

CURRICULUM VITAE

| Name: | Liam Michael Whitlow | |
|--|---|--|
| Nationality: | South African | |
| Date of Birth: | 22 August 1978 | |
| Profession: | Environmental Scientist | |
| Professional Qualification/ Training: | BSc Honours Environmental Management; Rand Afrikaans University (now University of Johannesburg), 2000 | |
| | Higher Certificate in Project Management; Damelin Business School, 2001. | |
| | ISO 14001 Auditor Training; BVQI, 2003. | |
| | Environmental Monitoring- Fallout Dust Training; Dustwatch, 2014. | |
| | Aquifer Hydraulics and Groundwater Monitoring Certificate Course; North West University, 2014. | |
| | Carbon Footprint Analyst Course; Terra Firma Academy, 2017. | |
| Professional Membership/ Registrations: | Registered Environmental Assessment Practitioner: Number 2019/222 Registered Professional Natural Scientist (SACNASP- #400148/08). Member of Land Rehabilitation Society of Southern Africa (LaRSSA). | |
| Current Employer: | Environmental Impact Management Services (Pty) Ltd. | |

KEY EXPERIENCE

Liam holds a B. Sc. Hons degree in Environmental Management and has completed an additional B. Sc. honours course in applied limnology. In addition he has completed a higher certificate in Project Management with Damelin Business School and a course on ISO14001 Auditing Principles and Environmental Management Systems Auditor Training. Liam is a registered professional natural scientist with the South African Council for Natural Scientific Professions. Liam's professional experience, gained over more than 17 years, lies mainly with environmental impact assessments including project managing significantly large EIA's in the mining and infrastructure sectors. Liam's other experience includes ISO14001, Site Assessments, Water-use licensing, Environmental monitoring, and Environmental Management Plans. Liam's experience lies mainly within South Africa but he has bene involved in projects in both Lesotho and Botswana.

CAREER SUMMARY

| Period: January 2011- Current | Organisation: EIMS | Position: | Director, | Senior |
|-------------------------------|--------------------|-------------|------------------|------------|
| | | Environment | al Assessment Pr | actitioner |



Key Projects/Assignments

<u>Technical Director:</u> Responsible for the technical management of EIMS including the following aspects:

- Technical review and direction for complex projects;
- Quality control and assurance;
- Staff management and performance review;
- Client management; and
- Marketing and business development.

Project Experience:

- Transnet Multi-products Pipeline (~650km total length) in Gauteng, Mpumalanga and between Durban and Johannesburg, RSA. Project manager and Environmental Advisor to the New Multiproduct Pipeline (NMPP) Alliance for the monitoring of construction phase. 2009-2017.
- Olifants River Water Resources Development Project, Steelpoort, Mpumalanga, RSA. EIMS was appointed to undertake the required environmental monitoring (noise, air quality, and water quality) for the construction of the Phase 1C of the bulk water pipeline. Project manager, 2012-2017.
- GSW Dilokong Chrome Mine Due Diligence, Limpopo, RSA. Environmental lead to undertake an environmental due. 2017.
- Tshipi é Ntle Manganese Mine Environmental Due Diligence, Kathu, Northern Cape, RSA. Project manager and senior consultant (in association with GSW) for an environmental review to inform a due diligence being undertaken. 2017.
- Libra Due Diligence, Mpumalanga and Free State Province, RSA. Project manager and senior consultant to conduct a high level environmental review and due diligence study for the Anglo Libra project (incl various Anglo Coal assets) for Mindset Mining Consultants, 2016.
- Sedgman Environmental Training, Pretoria, RSA. Compiled and presented a training workshop to Sedgman Engineers, focusing on the application and interpretation of the South African Environmental Laws, in relation to their operations and client profile. 2017.
- EIA and EMP for the Transnet Richards Bay Coal Line: Overvaal Tunnel, Mpumalanga Province. Project manager, responsible for successful completion of the EIA. 2015-2016.
- Tetra 4 Virginia Natural Gas Production, Water Monitoring, Free State, RSA.
 Project manager appointed to undertake surface and groundwater sampling to establish an environmental baseline and to monitor the actual impacts associated with the proposed natural gas production activities. 2015-2017.
- Drafted the 2014-2019, 3rd Edition Environmental Management, Plan (compiled in terms of Section 11(2) of the National Environmental



- Management Act 1998 (act 107 of 1998), for the National Department of Energy. Project manager and report writer. 2014-2015.
- Environmental Advisory to the Government Technical Advisory Centre, Public Private Partnership Unit. Environmental lead in a team of consultants providing consulting services to report to the GTAC on the lessons learn from past PPP's and to suggest means of improving the process for future PPP's. 2015.
- Eskom Lambda 400-765kV Sub-station and Associated Transmission Lines, Mpumalanga, RSA. Project manager and Environmental Assessment Practitioner for EIA. 2010-2012.

