

## CURRICULUM VITAE

<b>Name:</b>	<b>Liam Michael Whitlow</b>
<b>Nationality:</b>	South African
<b>Date of Birth:</b>	22 August 1978
<b>Profession:</b>	Environmental Scientist
<b>Professional Qualification/ Training:</b>	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.
<b>Professional Membership/ Registrations:</b>	Registered Environmental Assessment Practitioner: Number 2019/222 Registered Professional Natural Scientist (SACNASP- #400148/08). Member of Land Rehabilitation Society of Southern Africa (LaRSSA).
<b>Current Employer:</b>	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 24 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 been involved in projects in both Lesotho and Botswana.

## CAREER SUMMARY

<b>Period: January 2011- Current</b>	<b>Organisation: EIMS</b>	<b>Position: Director, Senior Environmental Assessment Practitioner</b>
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<b>Key Projects/Assignments</b>	<p><u>Technical Director:</u> Responsible for the technical management of EIMS including the following aspects:</p> <ul style="list-style-type: none"> <li>• Technical review and direction for complex projects;</li> <li>• Quality control and assurance;</li> <li>• Staff management and performance review;</li> <li>• Client management; and</li> <li>• Marketing and business development.</li> </ul> <p><u>General Project Experience:</u></p> <ul style="list-style-type: none"> <li>• Africa Oil SA Corp Block 3B/4B Offshore Exploration Right: EIMS was appointed by African Oil SA Corp to undertake the Environmental Impact Assessment (EIA) for the proposed Block 3B/4B Exploration Right offshore South Africa. Liam was responsible for technical review and oversight and approval of documents.</li> <li>• Tosaco Block 1 Offshore Exploration Right EIA: EIMS was appointed to undertake the Environmental Impact Assessment associated with the ER326 Exploration Right Application for Tosaco Energy (Pty) Ltd. Liam was responsible for technical review and oversight and approval of documents.</li> <li>• Environmental Authorisation applications for offshore seismic surveys of the West Coast of South Africa, for TGS and Searcher: EIMS was appointed to assist with a Basic Assessment application for 3D seismic surveys off the West Coast of South Africa on behalf of Searcher Geodata UK Limited and TGS. Liam was responsible for technical review and oversight and approval of documents.</li> <li>• EIMS was appointed to conduct an environmental due diligence of an environmental assessment conducted as part of the application for funding to the DBSA by Ilitha Fibre Optics. This included review of the Environmental and Social Impact Assessment undertaken in accordance with the DBSA's Environmental and Social Safeguard Standards. Liam fulfilled the role of technical director for the project.</li> <li>• 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.</li> <li>• 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.</li> <li>• GSW Dilokong Chrome Mine Due Diligence, Limpopo, RSA. Environmental lead to undertake an environmental due. 2017.</li> </ul>
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- 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 of 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.

Greenhouse Gas Accounting and Carbon footprint:

- UMK GHG and Carbon Footprint: Prepared a GHG emissions inventory and calculation for scope 1,2, and 3 for United Manganese of Kalahari (Pty) Ltd.
- Geosol and Water Annual Greenhouse Gas and Emissions Reporting for various mining operations: Prepared the Annual GHG Emission Report for the 2019 to 2024 reporting years as required by the GHG Regulations.

Compliance Auditing:

- Tetra4 onshore natural gas production right\_Environmental Authorisation and Water Use Licence Audits- Project technical director responsible for review and oversight of the audits.
- Azinam Block 2B Closure Application: EIMS was appointed to assist Azinam South Africa in their application for closure in terms of Section 43 of the MPRDA for the Offshore Block 2B Exploration Right and Environmental Authorisation. The application process includes a NEMA Regulation 34 Compliance Audit. Liam was responsible for final review and authorisation of the report.
- Azinam Block 2B Close Out Audit: EIMS was appointed to undertake the Close Out NEMA Environmental Audit for the Offshore Block 2B Exploration Right and Environmental Authorisation. Liam was responsible for final review and authorisation of the report.



	<ul style="list-style-type: none"> <li>Azinam Block 2B NEMA Audit: EIMS was appointed to undertake the NEMA Environmental Audit for the Offshore Block 2B Exploration Right and Environmental Authorisation. Liam was responsible for authorisation of the report.</li> <li>Sunbird Energy NEMA EA and EMPr audit: Sunbird Energy Holdings appointed EIMS to undertake an audit for their offshore exploration right EA and EMPr. Liam was responsible for authorisation of the report.</li> <li>PetroSA External Verification Audit of the EMPRs for the Block 9 Licence Area: Undertaking an external compliance audit against the annual performance assessments done for the FA-EA, SCG, Oribi/Oryx and FO production areas for the PetroSA Block 9 Licence Area. Liam was responsible for review and authorisation of the report.</li> <li>PetroSA Independent Environmental Compliance Audits: EIMS was appointed to provide the services of an External Compliance Auditor to undertake an Independent Audit of the respective Environmental management Programmes (EMPR) and Environmental Authorisations (EA) for the following offshore exploration blocks: Block 2C, Block 3A/4A and Block 9/11A. Liam was the assigned auditor for the Block 9 and 11A right and was the technical reviewer for Block 2C and 3A/4A.</li> </ul>	
<b>Period: January 2002-December 2010</b>	<b>Organisation: EIMS</b>	<b>Position: Senior Environmental Assessment Practitioner</b>
<b>Key Projects/Assignments</b>	<p>Project Manager and Environmental Assessment Practitioner for the following:</p> <ul style="list-style-type: none"> <li>Environmental applications, including EIAs, and mining permit applications, for various (7 Packages including N1, N3, N12, R21, and R24) Gauteng road upgrades as part of the Gauteng Freeway Improvement Project. EIMS was also appointed to undertake the role of Independent ECO's for certain GFIP Packages</li> <li>EIA for OCGT Peaking Power Station within the Coega IDZ.</li> <li>EIA for spent nuclear fuel storage facility at Pelindaba.</li> <li>EIA for nuclear waste smelter at Pelindaba.</li> <li>EIA and water-use licensing for an underground ash disposal facility in Mpumalanga Province.</li> <li>EIA for the proposed upgrade of the effluent collection and treatment facilities at the South African Nuclear Energy Corporation, Pelindaba.</li> <li>EIA for proposed Garona to Aries 400KV Transmission line.</li> <li>EIA for numerous Golf Estates.</li> <li>EIA for Market Street Underpass as part of the Provincial government Precinct and City Square (Johannesburg) CBD.</li> </ul>	



- EIA's for numerous residential developments.
- Scoping report for the Eskom Janus substation in Limpopo Province.
- EIA's for low-cost housing developments in the East Rand, Ekurhuleni Metropolitan Council as part of the Regional Professional Team.
- Environmental exemption process for a World Summit on Sustainable Development project, Moroka Dam, Gauteng Province.
- Numerous environmental exemption applications for housing developments.
- Environmental Scoping studies for Sentech telecommunication masts in Eastern Cape Province.
- Environmental Studies for telecommunication facilities for Vodacom.
- Environmental Studies for 150+ telecommunication facilities for Cell C and Siemens in five provinces.
- Environmental Studies for Eskom Telecommunications.

#### 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.

Signature of Staff Member

\_2026/02/25\_

Date