental Management Plan for a Pilot Aquaculture Operation for the Grow-Out of *Litopenaeus vannamei* Prawn Larvae For Commercial Purposes, Coega Industrial Development Zone at Port Elizabeth, Eastern Cape Province
- ✿ Environmental Assessment for a Proposed Interpretive Centre, Day Visitor Site and Boardwalk Trail in the, Baviaanskloof Mega-Reserve Wilderness Foundation
- ✿ Environmental Assessment for a Proposed Residential Development, Remainder of Erf 328 Kabeljous River Jeffrey's Bay
- ✿ Environmental Assessment for the Augmentation of the Jeffrey's Bay Bulk Water Supply System (Pump Station, Supply Mains from Churchill Supply Mains and 5 MI Reservoir)
- ✿ Environmental Assessment for the Proposed Augmentation of the Jeffrey's Bay Main Electrical Substation
- ✿ Environmental Assessment for a Proposed Residential Development, Remainder of Farm Noorsekloof 327, Jeffrey's Bay
- ✿ Environmental Assessment for the Proposed Rezoning and Subdivision of Portion of Portion 8 of the Farm Kabeljous River No. 321, Jeffrey's Bay

- ✿ Sensitivity Assessment for the Subdivision of Portion 1 (Remaining Extent) of the Farm Klein Buffelsfontein No 477/1
- ✿ Environmental Assessment for a Proposed Resort Development, Portion 84 of the Farm De Stades No. 485, Beachview
- ✿ Environmental Assessment for the Rezoning and Subdivision of the Remainder of the Farm Boschkloof No. 896, Division of Humansdorp
- ✿ Environmental Assessment for the Rezoning of Portion B of the Remainder of Farm 428 to “Special Zone Nursery”
- ✿ Environmental Management Programme Report for a Proposed Sand, Clay and Calcrete Mining Operation in the Coega Valley on Portions 1 and 4 of the Farm Welbedachtsfontein, 300, Port Elizabeth
- ✿ Environmental Assessment for Subdivision and Rezoning of Erf 483 Bushman’s River for Residential Development
- ✿ Environmental Assessment for the Rezoning of Farms 328/1, 328/2 and Farm 779, Jeffrey’s Bay, Kabeljouis-on-Sea

2001 – 2004 Selected Projects

- ✿ Environmental Assessment for the Extension of the Tsitsikamma Golf Estate.
- ✿ Environmental Assessment for a Residential Development in Jeffrey’s Bay.
- ✿ Environmental Assessment for a Township Development in Jeffrey’s Bay
- ✿ Environmental Assessment for Luxury Lodges and a Tent camp on the Mkambati Nature Reserve
- ✿ Environmental Assessment for a Boat Launch Facility at Gwe-Gwe, Mkambati Nature Reserve
- ✿ Environmental Assessment for a Boat Launch Facility at Kings Beach Port Elizabeth
- ✿ Environmental Assessment for the Port Elizabeth Golf Course Estate

- ✿ Environmental Assessment for a Resort Development on the Kromme River
- ✿ Environmental Assessment for the Establishment of a Presidential Suite at the Eagles Cragg Lodge, Shamwari Game Reserve
- ✿ Environmental Assessment for the Establishment of a Golfing Estate at the Port Elizabeth Golf Club
- ✿ Environmental Assessment for the Eskom Tsitsikamma 66kV powerline
- ✿ Environmental Assessment for three resorts in the Zuurrberg Area
- ✿ Environmental Assessment for a Satellite Resort on the Gorah Concession Area, Addo Elephant National Park
- ✿ Environmental Assessment for the Alicedale Golf Resort Development
- ✿ Environmental Assessment for three lodges on the Lalibella Game Reserve
- ✿ Environmental Assessment for the closure of the Marina Martinique Small Boat Harbour
- ✿ Environmental Assessments for two caravan parks on the Gamtoos River
- ✿ Environmental Assessment for the upgrading of the Road from Flagstaff to Holy Cross
- ✿ Biophysical Environmental Assessment on the proposed ESKOM Power line to feed the Aluminium Smelter at Coega
- ✿ Environmental Assessment of the Bayethe Game Reserve
- ✿ Environmental Assessment of Eagles Cragg Game Lodge – Shamwari Game Reserve
- ✿ Environmental Impact Assessment on the Sanderlings Coastal Wetland Resort
- ✿ Scoping Report for boat mooring facilities on the Kromme River to serve a residential resort