Mine Closure and Financial Provisioning:

- Determined Financial Provisions in accordance with the 'Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision' provided by a Mine (DMR Guideline): Mooiplaats Colliery 2018; Exxaro Paardeplaats Coal Mine- Update 2018.
- Final Rehabilitation, Decommissioning and Closure Plan (FRDCP) prepared in accordance with the requirements of the NEMA Financial Provisioning Regulations (2015) (NEMA GNR 1147): Tetra 4 Virginia Natural Gas Project, 2017; Motuoane Gas Hennenman Exploration Right-2017; Motuoane Gas Ladysmith Exploration Right- 2017; Sungu Sungu Dannhauser Exploration Right- 2016; Kangala Colliery- Eloff Phase 3 Pit-2020; Anker Coal Elandsfontein Colliery-2021.
- Review of closure plans and financial provisions for closure as a component of Due Diligence and/or Competent Persons Reports: Environmental Review for 5 large Coal mining operations held by Exxaro- 2018; Environmental Review for Dilokong Chrome Mine- 2017; Environmental Review for Tshipi Mine- 2017; Environmental Review on numerous large coal mines held by Anglo Coal-2016.

Environmental Monitoring:

- Project manager and senior environmental scientist for the construction phase environmental monitoring on the Olifants River Water Resources Project Phase 2C (bulk water pipeline). The project included monitoring of water (point and diffuse), air quality (PM10 and fallout dust), and noise to ensure and guide compliance with the environmental specifications of the construction phase EMPR.
- Project manager and senior environmental scientist for the water resource monitoring of the Tetra4 Virginia Natural Gas Production Project. This includes specialist low-flow sampling od dissolved gases in the groundwater as well as general water quality parameters in both regional ground and surface water resources.
- Project Director for the routine water resource (surface and groundwater)
 monitoring being undertaken for the United Manganese of the Kalahari



| | (UMK), manganese mine in Northern Cape. Responsible for technical and quality review and oversight. | | |
|--|--|---|--|
| Period: January 2002- December 2010 | Organisation: EIMS | Position: Senior Environmental Assessment Practitioner | |
| Key Projects/Assignments | Environmental applications, include for various (7 Packages including upgrades as part of the Gauteng also appointed to undertake their Packages EIA for OCGT Peaking Power Station EIA for spent nuclear fuel storage EIA for nuclear waste smelter at Packages EIA for nuclear waste smelter at Packages EIA for the proposed upgrade of facilities at the South African Nuclear state of facilities at the So | facility at Pelindaba. elindaba. an underground ash disposal facility in of the effluent collection and treatment ear Energy Corporation, Pelindaba. 400KV Transmission line. as as part of the Provincial government isburg) CBD. Velopments. Its substation in Limpopo Province. elopments in the East Rand, Ekurhuleni e Regional Professional Team. as for a World Summit on Sustainable m, Gauteng Province. ion applications for housing developments. For Sentech telecommunication masts in informunication facilities for Vodacom. elecommunication facilities for Cell C and | |
| | Environmental Studies for Eskom | relecornmunications. | |



Environmental Site Assessment and Remediation:

 Participation in several Environmental Site Assessments in Gaborone (Botswana) and Mpumalanga.

Strategic Environmental Assessment:

• Participation in the compilation of the Strategic Environmental Assessment for the Hartbeespoort Dam area.

ISO 14001 Environmental Management Systems and Auditing

- Participation in the compilation of the ISO 14001 system (legal register) for Coega Development Corporation, Eastern Cape Province.
- Participation in the compilation of the ISO 14001 system (legal register) for Matimba Power Station in Limpopo Province.

Mining Related Permits and Rights

- Environmental Management Programme and EIA for the Cranemere Gas Exploration Project in the Eastern Cape Province.
- EIA and EMPR for the proposed Loopspruit Coal Mine, Mpumalanga Province.
- Project Manager for in excess of 40 mining permit applications for the Transnet New Multi-products Pipeline, Inland and Trunkline (between Johannesburg and Durban). Applications submitted in 4 different provinces.
- Project Manager for 5 Mining Permit Applications for the South African
 National Roads Agencies Gauteng Freeway Improvement Project.

Numerous NEMA Section 24(G) Rectification applications for a broad spectrum of developments

LANGUAGE CAPABILITY

| Language | Speak | Read | Write |
|-----------|-----------|-----------|-----------|
| English | Excellent | Excellent | Excellent |
| Afrikaans | Excellent | Excellent | Good |

DECLARATION

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications and that, at the time of signature.



| Recoverable Signature | |
|---|------|
| _x_& | |
| Liam Whitlow | |
| Director | |
| Signed by: 6f6103b0-585d-4fda-855e-bdf53a161a41 | |
| | |
| Signature of Staff Member | Date |



DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

| File Reference Number: | (For official use only) |
|------------------------|-------------------------|
| NEAS Reference Number: | DEA/EIA/ |
| Date Received: | |

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

Proposed Gamohaan Seven-Miles 22kV Powerline Project

Kindly note the following:

- 1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment
 Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the
 Competent Authority. The latest available Departmental templates are available at
 https://www.environment.gov.za/documents/forms.
- 3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- 4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address:

Department of Environmental Affairs

Attention: Chief Director: Integrated Environmental Authorisations

Private Bag X447

Pretoria 0001

Physical address:

Department of Environmental Affairs

Attention: Chief Director: Integrated Environmental Authorisations

Environment House 473 Steve Biko Road

Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:

Email: EIAAdmin@environment.gov.za

1. ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) INFORMATION

| EAP Company Name: | Environmental Impact Management Services | | | |
|---------------------------|---|---------|-------------|--------------------|
| B-BBEE | Contribution level (indicate 1 | Level 2 | Percentage | |
| | to 8 or non-compliant) | | Procurement | |
| | | | recognition | |
| EAP name: | Liam Whitlow | | | |
| EAP Qualifications: | BSc Honours Environmental Management; Rand Afrikaans University (now University | | | ty (now University |
| | of Johannesburg), 2000 | | | |
| Professional | EAPASA Reg No: 2019/222 | | | |
| affiliation/registration: | | | | |
| Physical address: | 8 Dalmeny Street, Pine Park | | | · |
| Postal address: | PO Box 2083, Pinegowrie, | | | |
| Postal code: | 2123 | Cell: | 083 393 22 | 02 |
| Telephone: | 011 7897170 | Fax: | | |
| E-mail: | liam@eims.co.za | | | |

The appointed EAP must meet the requirements of Regulation 13 of GN R982 of 04 December 2014, as amended.

2. DECLARATION BY THE EAP

I, _Liam Whitlow_, declare that -

- I act as the independent environmental assessment practitioner in this application;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I will take into account, to the extent possible, the matters listed in Regulation 13 of the Regulations when preparing the application and any report relating to the application;
- I undertake to disclose to the applicant and the Competent Authority all material information in my possession that
 reasonably has or may have the potential of influencing any decision to be taken with respect to the application by
 the Competent Authority; and the objectivity of any report, plan or document to be prepared by myself for
 submission to the Competent Authority, unless access to that information is protected by law, in which case it will be
 indicated that such information exists and will be provided to the Competent Authority;
- I will perform all obligations as expected from an environmental assessment practitioner in terms of the Regulations;
- I am aware of what constitutes an offence in terms of Regulation 48 and that a person convicted of an offence in terms of Regulation 48(1) is liable to the penalties as contemplated in Section 49B of the Act.

Disclosure of Vested Interest (delete whichever is not applicable)

| • I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed |
|---|
| activity proceeding other than remuneration for work performed in terms of the Regulations; |
| |
| |
| |
| Signature of the Environmental Assessment Practitioner |
| Name of Company: |
| Name of Company: |
| 5 October 2022 |
| Date |
| 3. UNDERTAKING UNDER OATH/ AFFIRMATION |
| I, Iram whitey, swear under oath / affirm that all the information submitted or to be |
| submitted for the purposes of this application is true and correct. |
| |
| |
| Signature of the Environmental Assessment Practitioner |
| |
| Environmental Impact Managener Services |
| Name of Company |
| 5 O.H |
| Date 8036951/ |
| 80369511 |
| MHB SUL, NE, MATANAHYSE |
| Signature of the Commissioner of Oaths |
| |
| 5037,10.02 |
| Date |
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| SOUTH AFRICAN POLICE SERVICE COMMUNITY SERVICE CENTRE |
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Registration No. 2019/222

Herewith certifies that

Liam Whitlow

is registered as an

Environmental Assessment Practitioner

Registered in accordance with the prescribed criteria of Regulation 15. (1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Effective: 01 March 2022 Expires: 28 February 2023

Chairperson

Registrar





CURRICULUM VITAE

| Name: | Cheyenne Muthukarapan |
|-----------------------------|--|
| Nationality: | South African |
| Date of Birth: | 3 January 1992 |
| Profession: | Environmental Scientist |
| Professional Qualification/ | B.S.c Environmental and Geographical Sciences; University of Cape Town |
| Training: | Advanced Diploma Business Project Management; University of Cape Town |
| | Master's in Business Administration; European Business School (in progress) |
| | ArcGIS Working with imagery - online course, ESRI South Africa, 2017 |
| | ArcGIS Geo-mapping - online course, ESRI South Africa, 2017 |
| | IFC Environmental and Social Risk Management Training for Financial Institutions |
| Current Employer: | Environmental Impact Management Services (Pty) Ltd. |

KEY EXPERIENCE

Ms Cheyenne Muthukarapan holds a Bachelor of Science degree in Environmental and Geographical Science from the University of Cape Town and an Advanced Diploma in Business Project Management from the University of Cape Town. Her expertise lies in public consultation/participation processes and sustainability consulting. She has participated in numerous public/stakeholder consultations in relation to environmental impacts, and the formulation of sustainable solutions to various environmental problems.

CAREER SUMMARY

| Period: November 2016 - Current | Organisation: EIMS | Position: Junior Environmental Scientist |
|--|--------------------|---|
| Key Projects/Assignments | | Plant Air Quality Education and Awareness amme required by the plants Air Emissions |
| Environmental and Sustainability consultant Thabametsi Coal IPP (Lenders technical advisory) Consultant to the IDC for the Development Framework; | | nical advisory team); |

- Consultant for the Lesotho Ministry of Social Development for the development of the Lesotho Livelihood Project Environmental and Social Management Framework;
- Consultant to the Department of Energy for the Development of the Department of Energy's Environmental Management Plan 2014-2019
- Public Participation Consultant for the Sasol Air Quality Matters Public Participation sessions;
- Environmental Management Plans update for EMPR for Harmony Gold.
- Public Participation Specialist for Anker Coal Prospecting Right Renewal Application and Environmental Management Plan Update (Mpumalanga);
- Public Participation Specialist for the City of Ekurhuleni Wetland and Watercourse Rehabilitation Project for the Kaalspruit, Rietspruit and Rietvlei Catchments;
- Public Participation Specialist for Manungu Colliery Project (Delams);
- Public Participation Specialist for Vlakvarkfontein Coal Mine Project (Ogies);
- Public Participation Specialist for the Kangala Coal Mine Extension Project (Delmas);
- Compilation of a Site and Retail Licence Application;
- Public Participation Consultant for EcoRevert Pyrolysis Plant and Refinery (Gauteng);
- Public Participation Consultant for Motuoane Hennenman Natural Gas Exploration Right (Free State);
- Public Participation Consultant for the Harmony Hill Township Establishment (Sabie)
- Public Participation Consultant for Pembani Coal Carolina (Carolina);
- Public Participation Consultant for S. Bothma and Son Transport Sand Mine (Sasolburg);
- Public Participation Consultant for Laudem Mining and Industrial Services
 (Pty) Ltd. Sand Mine (Free State);
- Public Participation Consultant for Lothtech (Pty) Ltd. (Wynberg)

LANGUAGE CAPABILITY

| Language | Speak | Read | Write |
|-----------|-----------|-----------|-----------|
| English | Excellent | Excellent | Excellent |
| Afrikaans | Average | Good | Average |

DECLARATION

I confirm that the above information contained in the CV is an accurate description of my experience and qualifications at the time of signature.

Date